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(54) **AMIDE DERIVATIVES, PROCESS FOR PRODUCTION OF THE SAME, AND METHOD FOR APPLICATION THEREOF AS INSECTICIDE**

AMIDDERIVATIVE, VERFAHREN ZU DEREN HERSTELLUNG UND VERFAHREN ZU DEREN ANWENDUNG ALS INSEKTIZIDE

DERIVES AMIDES, PROCESSUS DE FABRICATION ET METHODE D'APPLICATION EN TANT QU INSECTICIDE

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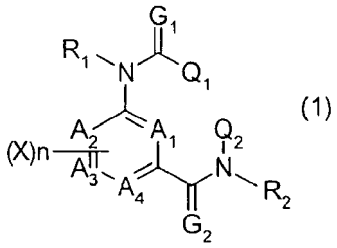
- **Farouk Eltayeb ET AL: "-TRIONE DERIVATIVES", Tetrahedron. Letters, vol. 10, 1 January 1980 (1980-01-01), pages 2-218, XP055273216,**

Description

TECNICAL FIELD

[0001] The present invention relates to a compound represented by Formula (1) as set out in claim 1:



(1)

wherein A3 and A4 are each carbon,

wherein A_1 and A_2, each represent a carbon atom, a nitrogen atom or an oxidized nitrogen atom;
R_1 and R_2 each represent a hydrogen atom, C1-C4 alkyl group or an optionally substituted C1-C4 alkylcarbonyl group;
G_1 and G_2 each represent an oxygen atom or a sulfur atom;
XS, which may be identical or different, represent a hydrogen atom, a halogen atom, or a trifluoromethyl group;
n is an integer of 0 to 4; and
Q_1 is an optionally substituted phenyl group, or an optionally substituted heterocyclic group, Q2 is represented by Formula (2) or (3) described below,
an insecticide comprising the compound as the active ingredient, and use thereof.

[0002] The process for the preparation of a compound of Formula (1) is also disclosed

BACKGROUND ART

[0003] International Publication WO 2000/55120 and US Patent No. 6,548,514 describe a compound similar to the compound of the present invention for the use as medicament, but they do not describe on the insecticidal activity of the compound. The compound clearly does not fall within the scope of claims of the present invention.

[0004] International Publication WO 2000/7980 describes a compound similar to the compound of the present invention for the use as medicament, but it does not describe on the insecticidal activity of the compound. The compound clearly does not fall within the scope of claims of the present invention.

[0005] US Patent Laid-Open No. 2002-032238 describes a compound similar to the compound of the present invention for the use as medicament, but it does not describe on the insecticidal activity of the compound. The compound clearly does not fall within the scope of claims of the present invention.

[0006] WO 01/70671 describes anthranilamide compounds for use in controlling arthopods. The compounds do not fall within the scope of the claims of the present invention.

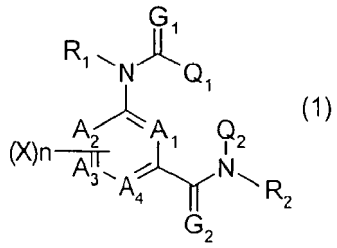
DISCLOSURE OF THE INVENTION

[0007] The object of the present invention is to provide a pesticide having a high insecticidal efficacy. Another object of the present invention is to provide a compound represented by Formula (1), an insectcide comprising the compound as an active ingredient, and a process for controlling pests by using a combination of the compound with another pesticide and/or a fungicide.

[0008] The inventors have conducted intensive studies to solve the above problems and discovered that the compound of the invention is a novel compound unknown in the documents and has remarkably excellent insecticidal effects, thus finding a novel application of the compound as a pesticide. Further, they also discovered that a compound unknown in the documents is a useful intermediate for the preparation of the compound of the present invention. As a result, they have completed the present invention.

[0009] The subject of the invention is as follows.

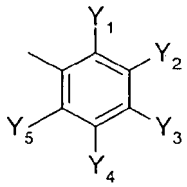
[1] A compound represented by Formula (1):



(1)

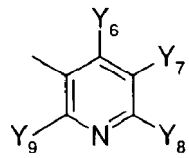
wherein A3 and A4 are each carbon,

A_1 and A_2, each represent a carbon atom, a nitrogen atom or an oxidized nitrogen atom;
G_1 and G_2 each represent an oxygen atom or a sulfur atom;
n is an integer of 0 to 4;
R_1 and R_2 are each a hydrogen atom, a C1-C4 alkyl group or an optionally substituted C1-C4 alkylcarbonyl group;
Xs, which may be identical or different each other, are a hydrogen atom, a halogen atom or a trifluoromethyl group;
Q_1 is a phenyl group, or a substituted phenyl group having one or more substituents, which may be identical or different, selected from a halogen atom, a C1-C4 alkyl group, a C1-C4 haloalkyl group, a C2-C4 alkenyl group, a C2-C4 haloalkenyl group, a C2-C4 alkynyl group, a C2-C4 haloalkynyl group, a C3-C6 cycloalkyl group, a C3-C6 halocycloalkyl group, a C1-C3 alkoxy group, a C1-C3 haloalkoxy group, a C1-C3 alkylthio group, a C1-C3 haloalkylthio group, a C1-C3 alkylsulfinyl group, a C1-C3 haloalkylsulfinyl group, a C1-C3 alkylsulfonyl group, a C1-C3 haloalkylsulfonyl group, a C1-C4 alkylamino group, a di-C1-C4-alkylamino group, a cyano group, a nitro group, a hydroxyl group, a C1-C4 alkylcarbonyl group, a C1-C4 alkylcarbonyloxy group, a C1-C4 alkoxycarbonyl group, an acetylamino group, and a phenyl group; a heterocyclic group selected from a pyridyl group, a pyridin-N-oxide group, a pyrimidinyl group, a pyridazinyl group, a pyrazinyl group, a furyl group, a thienyl group, an oxazolyl group, an isoxazolyl group, an oxadiazolyl group, a thiazolyl group, an isothiazolyl group, an imidazolyl group, a triazolyl group, a pyrrolyl group, a pyrazolyl group or a tetrazolyl group, or a substituted heterocyclic group (which means the same as those described above) having one or more substituents, which may be identical or different, selected from a halogen atom, a C1-C4 alkyl group, a C1-C4 haloalkyl group, a C2-C4 alkenyl group, a C2-C4 haloalkenyl group, a C2-C4 alkynyl group, a C2-C4 haloalkynyl group, a C3-C6 cycloalkyl group, a C3-C6 halocycloalkyl group, a C1-C3 alkoxy group, a C1-C3 haloalkoxy group, a C1-C3 alkylthio group, a C1-C3 haloalkylthio group, a C1-C3 alkylsulfinyl group, a C1-C3 haloalkylsulfinyl group, a C1-C3 alkylsulfonyl group, a C1-C3 haloalkylsulfonyl group, a C1-C4 alkylamino group, a di-C1-C4-alkylamino group, a cyano group, a nitro group, a hydroxyl group, a C1-C4 alkylcarbonyl group, a C1-C4 alkylcarbonyloxy group, a C1-C4 alkoxycarbonyl group, an acetylamino group, and a phenyl group;
Q_2 is represented by Formula (2):



(2)

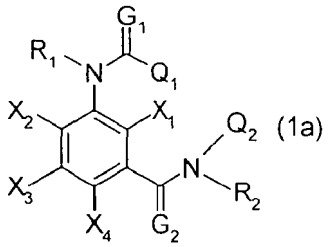
wherein Y_1 and Y_5, which may be identical or different, each represent a halogen atom, a C1-C4 alkyl group, a C1-C4 haloalkyl group, a C1-C3 alkylthio group, a C1-C3 haloalkylthio group, a C1-C3 alkylsulfinyl group, a C1-C3 haloalkylsulfinyl group, a C1-C3 alkylsulfonyl group, a C1-C3 haloalkylsulfonyl group or a cyano group;
Y_3 represents a C2-C6 perfluoroalkyl group, a C1-C6 perfluoroalkylthio group, a C1-C6 perfluoroalkylsulfinyl group or a C1-C6 perfluoroalkylsulfonyl group; and Y_2 and Y_4 each represent a hydrogen atom, a halogen atom or a C1-C4 alkyl group;
or by Formula (3) :



(3)

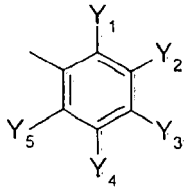
wherein Y_6 and Y_9, which may be identical or different, each represent a halogen atom, a C1-C4 alkyl group, a C1-C4 haloalkyl group, a C1-C3 alkylthio group, a C1-C3 haloalkylthio group, a C1-C3 alkylsulfinyl group, a C1-C3 haloalkylsulfinyl group, a C1-C3 alkylsulfonyl group, a C1-C3 haloalkylsulfonyl group or a cyano group; Y_8 represents a C1-C4 haloalkoxy group, a C2-C6 perfluoroalkyl group, a C1-C6 perfluoroalkylthio group, a C1-C6 perfluoroalkylsulfinyl group or a C1-C6 perfluoroalkylsulfonyl group; and Y_7 represents a hydrogen atom, a halogen atom or a C1-C4 alkyl group.

[2] The compound as described in [1], represented by Formula (1a) , which is Formula (1) with A_1, A_2, A_3 and A_4 being all carbon atoms :



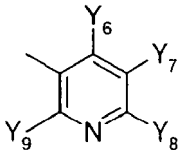
(1a)

wherein R_1, R_2, G_1, G_2 and Q_1 have the same meanings as those described in [1], and Q_2 is represented either by Formula (2):



(2)

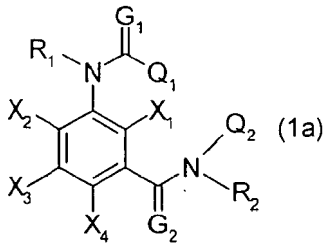
wherein Y_1 and Y_5, which may be identical or different, each represent a halogen atom, a C1-C4 alkyl group, a C1-C4 haloalkyl group, a C1-C3 alkylthio group, a C1-C3 haloalkylthio group, a C1-C3 alkylsulfinyl group, a C1-C3 haloalkylsulfinyl group, a C1-C3 alkylsulfonyl group, a C1-C3 haloalkylsulfonyl group or a cyano group; Y_3 represents a C1-C6 perfluoroalkylthio group, a C1-C6 perfluoroalkylsulfinyl group or a C1-C6 perfluoroalkylsulfonyl group; and Y_2 and Y_4 each represent a hydrogen atom, a halogen atom or a C1-C4 alkyl group;
or by Formula (3):



(3)

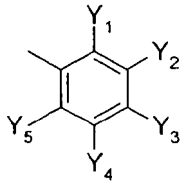
wherein Y_6 and Y_9, which may be identical or different, each represent a halogen atom, a C1-C4 alkyl group, a C1-C4 haloalkyl group, a C1-C3 alkylthio group, a C1-C3 haloalkylthio group, a C1-C3 alkylsulfinyl group, a C1-C3 haloalkylsulfinyl group, a C1-C3 alkylsulfonyl group, a C1-C3 haloalkylsulfonyl group or a cyano group; Y_8 represents a C1-C4 haloalkoxy group, a C1-C6 perfluoroalkylthio group, a C1-C6 perfluoroalkylsulfinyl group or a C1-C6 perfluoroalkylsulfonyl group; and Y_7 represents a hydrogen atom, a halogen atom or a C1-C4 alkyl group,
wherein in Formula (1a) , X_1 and X_2 each represent a hydrogen atom or a fluorine atom; and
X_3 and X_4 represent a hydrogen atom.

[3] The compound as described in [1], represented by Formula (1a), which is Formula (1) with A_1, A_2, A_3 and A_4 being all carbon atoms:



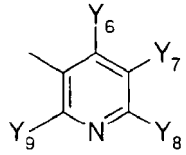
(1a)

wherein Q_2 is represented either by Formula (2):



(2)

wherein Y_1 and Y_5, which may be identical or different, each represent a halogen atom, a C1-C4 alkyl group, a C1-C4 haloalkyl group, a C1-C3 alkylthio group, a C1-C3 haloalkylthio group, a C1-C3 alkylsulfonyl group, a C1-C3 haloalkylsulfinyl group, a C1-C3 alkylsulfonyl group, a C1-C3 haloalkylsulfonyl group or a cyano group; Y_3 represents a C2-C6 perfluoroalkyl group; and Y_2 and Y_4 each represent a hydrogen atom, a halogen atom or a C1-C4 alkyl group;
or by Formula (3):



(3)

wherein Y_6 and Y_9, which may be identical or different, each represent a halogen atom, a C1-C4 alkyl group, a C1-C4 haloalkyl group, a C1-C3 alkylthio group, a C1-C3 haloalkylthio group, a C1-C3 alkylsulfinyl group, a C1-C3 haloalkylsulfinyl group, a C1-C3 alkylsulfonyl group, a C1-C3 haloalkylsulfonyl group or a cyano group; Y_8 represents a C2-C6 perfluoroalkyl group; and Y_7 represents a hydrogen atom, a halogen atom or a C1-C4 alkyl group;

X_1 and X_2 each represent a hydrogen atom or a fluorine atom;
X_3 and X_4 represent a hydrogen atom;
one of R_1 and R_2 is a hydrogen atom, the other is a C1-C4 alkyl group or an optionally substituted C1-C4 alkylcarbonyl group, or both of them are independently a C1-C4 alkyl group or an optionally substituted C1-C4 alkylcarbonyl group;
G_1 and G_2 each represent an oxygen atom or a sulfur atom; and
Q_1 represents a phenyl group; a substituted phenyl group having one or more substituents, which may be identical or different, selected from a halogen atom, a C1-C4 alkyl group, a C1-C4 haloalkyl group, a C2-C4 alkenyl group, a C2-C4 haloalkenyl group, a C2-C4 alkynyl group, a C2-C4 haloalkynyl group, a C3-C6 cycloalkyl group, a C3-C6 halocycloalkyl group, a C1-C3 alkoxy group, a C1-C3 haloalkoxy group, a C1-C3 alkylthio group, a C1-C3 haloalkylthio group, a C1-C3 alkylsulfinyl group, a C1-C3 haloalkylsulfinyl group, a C1-C3 alkylsulfonyl group, a C1-C3 haloalkylsulfonyl group, a C1-C4 alkylamino group, a di-C1-C4-alkylamino group, a cyano group, a nitro group, a hydroxyl group, a C1-C4 alkylcarbonyl group, a C1-C4 alkylcarbonyloxy group, a C1-C4 alkoxycarbonyl group, an acetylamino group and a phenyl group; a heterocyclic group selected from a pyridyl group, a pyridin-N-oxide group, a pyrimidinyl group, a pyridazinyl group, a pyrazinyl group, a furyl group, a thienyl group, an oxazolyl group, an isoxazolyl group, an oxadiazolyl group, a thiazolyl group, an isothiazolyl group, an imidazolyl group, a triazolyl group, a pyrrolyl group, a pyrazolyl group or a tetrazolyl group ; or a substituted heterocyclic group (which means the same as those described above) having one or more substituents, which may be identical or different, selected from a halogen atom, a C1-C4 alkyl group, a C1-C4 haloalkyl group, a C2-C4 alkenyl group, a C2-C4 haloalkenyl group, a C2-C4 alkynyl group, a C2-C4 haloalkynyl group, a C3-C6 cycloalkyl group, a C3-C6 halocycloalkyl group, a C1-C3 alkoxy group, a C1-C3 haloalkoxy group, a C1-C3

alkylthio group, a C1-C3 haloalkylthio group, a C1-C3 alkylsulfinyl group, a C1-C3 haloalkylsulfinyl group, a C1-C3 alkylsulfonyl group, a C1-C3 haloalkylsulfonyl group, a C1-C4 alkylamino group, a di-C1-C4-alkylamino group, a cyano group, a nitro group, a hydroxyl group, a C1-C4 alkylcarbonyl group, a C1-C4 alkylcarbonyloxy group, a C1-C4 alkoxycarbonyl group, an acetylamino group and a phenyl group.

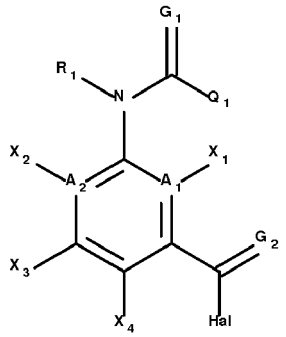
[4] The compound as described in [1], wherein A_1 is a nitrogen atom or an oxidized nitrogen atom; A_2, A_3 and A_4 are a carbon atom; R_1 and R_2 are each a hydrogen or a C1-C4 alkyl group; X is a hydrogen atom and a fluorine atom; n is 0 or 1; and G_1 and G_2 are an oxygen atom.

[5] The compound as described in any one of [2], [3] and [4],

wherein

Q_1 is a phenyl group; a substituted phenyl group having one or more substituents, which may be identical or different, selected from a halogen atom, a C1-C4 alkyl group, a C1-C4 haloalkyl group, a C2-C4 alkenyl group, a C2-C4 haloalkenyl group, a C2-C4 alkynyl group, a C2-C4 haloalkynyl group, a C3-C6 cycloalkyl group, a C3-C6 halocycloalkyl group, a C1-C3 alkoxy group, a C1-C3 haloalkoxy group, a C1-C3 alkylthio group, a C1-C3 haloalkylthio group, a C1-C3 alkylsulfinyl group, a C1-C3 haloalkylsulfinyl group, a C1-C3 alkylsulfonyl group, a C1-C3 haloalkylsulfonyl group, a C1-C4 alkylamino group, a di-C1-C4-alkylamino group, a cyano group, a nitro group, a hydroxyl group, a C1-C4 alkylcarbonyl group, a C1-C4 alkylcarbonyloxy group, a C1-C4 alkoxycarbonyl group, an acetylamino group and a phenyl group; a pyridyl group; or a substituted pyridyl group having one or more substituents, which may be identical or different, selected from a halogen atom, a C1-C4 alkyl group, a C1-C4 haloalkyl group, a C2-C4 alkenyl group, a C2-C4 haloalkenyl group, a C2-C4 alkynyl group, a C2-C4 haloalkynyl group, a C3-C6 cycloalkyl group, a C3-C6 halocycloalkyl group, a C1-C3 alkoxy group, a C1-C3 haloalkoxy group, a C1-C3 alkylthio group, a C1-C3 haloalkylthio group, a C1-C3 alkylsulfinyl group, a C1-C3 haloalkylsulfinyl group, a C1-C3 alkylsulfonyl group, a C1-C3 haloalkylsulfonyl group, a C1-C4 alkylamino group, a di-C1-C4-alkylamino group, a cyano group, a nitro group, a hydroxyl group, a C1-C4 alkylcarbonyl group, a C1-C4 alkylcarbonyloxy group, a C1-C4 alkoxycarbonyl group, an acetylamino group and a phenyl group.

[6] A compound represented by Formula (4):



(4)

wherein:

(a) in the case of R_1 represents a hydrogen atom:

A_1 and A_2 each represent a carbon atom;
G_1 and G_2 each represent an oxygen atom or a sulfur atom;
X_1 is hydrogen or fluorine;
X_2, X_3 and X_4 represent a hydrogen atom;
Q_1 represents a phenyl group; a substituted phenyl group having one or more substituents, which may be identical or different, selected from a halogen atom, a C1-C4 alkyl group, a C1-C4 haloalkyl group, a cyano group and a nitro group; a pyridyl group; or a substituted pyridyl group, having one or more substituents, which may be identical or different, selected from a halogen atom;

(b) in the case of R_1 represents a C1-C4 alkyl group, or a C1-C4 alkylcarbonyl group:

wherein A_1 and A_2, each represent a carbon atom, a nitrogen atom or an oxidized nitrogen atom;

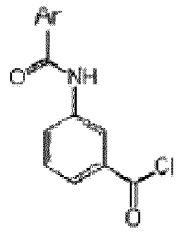
G_1 and G_2 each represent an oxygen atom or a sulfur atom;

X1, X2, X3 and X4, which may be identical or different to each other, represent a hydrogen atom, a halogen atom, an optionally substituted C1-C3 alkyl group or a trifluoromethyl group;

Q_1 represents a phenyl group; a substituted phenyl group having one or more substituents, which may be identical or different, selected from a halogen atom, a C1-C4 alkyl group, a C1-C4 haloalkyl group, a C2-C4 alkenyl group, a C2-C4 haloalkenyl group, a C2-C4 alkynyl group, a C2-C4 haloalkynyl group, a C3-C6 cycloalkyl group, a C3-C6 halocycloalkyl group, a C1-C3 alkoxy group, a C1-C3 haloalkoxy group, a C1-C3 alkylthio group, a C1-C3 haloalkylthio group, a C1-C3 alkylsulfinyl group, a C1-C3 haloalkylsulfinyl group, a C1-C3 alkylsulfonyl group, a C1-C3 haloalkylsulfonyl group, a C1-C4 alkylamino group, a di-C1-C4-alkylamino group, a cyano group, a nitro group, a hydroxyl group, a C1-C4 alkylcarbonyl group, a C1-C4 alkylcarbonyloxy group, a C1-C4 alkoxycarbonyl group, an acetylamino group and a phenyl group; a heterocyclic group selected from a pyridyl group, a pyridin-N-oxide group, a pyrimidinyl group, a pyridazinyl group, a pyrazinyl group, a furyl group, a thienyl group, an oxazolyl group, an isoxazolyl group, an oxadiazolyl group, a thiazolyl group, an isothiazolyl group, an imidazolyl group, a triazolyl group, a pyrrolyl group, a pyrazolyl group or a tetrazolyl group ; or a substituted heterocyclic group (which means the same as those described above) having one or more substituents, which may be identical or different, selected from a halogen atom, a C1-C4 alkyl group, a C1-C4 haloalkyl group, a C2-C4 alkenyl group, a C2-C4 haloalkenyl group, a C2-C4 alkynyl group, a C2-C4 haloalkynyl group, a C3-C6 cycloalkyl group, a C3-C6 halocycloalkyl group, a C1-C3 alkoxy group, a C1-C3 haloalkoxy group, a C1-C3 alkylthio group, a C1-C3 haloalkylthio group, a C1-C3 alkylsulfinyl group, a C1-C3 haloalkylsulfinyl group, a C1-C3 alkylsulfonyl group, a C1-C3 haloalkylsulfonyl group, a C1-C4 alkylamino group, a di-C1-C4-alkylamino group, a cyano group, a nitro group, a hydroxyl group, a C1-C4 alkylcarbonyl group, a C1-C4 alkylcarbonyloxy group, a C1-C4 alkoxy-carbonyl group, an acetylamino group or a phenyl group; and

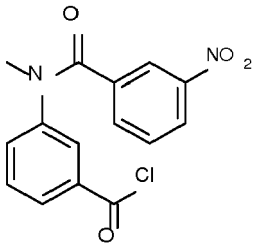
Hal represents a chlorine atom or a bromine atom,

with the proviso that the compound is not a compound of the following formula:



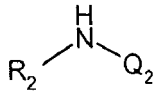
where Ar is phenyl, 3,4-dimethoxyphenyl, 3-methylphenyl, 3-chlorophenyl, 4-methoxyphenyl, 3-nitrophenyl or 3-pyridyl;

and with the proviso that the compound is not a compound of the following formula:



[7] The compound according to [6] wherein A_2 is a carbon atom.

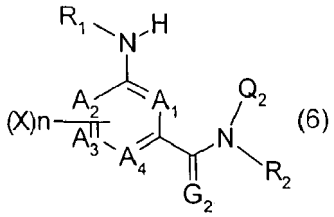
Also diclosed is a process for preparation of the compound represented by Formula (1) as described in [1], wherein the compound represented by Formula (4) as described in [6] is reacted with a compound represented by Formula (5):



(5)

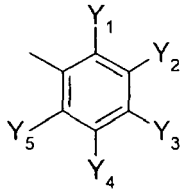
(wherein R_2 andQ_2 are as defined in [1].

Also disclosed is a compound represented by Formula (6):



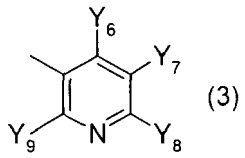
(6)

wherein A_1, A_2, A_3 and A_4 each represented by a carbon atom, a nitrogen atom or an oxidized nitrogen atom;
R_1 and R_2 each represent a hydrogen atom, a C1-C4 alkyl group or a C1-C4 alkylcarbonyl group;
G_2 represents an oxygen atom or a sulfur atom;
X, which may be identical or different, represents a hydrogen atom, a halogen atom, an optionally substituted C1-C3 alkyl group or a trifluoromethyl group;
n represents an integer of 0 to 4;
Q_2 is represented either by Formula (2):



(2)

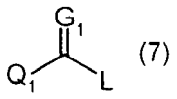
(wherein Y_1 and Y_5, which may be identical or different, each represent a halogen atom, a C1-C4 alkyl group, a C1-C4 haloalkyl group, a C1-C3 alkylthio group, a C1-C3 haloalkylthio group, a C1-C3 alkylsulfinyl group, a C1-C3 haloalkylsulfinyl group, a C1-C3 alkylsulfonyl group, a C1-C3 haloalkylsulfonyl group or a cyano group; Y_3 represents a C2-C6 perfluoroalkyl group, a C1-C6 perfluoroalkylthio group, a C1-C6 perfluoroalkylsulfinyl group or a C1-C6 perfluoroalkylsulfonyl group; and Y_2 and Y_4 each represent a hydrogen atom, a halogen atom or a C1-C4 alkyl group);
or by Formula (3):



(3)

(wherein Y_6 and Y_9, which may be identical or different, each represent a halogen atom, a C1-C4 alkyl group, a C1-C4 haloalkyl group, a C1-C3 alkylthio group, a C1-C3 haloalkylthio group, a C1-C3 alkylsulfinyl group, a C1-C3 haloalkylsulfinyl group, a C1-C3 alkylsulfonyl group, a C1-C3 haloalkylsulfonyl group or a cyano group; Y_8 represents a C1-C4 haloalkoxy group, a C2-C6 perfluoroalkyl group, a C1-C6 perfluoroalkylthio group, a C1-C6 perfluoroalkylsulfinyl group or a C1-C6 perfluoroalkylsulfonyl group; and Y_7 represents a hydrogen atom, a halogen atom or a C1-C4 alkyl group).

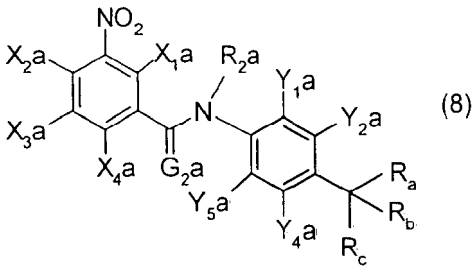
Also disclosed is a process for preparation of the compound represented by Formula (1) as described in [1], wherein the compound represented by Formula (6) as described in [11] is reacted with a compound represented by Formula (7):



(7)

(wherein G_1 and Q_1 are defined in [1] ; and
L represents a halogen atom or a hydroxyl group).

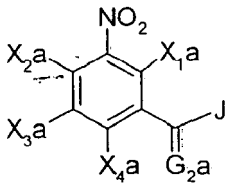
[8] A compound represented by Formula (8):



(8)

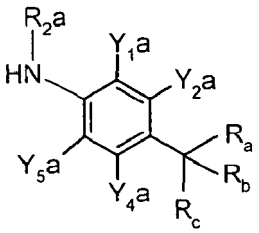
wherein X_1a, X_2a, X_3a and X_4a each represent a hydrogen atom, a C1-C3 alkyl group, a trifluoromethyl group, a hydroxyl group, an amino group or a halogen atom;
R_a and R_b each represent a fluorine atom or a C1-C4 perfluoroalkyl group;
R_c represents a hydroxyl group, a group -O-R_d (wherein R_d represents a C1-C3 alkyl group, a C1-C3 haloalkyl group, a C1-C3 alkylsulfonyl, a C1-C3 haloalkylsulfonyl group, an arylsulfonyl group, a C1-C4 alkylcarbonyl group or a C1-C4 haloalkylcarbonyl group), a chlorine atom, a bromine atom or an iodine atom;
R_2a represents a hydrogen atom, a C1-C3 alkyl group, a C1-C3 haloalkyl group, a C1-C3 alkoxy group, a C1-C3 haloalkoxy group, a C1-C4 alkylthio group, a C1-C4 haloalkylthio group, a C1-C4 alkylcarbonyl group or a C1-C4 haloalkylcarbonyl group;
Y_1a and Y_5a each represent a C1-C4 alkyl group, a C1-C4 haloalkyl group, a C1-C4 alkylthio group, a C1-C4 haloalkylthio group, a C1-C3 alkylsulfinyl group or a C1-C3 haloalkylsulfinyl group, a C1-C3 alkylsulfonyl group, a C1-C3 haloalkylsulfonyl group, a cyano group, a hydroxyl group or a halogen atom;
Y_2a and Y_4a each represent a hydrogen atom, a C1-C4 alkyl group or a halogen atom; and
G_2a represents an oxygen atom or a sulfur atom.

Also disclosed is a process for preparation of the compound represented by Formula (8) as described in [8], wherein a compound represented by Formula (9):



(9)

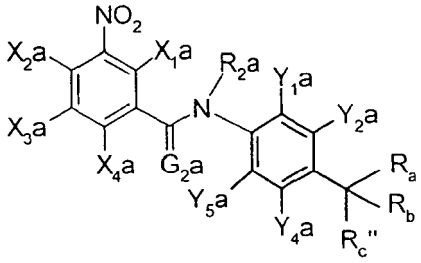
(wherein J represents a halogen atom or a hydroxyl group; and X_1a, X_2a, X_3a, X_4a and G_2a have the same meanings as those described in [8]),
is reacted with a compound represented by Formula (10):



(10)

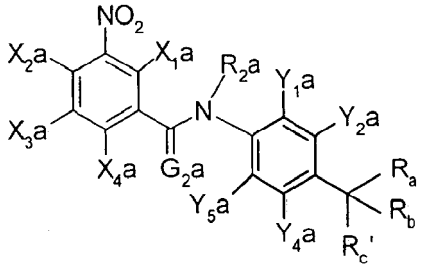
(wherein R_a, R_b, R_c, Y_1a, Y_2a, Y_4a, Y_5a and R_2a have the same meanings as those described in [8]).

Also disclosed is a process for preparation of a compound represented by Formula (8b):



(8b)

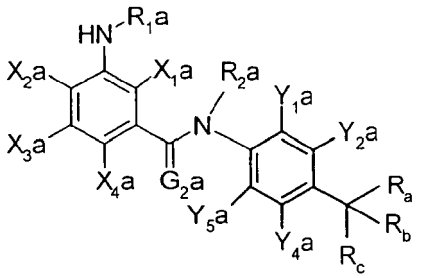
(wherein X_1a, X_2a, X_3a, X_4a, G_2a, R_2a, Y_1a, Y_2a, Y_4a, Y_5a, R_a and R_b have the same meanings as those described in [8]; and R_c" represents a chlorine atom, a bromine atom or an iodine atom) ;
wherein a compound represented by Formula (8a):



(8a)

(wherein X_1a, X_2a, X_3a, X_4a, G_2a, R_2a, Y_1a, Y_2a, Y_4a, Y_5a, R_a and R_b have the same meanings as those described in [8]; and R_c' represents a hydroxyl group or a group -O-R_d (wherein R_d represents a C1-C3 alkyl group, a C1-C3 haloalkyl group, a C1-C3 alkylsulfonyl group, a C1-C3 haloalkylsulfonyl group, an arylsulfonyl group, a C1-C4 alkylcarbonyl group or a C1-C4 haloalkylcarbonyl group)),
is reacted with a suitable halogenating agent.

[9] A compound represented by Formula (11):

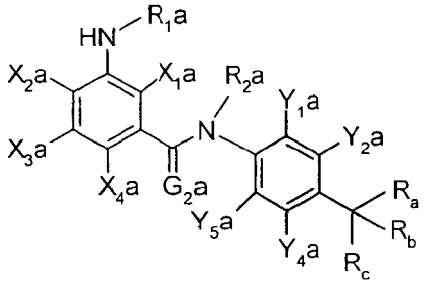


(11)

wherein X_1a, X_2a, X_3a and X_4a each represent a hydrogen atom, a C1-C3 alkyl group, a trifluoromethyl group, a hydroxyl group, an amino group or a halogen atom;
R_a and R_b each represent a fluorine atom or a C1-C4 perfluoroalkyl group;
R_c represents a hydroxyl group, a group -O-R_d (wherein R_d represents a C1-C3 alkyl group, a C1-C3 haloalkyl group, a C1-C3 alkylsulfonyl group, a C1-C3 haloalkylsulfonyl group, an arylsulfonyl group, a C1-C4 alkylcarbonyl group or a C1-C4 haloalkylcarbonyl group), a chlorine atom, a bromine atom or an iodine atom;
R_1a and R_2a each represent a hydrogen atom, a C1-C3 alkyl group, a C1-C3 haloalkyl group, a C1-C3 alkoxy group, a C1-C3 haloalkoxy group, a C1-C4 alkylthio group, a C1-C4 haloalkylthio group, a C1-C4 alkylcarbonyl group or a C1-C4 haloalkylcarbonyl group;
Y_1a and Y_5a each represent a C1-C4 alkyl group, a C1-C4 haloalkyl group, a C1-C4 alkylthio group, a C1-C4 haloalkylthio group, a C1-C3 alkylsulfinyl group, a C1-C3 haloalkylsulfinyl group, a C1-C3 alkylsulfonyl group, a C1-C3 haloalkylsulfonyl group, a cyano group, a hydroxyl group or a halogen atom;

Y_2a and Y_4a each represent a hydrogen atom, a C1-C4 alkyl group or a halogen atom; and
G_2a represents an oxygen atom or a sulfur atom.

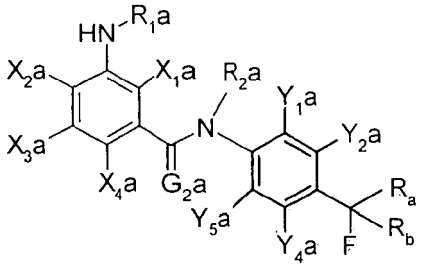
Also disclosed is a process for preparation of the compound represented by Formula (11) as described in [9]:



(11)

(wherein X_1a, X_2a, X_3a, X_4a, R_a, R_b, R_c, R_1a, R_2a, Y_1a, Y_2a, Y_4a, Y_5a and G_2a have the same meanings as those described in [9]),
wherein the compound represented by Formula (8) as described in [13] is reacted in the presence of a suitable reducing agent.

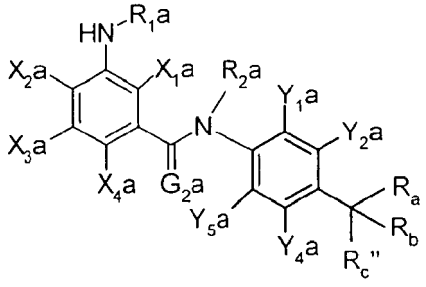
Also disclosed is a process for preparation of a compound represented by Formula (12):



(12)

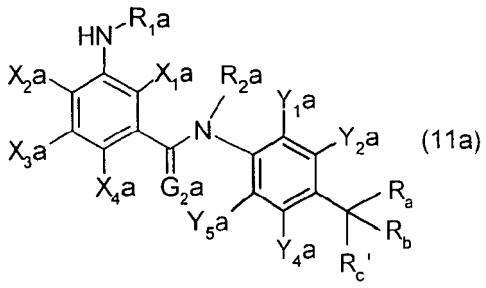
wherein X_1a, X_2a, X_3a and X_4a each represent a hydrogen atom, a C1-C3 alkyl group, a trifluoromethyl group, a hydroxyl group, an amino group or a halogen atom;
R_a and R_b each represent a fluorine atom or a C1-C4 perfluoroalkyl group;
R_1a and R_2a each represent a hydrogen atom, a C1-C3 alkyl group, a C1-C3 haloalkyl group, a C1-C3 alkoxy group, a C1-C3 haloalkoxy group, a C1-C4 alkylthio group, a C1-C4 haloalkylthio group, a C1-C4 alkylcarbonyl group or a C1-C4 haloalkylcarbonyl group;
Y_1a and Y_5a each represent a C1-C4 alkyl group, a C1-C4 haloalkyl group, a C1-C4 alkylthio group, a C1-C4 haloalkylthio group, a C1-C3 alkylsulfinyl group, a C1-C3 haloalkylsulfinyl group, a C1-C3 alkylsulfonyl group, a C1-C3 haloalkylsulfonyl group, a cyano group, a hydroxyl group or a halogen atom;
Y_2a and Y_4a each represent a hydrogen atom, a C1-C4 alkyl group or a halogen atom; and
G_2a represents an oxygen atom or a sulfur atom.

Also disclosed is a process for preparation of a compound represented by Formula (11b):



(11b)

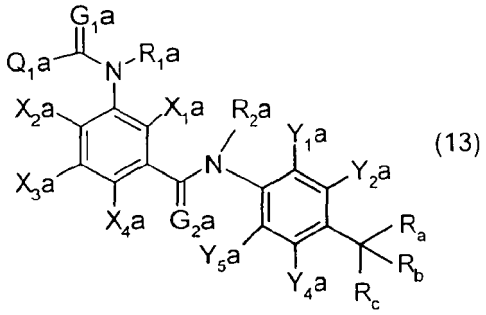
(wherein X_1a, X_2a, X_3a, X_4a, G_2a, R_1a, R_2a, Y_1a, Y_2a, Y_4a, Y_5a, R_a and R_b have the same meanings as those described above ; and R_c" represents a chlorine atom, a bromine atom or an iodine atom);
wherein a compound represented by Formula (11a):



(11a)

(wherein X_1a, X_2a, X_3a, X_4a, G_2a, R_1a, R_2a, Y_1a, Y_2a, Y_4a, Y_5a, R_a and R_b have the same meanings as those describe above; and R_c' represents a hydroxyl group or a group -O-R_d (wherein R_d represents a C1-C3 alkyl group, a C1-C3 haloalkyl group, a C1-C3 alkylsulfonyl group, a C1-C3 haloalkylsulfonyl group, an arylsulfonyl group, a C1-C4 alkylcarbonyl group or a C1-C4 haloalkylcarbonyl group)),
is reacted with a suitable halogenating agent.

[10] A compound represented by Formula (13):

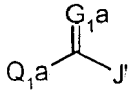


(13)

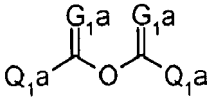
wherein X_1a, X_2a, X_3a and X_4a each represent a hydrogen atom, a c1-C3 alkyl group, a trifluoromethyl group, a hydroxyl group, an amino group or a halogen atom;
R_a and R_b each represent a fluorine atom or a C1-C4 perfluoroalkyl group;
R_c represents a hydroxyl group, a group -O-R_d (wherein R_d represents a C1-C3 alkyl group, a C1-C3 haloalkyl group, a C1-C3 alkylsulfonyl group, a C1-C3 haloalkylsulfonyl group, an arylsulfonyl group, a C1-C4 alkylcarbonyl group or a C1-C4 haloalkylcarbonyl group), a chlorine atom, a bromine atom or an iodine atom;
R_1a and R_2a each represent a hydrogen atom, a C1-C3 alkyl group, a C1-C3 haloalkyl group, a C1-C3 alkoxy group, a C1-C3 haloalkoxy group, a C1-C4 alkylthio group, a C1-C4 haloalkylthio group, a C1-C4 alkylcarbonyl group or a C1-C4 haloalkylcarbonyl group;
Y_1a and Y_5a each represent a C1-C4 alkyl group, a C1-C4 haloalkyl group, a C1-C4 alkylthio group, a C1-C4 haloalkylthio group, a C1-C3 alkylsulfinyl group, a C1-C3 haloalkylsulfinyl group, a C1-C3 alkylsulfonyl group, a C1-C3 haloalkylsulfonyl group, a cyano group, a hydroxyl group or a halogen atom;
Y_2a and Y_4a each represent a hydrogen atom, a C1-C4 alkyl group or a halogen atom;
G_1a and G_2a each represent an oxygen atom or a sulfur atom;
Q_1a represents a phenyl group; a substituted phenyl group having one or more substituents, which may be identical or different, selected from a halogen atom, a C1-C4 alkyl group, a C1-C4 haloalkyl group, a C2-C4 alkenyl group, a C2-C4 haloalkenyl group, a C2-C4 alkynyl group, a C2-C4 haloalkynyl group, a C3-C6 cycloalkyl group, a C3-C6 halocycloalkyl group, a C1-C3 alkoxy group, a C1-C3 haloalkoxy group, a C1-C3 alkylthio group, a C1-C3 haloalkylthio group, a C1-C3 alkylsulfinyl group, a C1-C3 haloalkylsulfinyl group, a C1-C3 alkylsulfonyl group, a C1-C3 haloalkylsulfonyl group, a C1-C4 alkylamino group, a di -C1-C4 -alkylamino group, a cyano group, a nitro group, a hydroxyl group, a C1-C4 alkylcarbonyl group, a C1-C4 alkylcarbonyloxy group, a C1-C4 alkoxycarbonyl group, an acetylamino group and a phenyl group; a heterocyclic group selected from a pyridyl group, a pyridin-N-oxide group, a pyrimidinyl group, a pyridazinyl group, a pyrazinyl group, a furyl group, a

thienyl group, an oxazolyl group, an isoxazolyl group, an oxadiazolyl group, a thiazolyl group, an isothiazolyl group, an imidazolyl group, a triazolyl group, a pyrrolyl group, a pyrazolyl group or a tetrazolyl group ; or a substituted heterocyclic group (which means the same as those described above) having one or more substituents, which may be identical or different, selected from a halogen atom, a C1-C4 alkyl group, a C1-C4 haloalkyl group, a C2-C4 alkenyl group, a C2-C4 haloalkenyl group, a C2-C4 alkynyl group, a C2-C4 haloalkynyl group, a C3-C6 cycloalkyl group, a C3-C6 halocycloalkyl group, a C1-C3 alkoxy group, a C1-C3 haloalkoxy group, a C1-C3 alkylthio group, a C1-C3 haloalkylthio group, a C1-C3 alkylsulfinyl group, a C1-C3 haloalkylsulfinyl group, a C1-C3 alkylsulfonyl group, a C1-C3 haloalkylsulfonyl group, a C1-C4 alkylamino group, a di-C1-C4-alkylamino group, a cyano group, a nitro group, a hydroxyl group, a C1-C4 alkylcarbonyl group, a C1-C4 alkylcarbonyloxy group, a C1-C4 alkoxycarbonyl group, an acetylamino group and a phenyl group.

Also disclosed is a process for preparation of the compound represented by Formula (13) as described in [10], wherein the compound represented by Formula (11) as described in [9] is reacted with a compound represented by Formula (14):

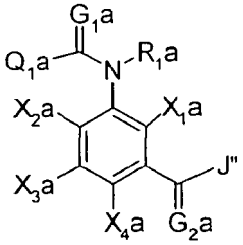

(14)

(wherein J' represents a halogen atom or a hydroxyl group; and
Q_1a and G_1a have the same meanings as those described in [10]);
or a compound represented by Formula (15):

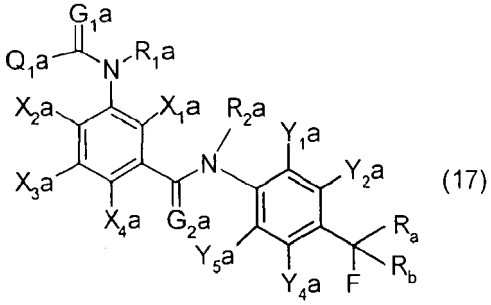

(15)

(wherein Q_1a and G_1a have the same meanings as those described in [10].

Also disclosed is a process for preparation of the compound represented by Formula (13) as described in [10], wherein a compound represented by Formula (16):

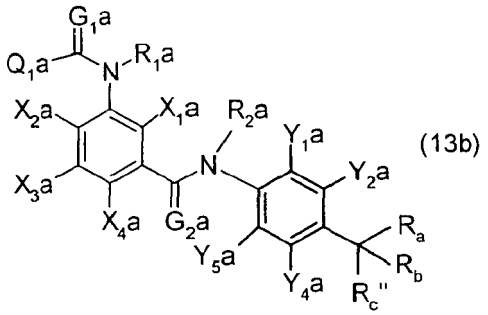

(16)

(wherein J" represents a halogen atom or a hydroxyl group; and X_1a, X_2a, X_3a, X_4a, G_1a, G_2a, R_1a and Q_1a have the same meanings as those described in [10]),
is reacted with the compound represented by Formula (10) as described above.
Also disclosed is a process for preparation of a compound represented by Formula (17):


(17)

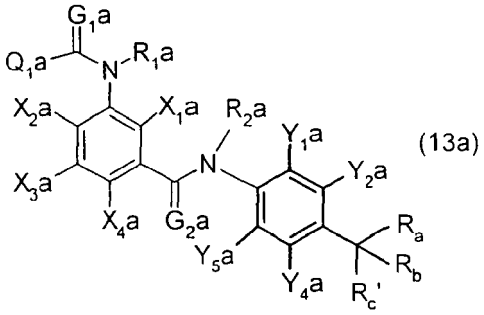
(wherein X_1a, X_2a, X_3a, X_4a, R_a, R_b, R_1a, R_2a, Y_1a, Y_2a, Y_4a, Y_5a, G_1a, G_2a and Q_1a have the same meanings as those described in [10],
wherein the compound represented by Formula (13) as described in [10] is reacted with a suitable fluorinating agent.

Also disclosed is a process for preparation of a compound represented by Formula (13b):



(13b)

(wherein X_1a, X_2a, X_3a, X_4a, R_a, R_b, R_1a, R_2a, Y_1a, Y_2a, Y_4a, Y_5a, G_1a, G_2a and Q_1a have the same meanings as those described in [10]; and R_c" represents a chlorine atom, a bromine atom or an iodine atom),
wherein a compound represented by Formula (13a):



(13a)

(wherein X_1a, X_2a, X_3a, X_4a, R_a, R_b, R_1a, R_2a, Y_1a, Y_2a, Y_4a, Y_5a, G_1a, G_2a and Q_1a have the same meanings as those described in [10]; and R_c' represents a hydroxyl group or a group -O-R_d (wherein R_d represents a C1-C3 alkyl group, a C1-C3 haloalkyl group, a C1-C3 alkylsulfonyl group, a C1-C3 haloalkylsulfonyl group, an arylsulfonyl group, a C1-C4 alkylcarbonyl group or a C1-C4 haloalkylcarbonyl group)),
is reacted with a suitable halogenating agent.

[11] An insecticide containing the compound as described in [1] to [5] as the active ingredient.
Also disclosed is a horticultural or agricultural insecticide containing the compound as described in [1] to [5] as an active ingredient.

[12] A method of using formulation in treating crops for cultivation or the soil to be treated with an effective amount of the compound as described in [1] to [5], in order to protect the crops from harmful organisms.
Also disclosed is a composition in which the compound as described in [1] to [5] is mixed with a suitable inert carrier, and optionally with an auxiliary agent,

[13] A mixture in which the compound as described in [1] to [5] is combined with at least one other insecticide and/or fungicide.

[14] The mixture according to [13], wherein the other insecticide is at least one selected from allethrin, tetramethrin, resmethrin, phenothrin, furamethrin, permethrin, cypermethrin, deltamethrin, cyhalothrin, cyfluthrin, fenpropathrin, tralomethrin, cycloprothrin, flucythrinate, fluvalinate, acrinathrin, tefluthrin, bifenthrin, empenthrin, beta-cyfluthrin, zeta-cypermethrin, fenvalerate, and the isomers thereof; or Dalmatian pyrethrum extract, DDVP, cyanophos, fenthion, fenitrothion, tetrachlorvinphos, dimethylvinphos, propaphos, methylparathion, temephos, phoxim, acephate, isofenphos, salithion, DEP, EPN, ethion, mecarbam, pyridafenthion, diazinon, pirimiphos-methyl, etrimfos, isoxathion, quinalphos, chlorpyrifosmethyl, chlorpyrifos, phosalone, phosmet, methidathion, oxydeprofos, vamidothion, malathion, phenthoate, dimethoate, formothion, thiometon, disulfoton, phorate, terbufos, profenofos, prothiofos,

sulprofos, pyraclofos, monocrotofos, naled, fosthiazate, cadusafos, NAC, MTMC, MIPC, BPMC, XMC, PHC, MPMC, ethiofencarb, bendiocarb, pirimicarb, carbosulfan, benfuracarb, methomyl, oxamyl, aldicarb, etofenprox, halfenprox, silafluofen, nicotine-sulfate, polynactins, abamectin, milbemectin, BT, cartap, thiocyclam, bensultap, diflubenzuron, chlorfluazuron, teflubenzuron, triflumuron, flufenoxuron, flucycloxuron, hexaflumuron, fluazuron, imidacloprid, nitenpyram, acetamiprid, dinotefuran, pymetrozine, fipronil, buprofezin, fenoxycarb, pyriproxyfen, methoprene, hydroprene, kinoprene, endosulfan, diafenthiuron, triazamate, tebufenozide, benzoepin, dicofol, chlorobenzilate, phenisobromolate, tetradifon, CPCBS, BPPS, chinomethionate, amitraz, benzomate, hexythiazox, fenbutatin oxide, cyhexatin, dienochlor, clofentezine, pyridaben, fenpyroximate, fenazaquin, tebufenpyrad; novaluron, noviflumuron, emamectin benzoate, clothianidin, thiacloprid, thiamethoxam, flupyrazofos, acequinocyl, bifenazate, chromafenozide, etoxazole, fluacrypyrim, flufenzine, halofenozide, indoxacarb, methoxyfenozide, spirodiclofen, tolfenpyrad, gamma-cyhalothrin, ethiprole, amidoflumet, bistrifluron, flonicamid, flubrocythrinate, flufenerim, pyridalyl, pyrimidifen, spinosad, and spiromesifen;
and the other fungicide is at least one selected from triadimefon, hexaconazole, propiconazole, ipconazole, prochloraz, triflumizole, pyrifenox, fenarimol, mepanipyrim, cyprodinil, metalaxyl, oxadixyl, benalaxyl, thiophanate-methyl, benomyl, mancozeb, propineb, zineb, metiram, tetrachloroisophthalonitrile, carpropamid, ethaboxam, dimethomorph, azoxystrobin, kresoxim-methyl, metominostrobin, orysastrobin, fluoxastrobin, trifloxystrobin, dimoxystrobin, pyraclostrobin, picoxystrobin, iprodione, procymidone, flusulfamide, dazomet, methyl isothiocyanate, chloropicrin, basic copper chloride, basic copper sulfate, copper nonylphenol sulfonate, oxine-copper, sulfur, zinc sulfate, edifenphos, tolclofos-methyl, fosetyl, phthalide, tricyclazole, pyroquilon, diclocymet, kasugamycin, validamycin, polyoxins, rape seed oil, benthiavalicarb-isopropyl, iprovalicarb, cyflufenamid, fenhexamid, quinoxyfen, spiroxamine, diflumetorim, metrafenone, picobenzamid, proquinazid, silthiofam, oxpoconazole, famoxadone, cyazofamid, fenamidone, furametpyr, zoxamide, boscalid, tiadinil, simeconazole, chlorothalonil, cymoxanil, captan, dithianon, fluazinam, folpet, dichlofluanid, (*RS*)-N-[2-(1,3-dimethylbutyl)thiophen-3-yl]-1-methyl-3-trifluoromethyl-1*H*-pyrazole-4-carboxamide (penthiopyrad: ISO proposed), oxycarboxin, mepronil, flutolanil, triforine, oxolinic acid, probenazole, acibenzolar-*S*-methyl, isoprothiolane, ferimzone, diclomezine, pencycuron, fluoroimide, chinomethionate, iminoctadine-triacetate and iminoctadine-albesilate.

[0010] The compound of the present invention exhibits an excellent controlling effect as a pesticide at low doses, and also exhibits an excellent controlling effect when used in combination with a pesticide, an acaricide, a nematocide, a fungicide, a herbicide, a plant growth controlling agent, a biocide or the like.

BEST MODE FOR CARRYING OUT THE INVENTION

[0011] The terms used in the formulae described in the present invention, such as Formula (1) have the meanings as described below, respectively.

[0012] A "halogen atom" represents a fluorine atom, a chlorine atom, a bromine atom or an iodine atom.

[0013] The expression "C_a-C_b (wherein, a and b represent an integer of 1 or more)" means such that, for example, "C1-C3" means having 1 to 3 carbon atoms, "C2-C6" means having 2 to 6 carbon atoms, and "C1-C4" means having 1 to 4 carbon atoms.

[0014] The terms "n-", "i-", "s-" and "t-" mean normal-, iso-, secondary- and tertiary-, respectively.

[0015] The term "optionally substituted alkyl group" means a straight, branched or cyclic alkyl group substituted with substituents, which may be identical or different, such as a hydrogen atom, a halogen atom, a hydroxyl group, a cyano group, a nitro group, a C1-C6 alkoxy group, a C1-C6 haloalkoxy group, a C1-C6 alkylthio group, a C1-C6 haloalkylthio group, a C1-C6 alkylsulfinyl group, a C1-C6 haloalkylsulfinyl group, a C1-C6 alkylsulfonyl group, a C1-C6 haloalkylsulfonyl group, a C1-C6 alkylcarbonyl group, a C1-C6 haloalkylcarbonyl group, a C1-C6 alkoxycarbonyl group, a C1-C6 haloalkoxycarbonyl group, a C1-C6 alkylcarbonyloxy group, a C1-C6 haloalkylcarbonyloxy group, an amino group, a C1-C6 alkylamino group, a di-C1-C6-alkylamino group, a phenyl group, a phenylcarbonyl group, a phenylamino group and a heterocyclic group.

[0016] The term "optionally substituted C1-C4 alkylcarbonyl group" means a straight, branched or cyclic alkylcarbonyl group having 1 to 4 carbon atoms which is substituted with substituents, which may be identical or different, such as a hydrogen atom, a halogen atom, a hydroxyl group, a cyano group, a nitro group, a C1-C6 alkoxy group, a C1-C6 haloalkoxy group, a C1-C6 alkylthio group, a C1-C6 haloalkylthio group, a C1-C6 alkylsulfinyl group, a C1-C6 haloalkylsulfinyl group, a C1-C6 alkylsulfonyl group, a C1-C6 haloalkylsulfonyl group, a C1-C6 alkylcarbonyl group, a C1-C6 haloalkylcarbonyl group, a C1-C6 alkoxycarbonyl group, a C1-C6 haloalkoxycarbonyl group, a C1-C6 alkylcarbonyloxy group, a C1-C6 haloalkylcarbonyloxy group, an amino group, a C1-C6 alkylamino group, a di-C1-C6-alkylamino group, an optionally substituted phenyl group, an optionally substituted phenylcarbonyl group, an optionally substituted phenylamino group and an optionally substituted heterocyclic group.

[0017] The term "optionally substituted phenyl group" means a phenyl substituted with substituents, which may be

identical or different, such as a hydrogen atom, a halogen atom, a hydroxyl group, a cyano group, a nitro group, a C1-C6 alkoxy group, a C1-C6 haloalkoxy group, a C1-C6 alkylthio group, a C1-C6 haloalkylthio group, a C1-C6 alkylsulfinyl group, a C1-C6 haloalkylsulfinyl group, a C1-C6 alkylsulfonyl group, a C1-C6 haloalkylsulfonyl group, a C1-C6 alkylcarbonyl group, a C1-C6 haloalkylcarbonyl group, a C1-C6 alkoxycarbonyl group, a C1-C6 haloalkoxycarbonyl group, a C1-C6 alkylcarbonyloxy group, a C1-C6 haloalkylcarbonyloxy group, an amino group, a C1-C6 alkylamino group, a di-C1-C6-alkylamino group, an acetylamino group, an optionally substituted phenyl group, an optionally substituted phenylcarbonyl group, an optionally substituted phenylamino group and an optionally substituted heterocyclic group.

[0018] The term "optionally substituted naphthyl group" means a naphthyl group substituted with substituents, which may be identical or different, such as a hydrogen atom, a halogen atom, a hydroxyl group, a cyano group, a nitro group, a C1-C6 alkoxy group, a C1-C6 haloalkoxy group, a C1-C6 alkylthio group, a C1-C6 haloalkylthio group, a C1-C6 alkylsulfonyl group, a C1-C6 haloalkylsulfinyl group, a C1-C6 alkylsulfonyl group, a C1-C6 haloalkylsulfonyl group, a C1-C6 alkylcarbonyl group, a C1-C6 haloalkylcarbonyl group, a C1-C6 alkoxycarbonyl group, a C1-C6 haloalkoxycarbonyl group, a C1-C6 alkylcarbonyloxy group, a C1-C6 haloalkylcarbonyloxy group, an amino group, a C1-C6 alkylamino group, a di-C1-C6-alkylamino group, an acetylamino group, an optionally substituted phenyl group, an optionally substituted phenylcarbonyl group, an optionally substituted phenylamino group and an optionally substituted heterocyclic group.

[0019] The term "optionally substituted heterocyclic group" means a heterocyclic group substituted with substituents, which may be identical or different, such as a hydrogen atom, a halogen atom, a hydroxyl group, a cyano group, a nitro group, a C1-C6 alkoxy group, a C1-C6 haloalkoxy group, a C1-C6 alkylthio group, a C1-C6 haloalkylthio group, a C1-C6 alkylsulfinyl group, a C1-C6 haloalkylsulfinyl group, a C1-C6 alkylsulfonyl group, a C1-C6 haloalkylsulfonyl group, a C1-C6 alkylcarbonyl group, a C1-C6 haloalkylcarbonyl group, a C1-C6 alkoxycarbonyl group, a C1-C6 haloalkoxycarbonyl group, a C1-C6 alkylcarbonyloxy group, a C1-C6 haloalkylcarbonyloxy group, an amino group, a C1-C6 alkylamino group, a di-C1-C6-alkylamino group, an acetylamino group, an optionally substituted phenyl group, an optionally substituted phenylcarbonyl group, an optionally substituted phenylamino group or an optionally substituted heterocyclic group.

[0020] Further, the term "C1-C3 alkyl group" represents a straight or branched alkyl group having 1 to 3 carbon atoms, such as methyl, ethyl, n-propyl, i-propyl, cyclopropyl, etc.; the term "C1-C4 alkyl group" represents a straight or branched alkyl group having 1 to 4 carbon atoms such as, for example, n-butyl, s-butyl, i-butyl, t-butyl, etc. in addition to the C1-C3 alkyl group; and the term "C1-C6 alkyl group" represents a straight or branched alkyl group having 1 to 6 carbon atoms, such as n-pentyl, 2-pentyl, 3-pentyl, neopentyl, n-hexyl, 2-hexyl, 4-methyl-2-pentyl, 3-methyl-n-pentyl, etc. in addition to the C1-C4 alkyl group.

[0021] The term "C1-C3 haloalkyl group" represents a straight or branched alkyl group having 1 to 3 carbon atoms, substituted with one or more halogen atoms which may be identical or different, such as monofluoromethyl, difluoromethyl, trifluoromethyl, monochloromethyl, dichloromethyl, trichloromethyl, monobromomethyl, dibromomethyl, tribromomethyl, 1-fluoroethyl, 2-fluoroethyl, 2,2-difluoroethyl, 2,2,2-trifluoroethyl, 1-chloroethyl, 2-chloroethyl, 2,2-dichloroethyl, 2,2,2-trichloroethyl, 1-bromoethyl, 2-bromoethyl, 2,2-dibromoethyl, 2,2,2-tribromoehtyl, 2-iodoethyl, pentafluoroethyl, 3-fluoro-n-propyl, 3-chloro-n-propyl, 3-bromo-n-propyl, 1,3-difluoro-2-propyl, 1,3-dichloro-2-propyl, 1,1,1-trifluoro-2-propyl, 1-chloro-3-fluoro-2-propyl, 1,1,1,3,3,3-hexafluoro-2-propyl, 1,1,1,3,3,3-hexafluoro-2-chloro-2-propyl, 2,2,3,3,3-pentafluoro-n-propyl, heptafluoro-i-propyl or heptafluoro-n-propyl. The term "C1-C4 haloalkyl group" represents a straight or branched alkyl group having 1 to 4 carbon atoms and being substituted with one or more halogen atoms which may be identical or different, such as 4-fluoro-n-butyl, nonafluoro-n-butyl and nonafluoro-2-butyl in addition to the "C1-C3 haloalkyl group".

[0022] The term "C2-C4 alkenyl group" represents an alkenyl group having 2 to 4 carbon atoms and a double bond in the carbon chain, such as vinyl, allyl, 2-butenyl or 3-butenyl. The Term "C2-C4 haloalkenyl group" represents a straight or branched alkenyl group having 2 to 4 carbon atoms and a double bond in the carbon chain, and being substituted with one or more halogen atoms which may be identical or different, such as 3,3-diflouro-2-propenyl, 3,3-dichloro-2-propenyl, 3,3-dibromo-2-propenyl, 2,3-dibromo-2-propenyl, 4,4-difluoro-3-butenyl and 3,4,4-tribromo-3-butenyl.

[0023] The term "C2-C4 alkynyl group" represents a straight or branched alkynyl group having 2 to 4 carbon atoms and a triple bond in the carbon chain, such as propargyl, 1-butyn-3-yl and 1-butyn-3-methyl-3-yl. The term "C2-C4 haloalkynyl group" represents a straight or branched alkenyl group having 2 to 4 carbon atoms and a triple bond in the carbon chain, and being substituted with one or more halogen atoms which may be identical or different.

[0024] The term "C3-C6 cycloalkyl group" represents a cycloalkyl group having a ring structure of 3 to 6 carbon atoms, such as cyclopropyl, cyclobutyl, cyclopentyl, 2-methylcyclopentyl, 3-methylcyclopentyl and cyclohexyl. The term "C3-C6 halocycloalkyl group" represents a cycloalkyl group having a ring structure of 3 to 6 carbon atoms and being substituted with one more halogen atoms which may be identical or different, such as 2,2-,3,3-tetrafluorocylcobutyl, 2-chlorocyclohexyl and 4-chlorocyclohexyl.

[0025] The term "C1-C3 alkoxy group" represents a straight or branched alkoxy group having 1 to 3 carbon atoms, such as methoxy, ethoxy, n-propyloxy and isopropyloxy. The term "C1-C3 haloalkoxy group" represents a straight or

branched haloalkoxy group having 1 to 3 carbon atoms, substituted with one or more halogen atoms which may be identical or different, such as trifluoromethoxy, 1,1,1,3,3,3-hexafluoro-2-propyloxy, 2,2,2-trifluoroethoxy, 2-chloroethoxy and 3-fluoro-n-propyloxy. The term "C1-C4 haloalkoxy group" represents a straight or branched haloalkoxy group having 1 to 4 carbon atoms and being substituted with one or more halogen atoms which may be identical or different, such as 1,1,1,3,3,4,4,4-octafluoro-2-butyloxy in addition to the "C1-C3 haloalkoxy group".

[0026] The term "C1-C3 alkylthio group" represents a straight or branched alkylthio group having 1 to 3 carbon atoms, such as methylthio, ethylthio, n-propylthio, i-propylthio and cyclopropylthio. The term "C1-C4 alkylthio group" represents a straight or branched alkylthio group having 1 to 4 carbon atoms, such as n-butylthio, i-butylthio, s-butylthio, t-butylthio and cyclopropylmethylthio in addition to the "C1-C3 alkylthio group". The term "C1-C3 haloalkylthio group" represents a straight or branched alkylthio group having 1 to 3 carbon atoms, substituted with one or more halogen atoms which may be identical of different, such as trifluoromethylthio, pentafluoroethylthio, 2,2,2-trifluoroethylthio, heptafluoro-n-propylthio and heptafluoro-i-propylthio. The term "C1-C4 haloalkylthio group" represents a straight or branched alkylthio group having 1 to 4 carbon atoms and being substituted with one or more halogen atoms which may be identical or different, such as nonafluoro-n-butylthio, nonafluoro-s-butylthio and 4,4,4-trifluoro-n-butylthio in addition to the "C1-C3 haloalkylthio group".

[0027] The term "C1-C3 alkylsulfinyl group" represents a straight or branched alkylsulfinyl group having 1 to 3 carbon atoms, such as methylsulfinyl, ethylsulfinyl, n-propylsulfinyl, i-propylsulfinyl or cyclopropylsulfinyl. The term "C1-C3 haloalkylsulfinyl group" represents a straight or branched alkylsulfinyl group having 1 to 3 carbon atoms, substituted with one or more halogen atoms which may be identical or different, such as trifluoromethylsulfinyl, pentafluoroethylsulfinyl, 2,2,2-trifluoroethylsulfinyl, heptafluoro-n-propylsulfinyl and heptafluoro-i-propylsulfinyl.

[0028] The term "C1-C3 alkylsulfonyl group" represents a straight or branched alkylsulfonyl group having 1 to 3 carbon atoms, such as methylsulfonyl, ethylsulfonyl, n-propylsulfonyl, i-propylsulfonyl and cyclopropylsulfonyl. The "C1-C3 haloalkylsulfonyl group" represents a straight or branched alkylsulfonyl group having 1 to 3 carbon atoms, substituted with one or more halogen atoms which may be identical or different, such as trifluomethylsulfonyl, pentafluoroethylsulfonyl, 2,2,2-trifluoroethylsulfonyl, heptafluoro-n-propylsulfonyl or heptafluoro-i-propylsulfonyl.

[0029] The term "arylsulfonyl group" represents an arylsulfonyl group having an aromatic ring of 6 to 14 carbon atoms, such as phenylsulfonyl, p-toluenesulfonyl, 1-naphthylsulfonyl, 2-naphthylsulfonyl, anthrylsulfonyl, phenanthrylsulfonyl and acenaphthylenylsulfonyl.

[0030] The term "C1-C4 alkylamino group" represents a straight, branched or cyclic alkylamino group having 1 to 4 carbon atoms, such as methylamino, ethylamino, n-propylamino, i-propylamino, n-butylamino and cyclopropylamino. The term "di-C1-C4-alkylamino group" represents an amino group substituted with two straight or branched alkyl group having 1 to 4 carbon atoms which may be identical or different, such as dimethylamino, diethylamino and N-ethyl-N-methylamino.

[0031] The term "C1-C4 alkylcarbonyl group" represents a straight, branched or cyclic alkylcarbonyl group having 1 to 4 carbon atoms, such as formyl, acetyl, propionyl, isopropylcarbonyl and cyclopropylcarbonyl.

[0032] The term "C1-C4 haloalkylcarbonyl group" represents a straight or branched alkylcarbonyl group having 1 to 4 carbon atoms and being substituted with one or more halogen atoms which may be identical or different, such as fluoroacetyl, difluoroacetyl, trifluoroacetyl, chloroacetyl, dichloroacetyl, trichloroacetyl, bromoacetyl, iodoacetyl, 3,3,3-trifluoropropionyl and 2,2,3,3,3-pentafluoropropionyl.

[0033] The term "C1-C4 alkylcarbonyloxy group" represents a straight or branched alkylcarbonyloxy group having 1 to 4 carbon atoms, such as acetoxy and propionyloxy.

[0034] The term "C1-C4 alkoxycarbonyl group" represents a straight or branched alkoxycarbonyl group having 1 to 4 carbon atoms, such as methoxycarbonyl, ethoxycarbonyl or isopropyloxycarbonyl.

[0035] The term "C1-C4 perfluoroalkyl group" represents a straight or branched alkyl group having 1 to 4 carbon atoms and being completely substituted with fluorine atoms, such as trifluoromethyl, pentafluoroethyl, heptafluoro-n-propyl, heptafluoro-i-propyl, nonafluoro-n-butyl, nonafluoro-2-butyl and nonafluoro-i-butyl. The term "C2-C6 perfluoroakyl group" represents a straight or branched alkyl group having 2 to 6 carbon atoms and being completely substituted with fluorine atoms, such as pentafluoroethyl, heptafluoro-n-propyl, heptafluoro-i-propyl, nonafluoro-n-butyl, nonafluoro-2-butyl, nonafluoro-i-butyl, perfluoro-n-pentyl and perfluoro-n-hexyl.

[0036] The term "C1-C6 perfluoroalkylthio group" represents a straight or branched alkylthio group having 1 to 6 carbon atoms and being completely substituted with fluorine atoms, such as trifluoromethylthio, pentafluoroethylthio, heptafluoro-n-propylthio, heptafluoro-i-propylthio, nonafluoro-n-butylthio, nonafluoro-2-butylthio, nonafluoro-i-butylthio, perfluoro-n-pentylthio and perfluoro-n-hexylthio.

[0037] The term "C1-C6 perfluoroalkylsulfinyl group" represents a straight or branched alkylsulfinyl group having 1 to 6 carbon atoms and being completely substituted with fluorine atoms, such as trifluoromethylsulfinyl, pentafluoroethylsulfinyl, heptafluoro-n-propylsulfinyl, heptafluoro-i-propylsulfinyl, nonafluoro-n-butylsulfinyl, nonafluoro-2-butylsulfinyl, nonafluoro-i-butylsulfinyl, perfluoro-n-pentylsulfinyl and perfluoro-n-hexylsulfinyl.

[0038] The term "C1-C6 perfluoroalkylsulfonyl group" represents a straight or branched alkylsulfonyl group having 1

to 6 carbon atoms and being completely substituted with fluorine atoms, such as trifluoromethylsulfonyl, pentafluoroethylsulfonyl, heptafluoro-n-propylsulfonyl, heptafluoro-i-propylsulfonyl, nonafluoro-n-butylsulfonyl, nonafluoro-2-butylsulfonyl, nonafluoro-i-butylsulfonyl, perfluoro-n-pentylsulfonyl and perfluoro-n-hexylsulfonyl.

[0039] The compound represented by Formula (1) of the invention may comprise one or a plurality of chiral carbon atoms or chiral centers in the structure, and thus two or more optical isomers may exist. The present invention includes all of the individual optical isomers and mixtures comprising them at any proportions. Furthermore, the compound represented by Formula (1) of the invention may exist in the form of two or more stereoisomers originating from carbon-carbon double bonds in the structure, and the invention includes all of the individual stereoisomers and mixtures comprising them at any proportions.

[0040] The substituents or atoms preferred as the substituents for the compounds represented by the above-mentioned formulae such as Formula (1) of the invention will be presented below.

[0041] A_1, A_2, A_3 and A_4 are preferably such that A_1 is a carbon atom, a nitrogen atom or an oxidized nitrogen atom and at the same time A_2, A_3 and A_4 are all carbon atoms, and more preferably such that A_1, A_2, A_3 and A_4 are all carbon atoms.

[0042] R_1 is preferably a hydrogen atom or a C1-C4 alkyl group, and more preferably a hydrogen atom, a methyl group or an ethyl group.

[0043] R_2 is preferably a hydrogen atom or a C1-C4 alkyl group, and more preferably a hydrogen atom, a methyl group or an ethyl group.

[0044] G_1 and G_2 are each preferably an oxygen atom or a sulfur atom, and more preferably G_1 and G_2 are both an oxygen atom.

[0045] X is preferably a hydrogen atom or a halogen atom, and more preferably a hydrogen atom or a fluorine atom.

[0046] n is preferably 0, 1 or 2, and more preferably 0 or 1.

[0047] X_1 is preferably a hydrogen atom or a halogen atom, and more preferably a hydrogen atom or a fluorine atom.

[0048] X_2 is preferably a hydrogen atom or a fluorine atom, and more preferably a hydrogen atom.

[0049] X_3 and X_4 are preferably a hydrogen atom.

[0050] Q_1 is preferably a phenyl group; a phenyl group optionally substituted with one or more substituents, which may be identical or different, selected from a halogen atom, a C1-C4 alkyl group, a C1-C4 haloalkyl group, a C2-C4 alkenyl group, a C2-C4 haloalkenyl group, a C2-C4 alkynyl group, a C2-C4 haloalkynyl group, a C3-C6 cycloalkyl group, a C3-C6 halocycloalkyl group, a C1-C3 alkoxy group, a C1-C3 haloalkoxy group, a C1-C3 alkylthio group, a C1-C3 haloalkylthio group, a C1-C3 alkylsulfinyl group, a C1-C3 haloalkylsulfinyl group, a C1-C3 alkylsulfonyl group, a C1-C3 haloalkylsulfonyl group, a C1-C4 alkylamino group, a di-C1-C4-alkylamino group, a cyano group, a nitro group, a hydroxyl group, a C1-C4 alkylcarbonyl group, a C1-C4 alkylcarbonyloxy group, a C1-C4 alkoxycarbonyl group and an acetylamino group; a pyridyl group; or a pyridyl group optionally substituted with one or more substituents, which may be identical or different, selected from a halogen atom, a C1-C4 alkyl group, a C1-C4 haloalkyl group, a C2-C4 alkenyl group, a C2-C4 haloalkenyl group, a C2-C4 alkynyl group, a C2-C4 haloalkynyl group, a C3-C6 cycloalkyl group, a C3-C6 halocycloalkyl group, a C1-C3 alkoxy group, a C1-C3 haloalkoxy group, a C1-C3 alkylthio group, a C1-C3 haloalkylthio group, a C1-C3 alkylsulfinyl group, a C1-C3 haloalkylsulfinyl group, a C1-C3 alkylsulfonyl group, a C1-C3 haloalkylsulfonyl group, a C1-C4 alkylamino group, a di-C1-C4-alkylamino group, a cyano group, a nitro group, a hydroxyl group, a C1-C4 alkylcarbonyl group, a C1-C4 alkylcarbonyloxy group, a C1-C4 alkoxycarbonyl group and an acetylamino group.

[0051] More preferably, Q_1 is a phenyl group; a phenyl group having 1 to 3 substituents, which may be identical or different, selected from a fluorine atom, a chlorine atom, a bromine atom, an iodine atom, a methyl group, a trifluoromethyl group, a methoxy group, a trifluoromethoxy group, a methylthio group, a methylsulfinyl group, a methylsulfonyl group, a trifluoromethylthio group, a trifluoromethylsulfinyl group, a trifluoromethylsulfonyl group, a methylamino group, a dimethylamino group, a cyano group and a nitro group; a pyridyl group; or a pyridyl group having 1 or 2 substituents, which may be identical or different, selected from a fluorine atom, a chlorine atom, a bromine atom, an iodine atom, a methyl group, a trifluoromethyl group, a methoxy group, a trifluoromethoxy group, a methylthio group, a methylsulfinyl group, a methylsulfonyl group, a trifluoromethylthio group, a trifluoromethylsulfinyl group, a trifluoromethylsulfonyl group, a methylamino group, a dimethylamino group, a cyano group and a nitro group.

[0052] Q_2 is a substituted phenyl group represented by Formula (2) or a substituted pyridyl group represented by Formula (3), wherein:

Y_1 and Y_5 are each preferably a chlorine atom, a bromine atom, an iodine atom, a methyl group, an ethyl group, an n-propyl group, an i-propyl group, an n-butyl group, a 2-butyl group, a trifluoromethyl group, a methylthio group, a methylsulfinyl group, a methylsufonyl group, a trifluoromethylthio group, a trifluoromethylsulfinyl group, a trifluoromethylsulfonyl group and a cyano group;

Y_6 and Y_9 are each preferably a chlorine atom, a bromine atom, an iodine atom, a methyl group, an ethyl group, an n-propyl group, an i-propyl group, an n-butyl group, a 2-butyl group, a trifluoromethyl group, a methylthio group, a methylsulfinyl group, a methylsulfonyl group, a trifluoromethylthio group, a trifluoromethylsulfinyl group, a trifluor-

omethylsulfonyl group and a cyano group;

Y_2, Y_4 and Y_7 are each preferably a hydrogen atom, a halogen atom or a methyl group, and more preferably a hydrogen atom;

Y_3 is preferably a pentafluoroethyl group, a heptafluoro-n-propyl group, a heptafluoro-i-propyl group, a nonafluoro-n-butyl group, a nonafluoro-2-butyl group, a nonafluoro-i-butyl group, a trifluoromethylthio group, a pentafluoroethylthio group, a heptafluoro-n-propylthio group, a heptafluoro-i-propylthio group, a nonafluoro-n-butylthio group, a nonafluoro-2-butylthio group, a trifluoromethylsulfinyl group, a pentafluoroethylsulfinyl group, a heptafluoro-n-propylsulfinyl group, a heptafluoro-i-propylsulfinyl group, a nonafluoro-n-butylsulfinyl group, a nonafluoro-2-butylsulfinyl group, a trifluoromethylsulfonyl group, a pentafluoroethylsulfonyl group, a heptafluoro-n-propylsulfonyl group, a heptafluoro-i-propylsulfonyl group, a nonafluoro-n-butylsulfonyl group or anonafluoro-2-butylsulfonyl group;

Y_8 is preferably a pentafluoroethyl group, a heptafluoro-n-propyl group, a heptafluoro-i-propyl group, a nonafluoro-n-butyl group, a nonafluoro-2-butyl group, a nonafluoro-i-butyl group, a trifluoromethylthio group, a pentafluoroethylthio group, a heptafluoro-n-propylthio group, a heptafluoro-i-propylthio group, a nonafluoro-n-butylthio group, a nonafluoro-2-butylthio group, a trifluoromethylsulfinyl group, a pentafluoroethylsulfinyl group, a heptafluoro-n-propylsulfinyl group, a heptafluoro-i-propylsulfinyl group, a nonafluoro-n-butylsulfinyl group, a nonafluoro-2-butylsulfinyl group, a trifluoromethylsulfonyl group, a pentafluoroethylsulfonyl group, a heptafluoro-n-propylsulfonyl group, a heptafluoro-i-propylsulfonyl group, a nonafluoro-n-butylsulfonyl group, a nonafluoro-2-butylsulfonylgroup, a pentafluoroethoxy group and a 1,1,1,3,3,3-hexafluoro-i-propyloxy group.

[0053] L is preferably a chlorine atom, a bromine atom or a hydroxyl group.

[0054] R_1a is preferably a hydrogen atom or a C1-C4 alkyl group, and more preferably a hydrogen atom, a methyl group or an ethyl group.

[0055] R_2a is preferably a hydrogen atom or a C1-C4 alkyl group, and more preferably a hydrogen atom, a methyl group or an ethyl group.

[0056] G_1a and G_2a are each preferably an oxygen atom or a sulfur atom, and more preferably G_{1a} and G_2a are both an oxygen atom.

[0057] X_1a is preferably a hydrogen atom or a halogen atom, and more preferably a hydrogen atom or a fluorine atom.

[0058] X_2a is preferably a hydrogen atom or a fluorine atom, and more preferably a hydrogen atom.

[0059] X_3a and X_4a are preferably a hydrogen atom.

[0060] Y_1a and Y_5a are each preferably a chlorine atom, a bromine atom, an iodine atom, a methyl group, an ethyl group, an n-propyl group, an i-propyl group, an n-butyl group, a 2-butyl group, a trifluoromethyl group, a methylthio group, a methylsulfinyl group, a methylsulfonyl group, a trifluoromethylthio group, a trifluoromethylsulfinyl group, a trifluoromethylsulfonyl group or a cyano group.

[0061] Y_2a and Y_4a are each preferably a hydrogen atom, a halogen atom and a methyl group, and more preferably a hydrogen atom.

[0062] Q_1a is preferably a phenyl group; a phenyl group optionally substituted with one or more substituents, which may be identical or different, selected from a halogen atom, a C1-C4 alkyl group, a C1-C4 haloalkyl group, a C2-C4 alkenyl group, a C2-C4 haloalkenyl group, a C2-C4 alkynyl group, a C2-C4 haloalkynyl group, a C3-C6 cycloalkyl group, a C3-C6 halocycloalkyl group, a C1-C3 alkoxy group, a C1-C3 haloalkoxy group, a C1-C3 alkylthio group, a C1-C3 haloalkylthio group, a C1-C3 alkylsulfinyl group, a C1-C3 haloalkylsulfinyl group, a C1-C3 alkylsulfonyl group, a C1-C3 haloalkylsulfonyl group, a C1-C4 alkylamino group, a di-C1-C4-alkylamino group, a cyano group, a nitro group, a hydroxyl group, a C1-C4 alkylcarbonyl group, a C1-C4 alkylcarbonyloxy group, a C1-C4 alkoxycarbonyl group and an acetylamino group; a pyridyl group; or a pyridyl group optionally substituted with one or more substituents, which may be identical or different, selected from a halogen atom, a C1-C4 alkyl group, a C1-C4 haloalkyl group, a C2-C4 alkenyl group, a C2-C4 haloalkenyl group, a C2-C4 alkynyl group, a C2-C4 haloalkynyl group, a C3-C6 cycloalkyl group, a c3-C6 halocycloalkyl group, a C1-C3 alkoxy group, a C1-C3 haloalkoxy group, a C1-C3 alkylthio group, a C1-C3 haloalkylthio group, a C1-C3 alkylsulfinyl group, a C1-C3 haloalkylsulfinyl group, a C1-C3 alkylsulfonyl group, a C1-C3 haloalkylsulfonyl group, a C1-C4 alkylamino group, a di-C1-C4-alkylamino group, a cyano group, a nitro group, a hydroxyl group, a C1-C4 alkylcarbonyl group, a C1-C4 alkylcarbonyloxy group, a C1-C4 alkoxycarbonyl group and an acetylamino group.

[0063] More preferably, Q_1a is a phenyl group; a phenyl group having 1 to 3 substituents, which may be identical or different, selected from a fluorine atom, a chlorine atom, a bromine atom, an iodine atom, a methyl group, a trifluoromethyl group, a methoxy group, a trifluoromethoxy group, a methylthio group, a methylsulfinyl group, a methylsulfonyl group, a trifluoromethylthio group, a trifluoromethylsulfinyl group, a trifluoromethylsulfonyl group, a methylamino group, a dimethylamino group, a cyano group and a nitro group; a pyridyl group; or a pyridyl group having 1 or 2 substituents, which may be identical or different, selected from a fluorine atom, a chlorine atom, a bromine atom, an iodine atom, a methyl group, a trifluoromethyl group, a methoxy group, a trifluoromethoxy group, a methylthio group, a methylsulfinyl group, a methylsulfonyl group, a trifluoromethylthio group, a trifluoromethylsulfinyl group, a trifluoromethylsulfonyl group, a methylamino group, a dimethylamino group, a cyano group and a nitro group.

[0064] R_a and R_b are each preferably a fluorine atom, a trifluoromethyl group, a pentafluoroethyl group or a heptafluoro-n-propyl group, and more preferably a fluorine atom, a trifluoromethyl group or a pentafluoroethyl group.

[0065] R_c is preferably a hydroxyl group, a chlorine atom, a bromine atom, an iodine atom, a methoxy group, an ethoxy group, a methylsulfonyloxy group, a trifluoromethylsulfonyloxy group, a phenylsulfonyloxy group, a p-toluenesulfonyloxy group, an acetoxy group or a trifluoroacetoxy group, and more preferably a hydroxyl group, a chlorine atom, a bromine atom, a methoxy group, a methylsulfonyloxy group, a trifluoromethylsulfonyloxy group, a phenylsulfonyloxy group or a p-toluenesulfonyloxy group, and even more preferably a hydroxyl group, a chlorine atom or a bromine atom.

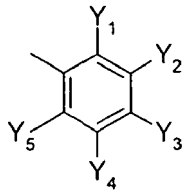
[0066] R_c' is preferably a hydroxyl group.

[0067] R_c" is preferably a chlorine atom or a bromine atom.

[0068] J, J' and J" are each preferably a hydroxyl group, a chlorine atom or a bromine atom, and more preferably a chlorine atom.

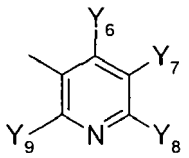
[0069] Representative processes for preparation of the compound of the invention will be described in the following. Preparation of the compound of the invention is possible by following the procedure, but the preparation route is not limited only to the process for preparation described below.

[0070] With regard to the formulae prepared by the following processes for preparation, X_1, X_2, X_3, X_4, Y_1, Y_2, Y_4, Y_5, G_1, G_2, R_1, R_2 and Q_1 may correspond to X_1a, X_2a, X_3a, X_4a, Y_1a, Y_2a, Y_4a, Y_5a, G_1a, G_2a, R_1a, R_2a and Q_1a, respectively, and it is also possible vice versa. Further, Q_2 has the meaning as described in claim 1 represented by Formula (2) :



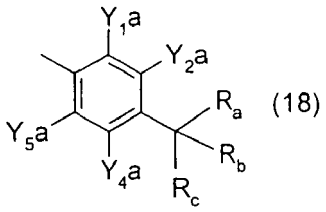
(2)

(wherein Y_1, Y_2, Y_3, Y_4 and Y_5 have the same meanings as described above),
by Formula (3):



(3)

(wherein Y_6, Y_7, Y_8 and Y_9 have the same meanings as described above),
or by Formula (18):

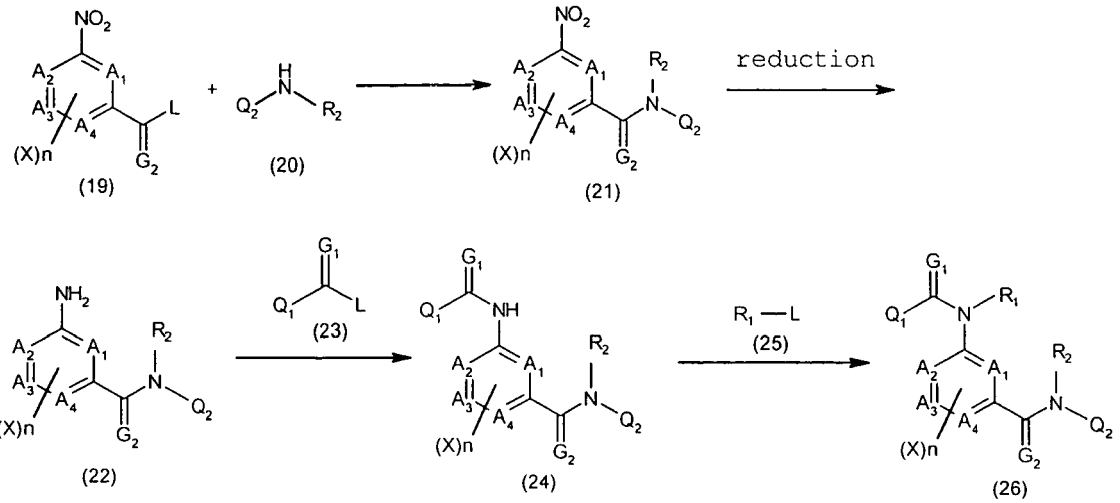


(18)

(wherein Y_1a, Y_2a, Y_4a, Y_5a, R_a, R_b and R_c have the same meaning as described above).

Preparation Process 1

[0071]



wherein A_1, A_2, A_3, A_4, G_1, G_2, R_1, R_2, X, n, Q_1 and Q_2 have the same meaning as described above, and L represents a functionality capable of leaving such as a halogen atom or a hydroxyl group.

1- (i) Formula (19) + Formula (20) → Formula (21)

[0072] An aromatic carboxamide derivative having a nitro group represented by Formula (21) can be prepared by reacting an m-nitro aromatic carboxylic acid derivative having a leaving group represented by Formula (19) with an aromatic amine derivative represented by Formula (20) in a suitable solvent or without a solvent. In this step, an appropriate base can be also used.

[0073] For the solvent, use can be made of any solvent which does not impede the reaction significantly, for example, water; aromatic hydrocarbons such as benzene, toluene and xylene; halogenated hydrocarbons such as dichloromethane, chloroform and tetrachlorocarbon; chained or cyclic ethers such as diethyl ether, dioxane, tetrahydrofuran and 1,2-dimethoxyethane; esters such as ethyl acetate and butyl acetate; alcohols such as methanol and ethanol; ketones such as acetone, methyl isobutyl ketone and cyclohexanone; amides such as dimethyl formamide and dimethyl acetamide; nitriles such as acetonitrile; and inert solvents such as 1,3-dimethyl-2-imidazolidinone, which may be used alone or in combination of two or more.

[0074] Further, for the base, use can be made of organic bases such as triethylamine, tri-n-butylamine, pyridine and 4-dimethyl aminopyridine; alkali metal hydroxides such as sodium hydroxide and potassium hydroxide; carbonates such as sodium hydrogen carbonate and potassium carbonate; phosphates such as dipotassium hydrogen phosphate and trisodium phosphate; alkali metal hydrides such as sodium hydride; and alkali metal alcoholates such as sodium methoxide and sodium ethoxide. These bases may be appropriately used in a quantity of 0.01 to 5-fold molar equivalents with respect to the compound represented by Formula (19).

[0075] The reaction temperature may be suitably selected within the range of -20°C to the reflux temperature of the solvent used, and the reaction time within the range of several minutes to 96 hours.

[0076] Among the compounds represented by Formula (19), an aromatic carboxylic acid halide derivative may be prepared easily from an aromatic carboxylic acid by a conventional process using a halogenating agent. A halogenating agent may be, for example, thionyl chloride, thionyl bromide, phosphorus oxychloride, oxalyl chloride, phosphorus trichloride and the like.

[0077] Meanwhile, it is possible to prepare the compound represented by Formula (21) from an m-nitro aromatic carboxylic acid derivative and the compound represented by Formula (20) without using a halogenating agent. The process is described in, for example, Chem. Ber. p. 788 (1970), in which a condensing agent comprising N,N'-dicyclohexylcarbodiimide is used, suitably with an additive such as 1-hydroxybenzotriazole. Other condensing agents that can be used in this case may include 1-ethyl-3-(3-dimethylaminopropyl)carbodiimide, 1,1'-carbonylbis-1H-imidazole and the like.

[0078] Furthermore, for other processes for preparation of the compounds represented by Formula (21), there can be used a mixed acid anhydride process using chloroformic acid esters or a process described in J. Am. Chem. Soc., p.5012 (1967) in order to prepare the compound represented by Formula (21). The chloroformic acid esters used in this case may include isobutyl chloroformate, isopropyl chloroformate and the like. In addition to chloroformic acid esters, diethylacetyl chloride, trimethylacetyl chloride and the like can also be used.

[0079] Both the process using a condensing agent and the mixed acid anhydride process are not limited by the solvent,

the reaction temperature and the reaction time as described in the references above. An inert solvent may be used which does not impede the reaction significantly, and the reaction temperature and the reaction time may also be selected appropriately in accordance with the proceeding of the reaction.

1-(ii) Formula (21) → Formula (22)

[0080] An aromatic carboxamide derivative having an amino group represented by Formula (22) can be derived from the aromatic carboxamide derivative having a nitro group represented by Formula (21) by means of reduction. Such reduction is illustrated by a process using hydrogenation and a process using a metal compound (for example, tin(II) chloride (anhydride), iron powder, zinc powder and the like).

[0081] The reaction of the former process can be carried out in a suitable solvent in the presence of catalyst at atmospheric pressure or a higher pressure under a hydrogen atmosphere. Examples of the catalyst may include palladium catalysts such as palladium-carbon, nickel catalysts such as Raney nickel, cobalt catalysts, ruthenium catalysts, rhodium catalysts, platinum catalysts and the like, and examples of the solvent may include water; alcohols such as methanol and ethanol; aromatic hydrocarbons such as benzene, toluene; chained or cyclic ethers such as ether, dioxane, tetrahydrofuran, etc.; and esters such as ethyl acetate. The compound of Formula (22) can be efficiently prepared by appropriately selecting the pressure within a range of 0.1 to 10 Mpa, the reaction temperature within a range of -20°C to the reflux temperature of the solvent used, and the reaction time within a range of several minutes to 96 hours.

[0082] For the latter process, there can be used a method using tin (II) chloride (anhydride) as a metal compound under the conditions described in "organic Syntheses" Coll. Vol. III, P.453.

1-(iii) Formula (22) + Formula (23) → Formula (24)

[0083] A compound of the invention represented by Formula (24) can be prepared by reacting the aromatic carboxamide derivative having an amino group represented by Formula (22) with the compound represented by Formula (23) in a suitable solvent. In this step, a suitable base can also be used.

[0084] For the solvent, use can be made of any solvent which does not impede the reaction significantly, for example, water; aromatic hydrocarbons such as benzene, toluene and xylene; halogenated hydrocarbons such as dichloromethane, chloroform and tetrachlorocarbon; chained or cyclic ethers such as diethyl ether, dioxane, tetrahydrofuran and 1,2-dimethoxyethane; esters such as ethyl acetate and butyl acetate; alcohols such as methanol and ethanol; ketones such as acetone, methyl isobutyl ketone and cyclohexanone; amides such as dimethyl formamide and dimethyl acetamide; nitriles such as acetonitrile; and inert solvents such as 1,3-dimethyl-2-imidazolidinone, which may be used alone or in combination of two or more.

[0085] Further, for the base, use can be made of organic bases such as triethylamine, tri-n-butylamine, pyridine and 4-dimethyl aminopyridine; alkali metal hydroxides such as sodium hydroxide and potassium hydroxide; carbonates such as sodium hydrogen carbonate and potassium carbonate; phosphates such as dipotassium hydrogen phosphate and trisodium phosphate; alkali metal hydrides such as sodium hydride; and alkali metal alcoholates such as sodium methoxide and sodium ethoxide. Such base may be appropriately used in a quantity of 0.01 to 5-fold molar equivalents with respect to the compound represented by Formula (22). The reaction temperature may be suitably selected within the range of -20°C to the reflux temperature of the solvent used, and the reaction time within the range of several minutes to 96 hours. It is also possible to prepare by the method using a condensing agent as described in 1- (i) or the mixed acid anhydride method.

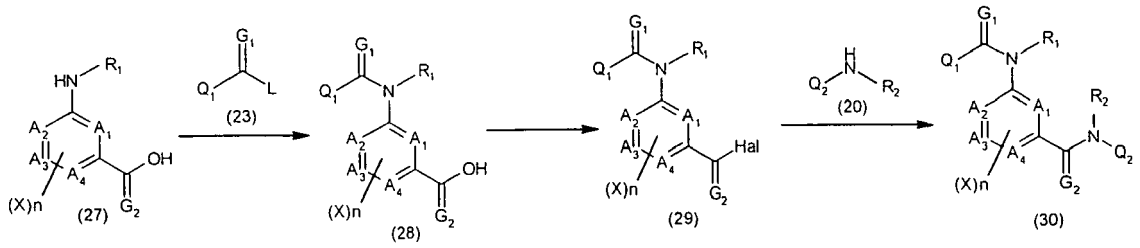
1-(iv) Formula (24) + Formula (25) → Formula (26)

[0086] A compound represented by Formula (26) of the invention can be prepared by reacting a compound represented by Formula (24) with an alkyl compound having a leaving group represented by Formula (25) in a solvent or without a solvent. The compound represented by Formula (25) may include an alkyl halide such as methyl iodide, ethyl iodide or n-propyl bromide. Further, in this step, it is possible to use a suitable base or a solvent, and for such base or solvent, those exemplified in 1-(i) may be used. The reaction temperature, the reaction time and the like may be selected according to the examples as given in 1-(i).

[0087] Alternatively, it is also possible to prepare the compound represented by Formula (26) by reacting the compound represented by Formula (24) with an alkylating agent such as dimethyl sulfate, diethyl sulfate and the like, instead of the compound represented by Formula (25).

Preparation Process 2

[0088]



wherein A_1, A_2, A_3, A_4, G_1, G_2, R_1, R_2, X, n, Q_1, Q_2, L and Hal have the same meaning as those described in the above.

2-(i) Formula (27) + Formula (23) → Formula (28)

[0089] Carboxylic acids having an acylamino group represented by Formula (28) can be prepared by reacting carboxylic acids having an amino group represented by Formula (27) as starting material with the compound represented by Formula (23) according to the conditions described in 1-(i).

2-(ii) Formula (28) → Formula (29)

[0090] A compound represented by Formula (29) can be prepared by a known conventional method in which the compound represented by Formula (28) is reacted with thionyl chloride, oxalyl chloride, phosgene, phosphorus oxychloride, phosphorus pentachloride, phosphorus trichloride, thionyl bromide, phosphorus tribromide, diethylaminosulfur trifluoride and the like.

2-(iii) Formula (29) + Formula (20) → Formula (30)

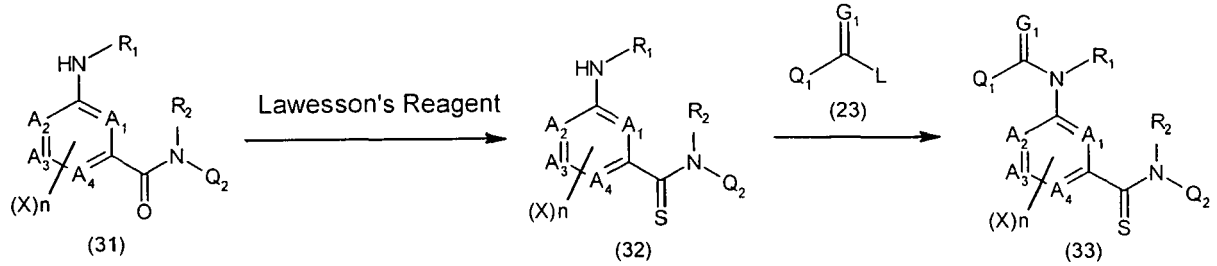
[0091] A compound represented by Formula (30) can be prepared by reacting the compound represented by Formula (29) with a compound represented by Formula (20) according to the conditions described in 1-(i).

2-(iv) Formula (28) + Formula (20) → Formula (30)

[0092] The compound represented by Formula (30) can be also prepared by reacting the compound represented by Formula (28) with the compound represented by Formula (20) according to the conditions of using a condensing agent as described in 1-(i) or the conditions of using the mixed acid anhydride method.

Preparation Process 3

[0093]



wherein A_1, A_2, A_3, A_4, G_1, R_1, R_2, X, n, Q_1, Q_2 and L have the same meaning as those described in the above.

3-(i) Formula (31) → Formula (32)

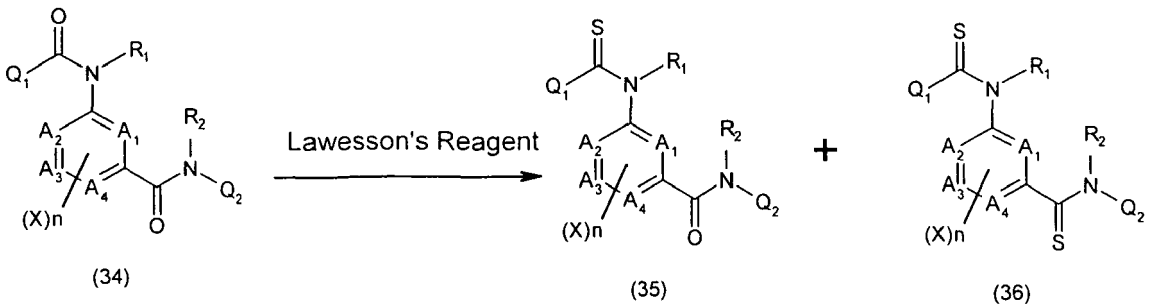
[0094] A compound represented by Formula (32) can be prepared by reacting a compound represented by Formula (31) with the Lawesson' s reagent according to the known conditions as described in Synthesis, p.463 (1993) or in Synthesis, p.829 (1984). Conditions such as a solvent, a reaction temperature and the like are not limited to those as described in the literature.

3-(ii) Formula (32) + Formula (23) → Formula (33)

[0095] A compound represented by Formula (33) can be prepared by reacting the compound represented by Formula (32) with the compound represented by Formula (23) according to the conditions as described in 1-(i).

Preparation Process 4

[0096]

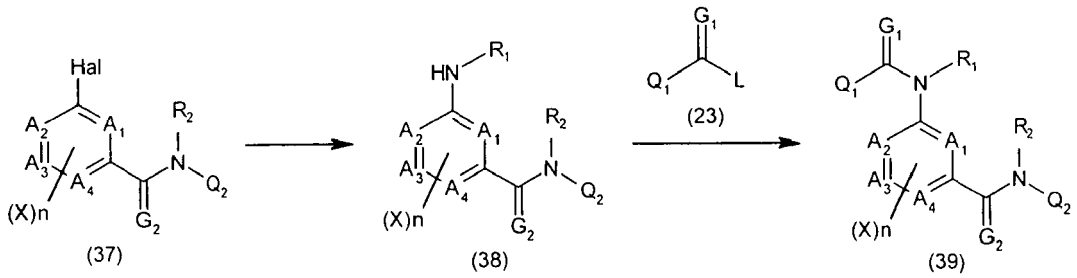


wherein A_1, A_2, A_3, A_4, R_1, R_2, X, n, Q_1 and Q_2 have the same meaning as those described in the above.

[0097] A compound represented by Formula (35) and a compound represented by Formula (36) can be prepared from the compound represented by Formula (34) according to the conditions as described in 3-(i). Conditions such as a solvent, a reaction temperature and the like are not limited to those as described in the literature. These two compounds can be easily separated and purified by means of a known separation and purification technique such as silica gel column chromatography.

Preparation Process 5

[0098]



wherein A_1, A_2, A_3, A_4, G_1, G_2, R_1, R_2, X, n, Q_1, Q_2 and L have the same meaning as those described in the above.

5- (i) Formula (37) → Formula (38)

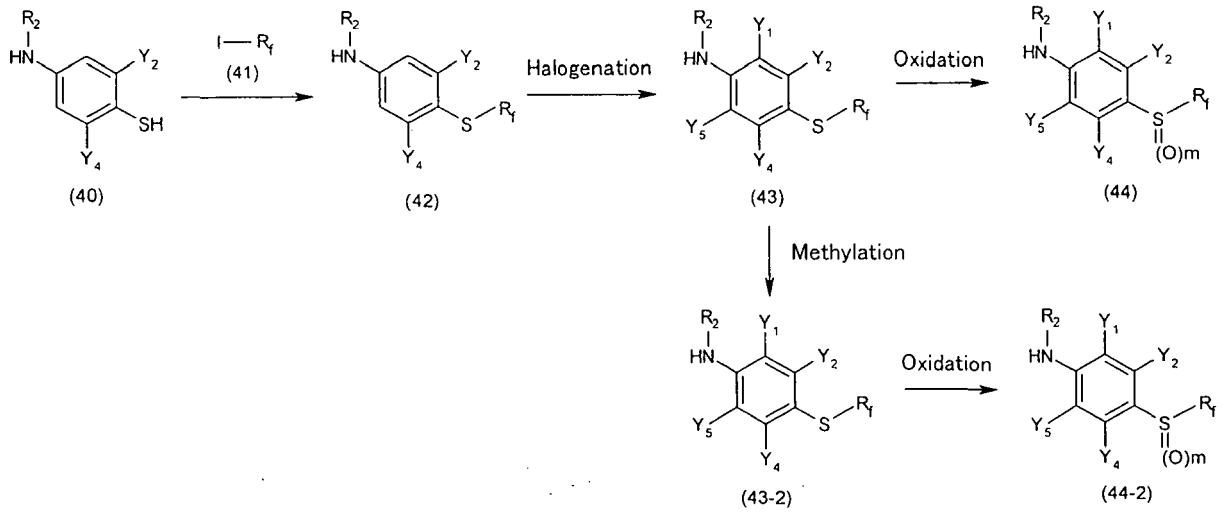
[0099] A compound represented by Formula (38) can be prepared by carrying out an amination reaction using ammonia according to the conditions as described in, for example, J. Org. Chem. , p. 280 (1958). Conditions such as a reaction solvent are not limited to those as described in the literature, and any inert solvent which does not impede the reaction significantly may be used. A reaction temperature and a reaction time may also be selected in accordance with the proceeding of the reaction. Further, it is also possible to use methylamine, ethylamine and the like, in addition to ammonia, as the aminating agent.

5-(ii) Formula (38) + Formula (23) → Formula (39)

[0100] A compound represented by Formula (39) can be prepared by reacting the compound represented by Formula (38) with a compound represented by Formula (23) according to the conditions as described in 1-(i).

Preparation Process 6

[0101]



wherein R_2 has the same meaning as described in the above; Y_1 and Y_5 each represent a methyl group, a chlorine atom, a bromine atom or an iodine atom; Y_2 and Y_4 have the same meaning as those described in the above; R_f represents a C1-C6 perfluoroalkyl group; and m represents 1 or 2.

6-(i) Formula (40) + Formula (41) → Formula (42)

[0102] A compound represented by Formula (42) can be prepared by reacting an aminothiophenol represented by Formula (40) with a haloalkyl iodide represented by Formula (41) according to the method as described in J. Fluorine Chem., p.207 (1994).

[0103] The haloalkyl iodide represented by Formula (41) may include, for example, trifluoromethyl iodide, pentafluoroethyl iodide, heptafluoro-n-propyl iodide, heptafluoroisopropyl iodide, nonafluoro-n-butyl iodide, nonafluoro-2-butyl iodide and the like, and these compounds represented by Formula (40) may be suitably used in the range of 1 to 10-fold molar equivalents.

[0104] The solvent used in this step is not limited to those solvents as described in the above literature, and the solvent may be any of those not impeding the reaction significantly, for example, water; aromatic hydrocarbons such as benzene, toluene and xylene; halogenated hydrocarbons such as dichloromethane, chloroform and tetrachlorocarbon; chained or cyclic ethers such as diethyl ether, dioxane, tetrahydrofuran and 1,2-dimethoxyethane; esters such as ethyl acetate and butyl acetate; alcohols such as methanol and ethanol; ketones such as acetone, methyl isobutyl ketone and cyclohexanone; amides such as dimethyl formamide and dimethylacetamide; nitriles such as acetonitrile; or inert solvents such as 1,3-dimethyl-2-imidazolidinone, hexamethylphosphate triamide and the like, which may used alone or in combination of two or more. A polar solvent is particularly preferred. The reaction temperature may be suitably selected within the range of -20°C to the reflux temperature of the solvent used, and the reaction time within the range of several minutes to 96 hours.

6-(ii) Formula (42) → Formula (43)

[0105] A compound represented by Formula (43) can be prepared using a suitable halogenating agent, for example, according to the method as described in Synth. Commun., p.1261 (1989).

[0106] The halogenating agent may include, for example, chlorine, bromine, iodine, N-chlorosuccinimide, N-bromosuccinimide, N-iodosuccinimide and the like, and these compounds represented by Formula (42) may be suitably used in the range of 1 to 10-fold molar equivalents.

[0107] In this step, it is possible to use a suitable solvent. Such solvent for use is not limited to the solvents as described in the above literature, and the solvent may be any of those not impeding the reaction significantly, for example, water; aromatic hydrocarbons such as benzene, toluene and xylene; halogenated hydrocarbons such as dichloromethane, chloroform and tetrachlorocarbon; chained or cyclic ethers such as diethyl ether, dioxane, tetrahydrofuran and 1,2-dimethoxyethane; esters such as ethyl acetate and butyl acetate; alcohols such as methanol and ethanol; ketones such

as acetone, methyl isobutyl ketone and cyclohexanone; amides such as dimethyl formamide and dimethylacetamide; nitriles such as acetonitrile; or inert solvents such as 1,3-dimethyl-2-imidazolidinone, hexamethylphosphate triamide and the like, which may used alone or in combination of two or more. A polar solvent is particularly preferred. The reaction temperature may be suitably selected within the range of -20°C to the reflux temperature of the solvent used, and the reaction time within the range of several minutes to 96 hours.

6-(iii) Formula (43) → Formula (44)

[0108] A compound represented by Formula (44) can be prepared using a suitable oxidizing agent, for example, according to the method as described in Tetrahedron Lett., p.4955 (1994).

[0109] The oxidizing agent may include, for example, an organic peracid such as m-chloroperbenzoic acid, sodium meta-periodate, hydrogen peroxide, ozone, selenium dioxide, chromic acid, dinitrogen tetraoxide, acyl nitrate, iodine, bromine, N-bromosuccinimide, iodosyl benzyl, t-butyl hypochlorite and the like.

[0110] The solvent used in this step is not limited to the solvents described in the above literature, and the solvent may be any of those not impeding the reaction of the invention significantly. The solvent can be used alone or in combination of two or more. A polar solvent is particularly preferred. The reaction temperature may be suitably selected within the range of -20°C to the reflux temperature of the solvent used, and the reaction time within the range of several minutes to 96 hours.

6-(iv) Formula (43) → Formula (43-2)

[0111] A compound represented by Formula (43-2), wherein either of Y_1 and Y_5 essentially represents a methyl group, can be prepared from the compound represented by Formula (43) using a suitable methylating agent. In this step, for example, the process described in Tetrahedron Lett., p.6237 (2000) can be carried out.

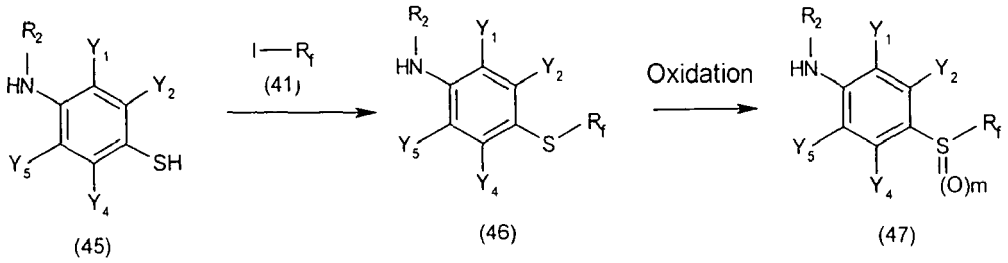
6-(v) Formula (43-2) → Formula (44-2)

[0112] A compound represented by Formula (44-2), wherein either of Y_1 and Y_5 essentially represents a methyl group, can be prepared according to the process described in 6-(iii).

[0113] Further, the compound of the present invention can be prepared using the aniline derivatives represented by Formula (43), Formula (44), Formula (43-2) and Formula (44-2), by selecting a suitable production process as described in the invention.

Preparation Process 7

[0114]

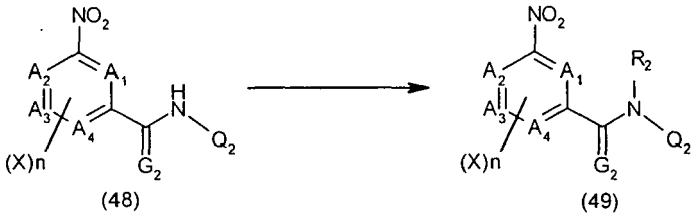


wherein R_2, Y_1, Y_2, Y_4, Y_5, R_f and m have the same meaning as those described in Preparation Process 6.

[0115] The aniline derivative represented by Formula (47) can be prepared according to Preparation Process 6 using a compound represented by Formula (45) as starting material, and further the compound of the invention can be prepared by selecting a suitable production process as described in the invention.

Preparation Process 8

[0116]



(48) (49)

wherein A_1, A_2, A_3, A_4, X, n, G_2, R_2 and Q_2 have the same meaning as those described above.

[0117] A compound represented by Formula (49) can be prepared by reacting a compound represented by Formula (48) with a suitable reacting agent in a suitable solvent using a suitable base.

[0118] For the solvent, it may be any of those which do not impede the reaction significantly, for example, aliphatic hydrocarbons such as hexane, cyclohexane and methylcyclohexane; aromatic hydrocarbons such as benzene, xylene and toluene; halogenated hydrocarbons such as dichloromethane, chloroform, tetrachlorocarbon and 1,2-dichloroethane; ethers such as diethyl ether, dioxane, tetrahydrofuran and 1,2-dimethoxyethane; amides such as dimethylformamide and dimethylacetamide; nitriles such as acetonitrile and propionitrile; ketones such as acetone, methyl isobutyl ketone, cyclohexanone and methyl ethyl ketone; esters such as ethyl acetate and butyl acetate; alcohols such as methanol and ethanol; 1,3-dimehtyl-2-imidazolidinone, sulfolane, dimethylsulfoxide, water and the like, which can be used alone or in combination of two or more.

[0119] For the base, use can be made of, for example, organic bases such as triethylamine, tributylamine, pyridine, 4-dimethylaminopyridine; an alkali metal hydroxide such as sodium hydroxide and potassium hydroxide; a carbonate such as sodium hydrogen carbonate and potassium carbonate; a phosphate such as potassium monohydrogen phosphate, trisodium phosphate; an alkali metal hydride such as sodium hydride; an alkali metal alkoxide such as sodium methoxide, sodium ethoxide; an organic lithium such as n-butyllithium; a Grignard reagent such as ethylmagnesium bromide; and the like.

[0120] Such base can be appropriately selected or used as solvent, in the range of 0.01 to 5-fold molar equivalents with respect to the compound represented by Formula (48).

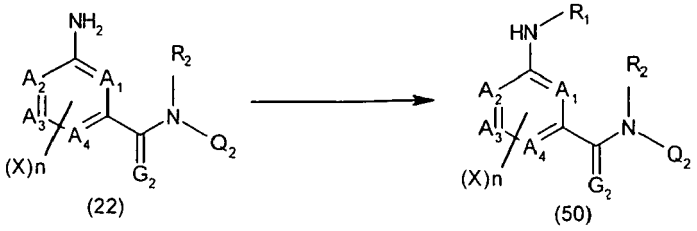
[0121] For the reacting agent, use can be made of, for example, an alkyl halide such as methyl iodide, ethyl bromide, trifluoromethyl iodide, 2,2,2-trifluoroethyl iodide; an aryl halide such as aryl iodide; a propargyl halide such as propargyl bromide; an acyl halide such as acetyl chloride; an acid anhydride such as trifluoroacetic acid anhydride; an alkyl sulfate such as dimethyl sulfate, diethyl sulfate; and the like.

[0122] Such reacting agent can be appropriately selected or used as solvent, in the range of 1 to 5-fold molar equivalents with respect to the compound represented by Formula (48).

[0123] The reaction temperature may be appropriately selected in the range from -80°C to the reflux temperature of the solvent used, and the reaction time in the range from several minutes to 96 hours.

Preparation Process 9

[0124]



(22) (50)

wherein A_1, A_2, A_3, A_4, X, n, G_2, R_1, R_2 and Q_2 have the same meaning as those described above.

9-(i) Formula (22) → Formula (50)

[0125] A compound represented by Formula (50) can be prepared by reacting a compound represented by Formula (22) with aldehydes or ketones in a suitable solvent, and reacting under a hydrogen atmosphere in the presence of a suitable catalyst.

[0126] The solvent may be any of those which do not impede the reaction significantly, for example, aliphatic hydrocarbons such as hexane, cyclohexane and methylcyclohexane; aromatic hydrocarbons such as benzene, xylene and

toluene; halogenated hydrocarbons such as dichloromethane, chloroform, tetrachlorocarbon and 1,2-dichloroethane; ethers such as diethyl ether, dioxane, tetrahydrofuran and 1,2-dimethoxyethane; amides such as dimethylformamide and dimethylacetamide; nitriles such as acetonitrile and propionitrile; ketones such as acetone, methyl isobutyl ketone, cyclohexanone and methyl ethyl ketone; esters such as ethyl acetate and butyl acetate; alcohols such as methanol and ethanol; 1,3-dimehtyl-2-imidazolidinone, sulfolane, dimethylsulfoxide, water and the like, which can be used alone or in combination of two or more.

[0127] Examples of the catalyst may include palladium-based catalysts such as palladium-carbon, palladium hydroxide-carbon; nickel-based catalysts such as Raney nickel; cobalt catalysts, platinum catalysts, ruthenium catalysts, rhodium catalysts and the like.

[0128] Examples of the aldehydes may include, for example, formaldehyde, acetaldehyde, propionaldehyde, trifluoroacetaldehyde, difluoroacetaldehyde, fluoroacetaldehyde, chloroacetaldehyde, dichloroacetaldehyde, trichloroacetaldehyde, bromoacetaldehyde and the like.

[0129] Examples of the ketones may include, for example, acetone, perfluoroacetone, methyl ethyl ketone and the like.

[0130] The reaction pressure may be appropriately selected in the range of 1 atm to 100 atm.

[0131] The reaction temperature may be appropriately selected in the range from -20°C to the reflux temperature of the solvent used, and the reaction time may be appropriately selected in the range from several minutes to 96 hours.

9-(ii) Formula (22) → Formula (50) (Alternative process 1)

[0132] The compound represented by Formula (50) can be prepared by reacting the compound represented by Formula (22) with an aldehyde or a ketone in a suitable solvent, and treating the product with a suitable reducing agent.

[0133] The solvent may be any of those which do not impede the reaction significantly, for example, aliphatic hydrocarbons such as hexane, cyclohexane and methylcyclohexane; aromatic hydrocarbons such as benzene, xylene and toluene; halogenated hydrocarbons such as dichloromethane, chloroform, tetrachlorocarbon and 1,2-dichloroethane; ethers such as diethyl ether, dioxane, tetrahydrofuran and 1,2-dimethoxyethane; amides such as dimethylformamide and dimethylacetamide; nitriles such as acetonitrile and propionitrile; ketones such as acetone, methyl isobutyl ketone, cyclohexanone and methyl ethyl ketone; esters such as ethyl acetate and butyl acetate; alcohols such as methanol and ethanol; 1,3-dimehtyl-2-imidazolidinone, sulfolane, dimethylsulfoxide, water and the like, which can be used alone or in combination of two or more.

[0134] Examples of the reducing agent may include, for example, borohydrides such as sodium borohydride, sodium cyanoborohydride, sodium triacetate borohydride and the like.

[0135] Examples of the aldehydes may include, for example, formaldehyde, acetaldehyde, propionaldehyde, trifluoroacetaldehyde, difluoroacetaldehyde, fluoroacetaldehyde, chloroacetaldehyde, dichloroacetaldehyde, trichloroacetaldehyde, bromoacetaldehyde and the like.

[0136] Examples of the ketones may include, for example, acetone, perfluoroacetone, methyl ethyl ketone and the like.

[0137] The reaction temperature may be appropriately selected in the range from -20°C to the reflux temperature of the solvent used, and the reaction time may be appropriately selected in the range from several minutes to 96 hours.

9-(iii) Formula (22) → Formula (50) (Alternative process 2)

[0138] The compound represented by Formula (50), wherein R_1 is methyl, can be prepared by reacting the compound represented by Formula (22) with a formylating agent in a suitable solvent or without solvent, and treating the product with a suitable reducing agent.

[0139] The solvent may be any of those which do not impede the reaction significantly, for example, aliphatic hydrocarbons such as hexane, cyclohexane and methylcyclohexane; aromatic hydrocarbons such as benzene, xylene and toluene; halogenated hydrocarbons such as dichloromethane, chloroform, tetrachlorocarbon and 1,2-dichloroethane; ethers such as diethyl ether, dioxane, tetrahydrofuran and 1,2-dimethoxyethane; amides such as dimethylformamide and dimethylacetamide; nitriles such as acetonitrile and propionitrile; ketones such as acetone, methyl isobutyl ketone, cyclohexanone and methyl ethyl ketone; esters such as ethyl acetate and butyl acetate; alcohols such as methanol and ethanol; 1,3-dimehtyl-2-imidazolidinone, sulfolane, dimethylsulfoxide, water and the like, which can be used alone or in combination of two or more.

[0140] Examples of the formylating agent may include, for example, formaldehyde, formic acid, fluoroformic acid, formic acid anhydrides such as formyl(2,2-dimethylpropioic acid), formic acid esters such as phenyl formate, pentafluorobenzaldehyde, oxazole and the like.

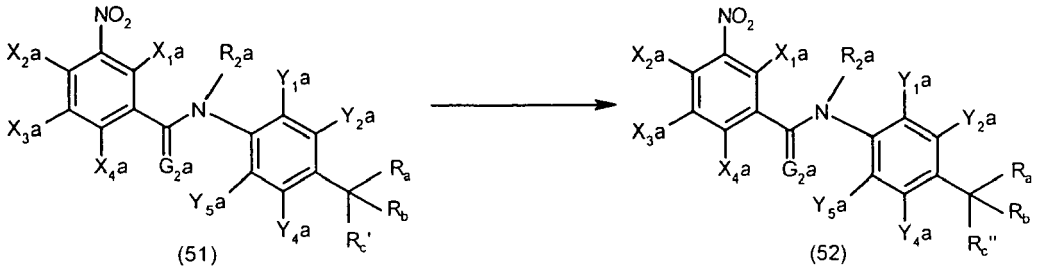
[0141] Examples of the reducing agent may include, for example, inorganic acids such as sulfuric acid, organic acids such as formic acid, borohydrides such as sodium borohydride and sodium cyanoborohydride, boronic acid, lithium aluminum hydride and the like.

[0142] The reaction temperature may be appropriately selected in the range from -20°C to the reflux temperature of

the solvent used, and the reaction time may be appropriately selected in the range from several minutes to 96 hours.

Preparation Process 10

[0143]



(51) (52)

wherein X_1a, X_2a, X_3a, X_4a, Y_1a, Y_2a, Y_4a, Y_5a, G_2a, R_2a, R_a and R_b have the same meaning as those described above; R_c' in Formula (51) represents a hydroxyl group or a group -O-R_d (wherein R_d has the same meaning as described above); and R_c" in Formula (52) represents a chlorine atom, a bromine atom or an iodine atom.

[0144] A chlorine compound (or a bromine compound, an iodine compound) represented by Formula (52) can be prepared by reacting a compound represented by Formula (51) with a suitable halogenating agent in a suitable solvent or without a solvent. In this step, a suitable additive may also be used.

[0145] The solvent may be any of those which do not impede the reaction significantly, for example, aliphatic hydrocarbons such as hexane, cyclohexane and methylcyclohexane; aromatic hydrocarbons such as benzene, xylene and toluene; halogenated hydrocarbons such as dichloromethane, chloroform, tetrachlorocarbon and 1,2-dichloroethane; ethers such as diethyl ether, dioxane, tetrahydrofuran and 1,2-dimethoxyethane; amides such as dimethylformamide and dimethylacetamide; nitriles such as acetonitrile and propionitrile; ketones such as acetone, methyl isobutyl ketone and cyclohexanone; esters such as ethyl acetate and butyl acetate; alcohols such as methanol and ethanol; 1,3-dimehtyl-2-imidazolidinone, sulfolane, dimethylsulfoxide, water and the like, which can be used alone or in combination of two or more.

[0146] Examples of the halogenating agent may include, for example, thionyl chloride, thionyl bromide, phosphorus oxychloride, oxalyl chloride, phosphorus trichloride, phosphorus tribromide, phosphorus pentachloride, a Rydon's reagent, sulfonyl halides such as methanesulfonyl chloride, p-toluenesulfonyl chloride and benzenesulfonyl chloride, sulfonium halide, a sulfonic acid ester, chlorine, bromine, iodine, hypohalogenic acid ester, N-halogenoamine, hydrogen chloride, hydrogen bromide, sodium bromide, potassium bromide, cyanuric chloride, 1,3-dichloro-1,2,4-triazole, titanium(IV) chloride, vanadium(IV) chloride, arsenic(III) chloride, N,N-diethyl-1,2,2-trichlorovinylamine, trichloroacetonitrile, sodium chloride, ammonium bromide, N,N-dimethylchloroforminium chloride, N,N-dimethylchloroforminium bromide, phosphorus trichloride, phosphorus tribromide, N,N-dimethylphosphoamidine dichloride and the like.

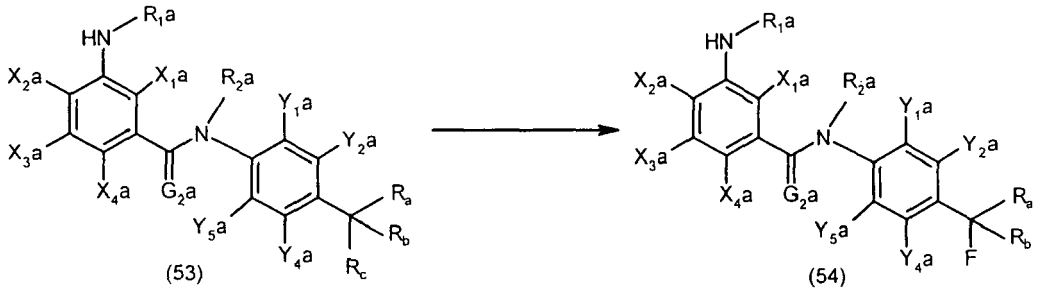
[0147] An additive may include, for example, metal salts such as zinc chloride, lithium bromide and the like, phase-transfer catalysts, organic bases such as hexamethyl phosphoric acid triamide, inorganic acids such as sulfuric acid, N,N-dimethyl formamide and the like.

[0148] Such halogenating agent may be appropriately selected or used as solvent, in the range of 0.01 to 10-fold molar equivalents with respect to the compound represented by Formula (1).

[0149] The reaction temperature may be appropriately selected in the range from -80°C to the reflux temperature of the solvent used, and the reaction time may be appropriately selected in the range from several minutes to 96 hours.

Preparation Process 11

[0150]



wherein X_1a, X_2a, X_3a, X_4a, Y_1a, Y_2a, Y_4a, Y_5a, G_2a, R_1a, R_2a, R_a, R_b and R_c have the same meaning as those described above.

[0151] A compound represented by Formula (54) can be prepared by reacting a compound represented by Formula (53) with a suitable fluorinating agent in a suitable solvent or without a solvent.

[0152] The solvent may be any of those which do not impede the reaction significantly, for example, aliphatic hydrocarbons such as hexane, cyclohexane and methylcyclohexane; aromatic hydrocarbons such as benzene, xylene and toluene; halogenated hydrocarbons such as dichloromethane, chloroform, tetrachlorocarbon and 1,2-dichloroethane; ethers such as diethyl ether, dioxane, tetrahydrofuran and 1,2-dimethoxyethane; amides such as dimethylformamide and dimethylacetamide; nitriles such as acetonitrile and propionitrile; ketones such as acetone, methyl isobutyl ketone, cyclohexanone and methyl ethyl ketone; esters such as ethyl acetate and butyl acetate; alcohols such as methanol and ethanol; 1,3-dimehtyl-2-imidazolidinone, sulfolane, dimethylsulfoxide, water and the like, which can be used alone or in combination of two or more.

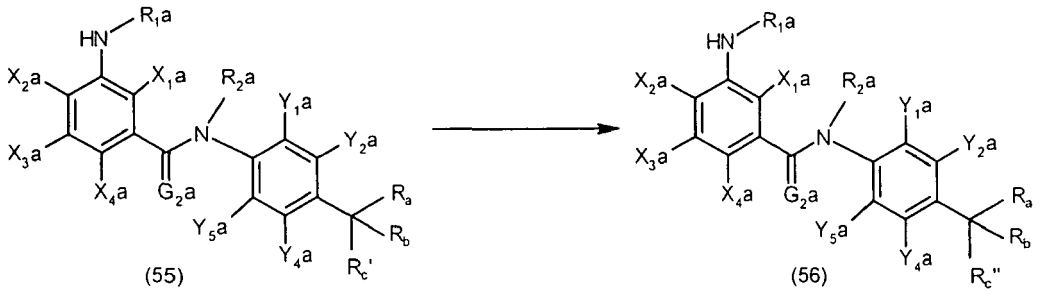
[0153] Examples of the fluorinating agent may include 1,1,2,2-tetrafluoroethyl diethylamine, 2-chloro-1,1,2-trifluoroethyl diethylamine, trifluorodiphenylphospholane, difluorotriphenylphospholane, fluoroformic acid esters, sulfur tetrafluoride, potassium fluoride, potassium hydrogen fluoride, cesium fluoride, rubidium fluoride, sodium fluoride, lithium fluoride, antimony(III) fluoride, antimony(V) fluoride, zinc fluoride, cobalt fluoride, lead fluoride, copper fluoride, mercury(II) fluoride, silver fluoride, silver fluoroborate, thallium(I) fluoride, molybdenum(VI) fluoride, arsenic(III) fluoride, bromine fluoride, selenium tetrafluoride, tris(dimethylamino)sulfonium difluorotrimethylsilicate, sodium hexafluorosilicate, quaternary ammonium fluorides, (2-chloroethyl) diethylamine, diethylaminosulfur trifluoride, morpholinosulfur trifluoride, silicon tetrafluoride, hydrogen fluoride, hydrofluoric acid, hydrogen fluoride-pyridine complex, hydrogen fluoride-triethylamine complex, hydrogen fluoride salts, bis(2-methoxyethyl)amino sulfurtrifluoride, 2,2-difluoro-1,3-dimethyl-2-imidazolidinone, iodine pentafluoride, tris(diethylamino)phosphonium 2,2,3,3,4,4-hexafluorocyclobutanilide, triethylammonium hexafluorocylcobutanilide, hexafluoropropene and the like. Such fluorinating agent can be used alone or in combination of two or more. The fluorinating agent may be appropriately selected or used as solvent, in the range of 1 to 10-fold molar equivalents with respect to the compound represented by Formula (53).

[0154] Additives may be used, and examples thereof may include crown ethers such as 18-crown-6, interline transfer catalysts such as a tetraphenylphosphonium salt, inorganic salts such as calcium fluoride and calcium chloride, metal oxides such as mercury oxide, ion exchange resin and the like. Such additives can be not only added to the reaction system but also used as a pretreating agent for the fluorinating agent.

[0155] The reaction temperature may be appropriately selected in the range from -80°C to the reflux temperature of the solvent used, and the reaction time may be appropriately selected in the range from several minutes to 96 hours.

Preparation Process 12

[0156]

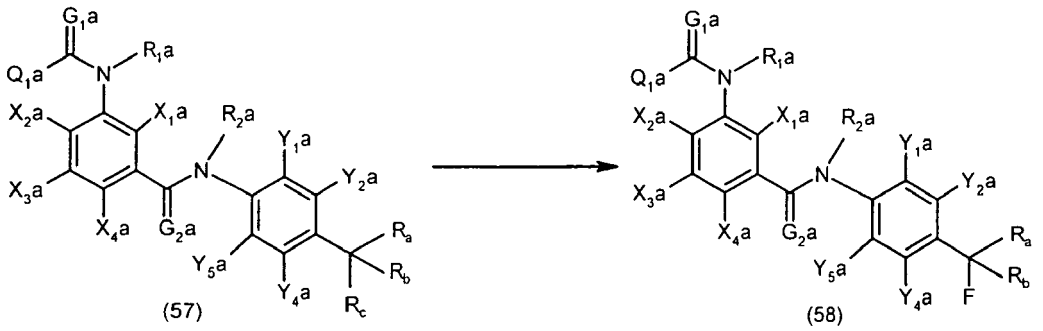


wherein X_1a, X_2a, X_3a, X_4a, Y_1a, Y_2a, Y_4a, Y_5a, G_2a, R_1a, R_2a, R_a, R_b, R_c' and R_c" have the same meaning as those described above.

[0157] A compound represented by Formula (56) can be prepared from the compound represented by Formula (55) according to the process described in Preparation Process 10.

Preparation Process 13

[0158]

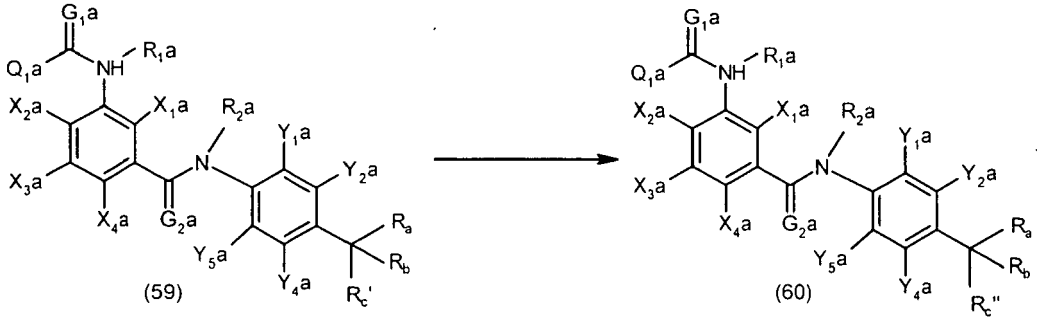


wherein X_1a, X_2a, X_3a, X_4a, Y_1a, Y_2a, Y_4a, Y_5a, G_1a, G_2a, R_1a, R_2a, R_a, R_b, R_c and Q_1a have the same meaning as those described above.

[0159] A compound represented by Formula (58) can be prepared from the compound represented by Formula (57) according to the process described in Preparation Process 11.

Preparation Process 14

[0160]



wherein X_1a, X_2a, X_3a, X_4a, Y_1a, Y_2a, Y_4a, Y_5a, G_1a, G_2a, R_1a, R_2a, R_a, R_b, R_c' , R_c" and Q_1a have the same meaning as those described above.

[0161] A compound represented by Formula (60) can be prepared from the compound represented by Formula (59) according to the process described in Preparation Process 10.

[0162] In all of the processes for preparation as described in the above, the desired products may be isolated from the reaction system after the reaction is completed according to conventional methods, but if required, purification can be carried out by operations such as recrystallization, column chromatography, distillation and the like. Further, the desired product can be also provided to the subsequent reaction process without being separated from the reaction system.

[0163] Hereinbelow, the representative compounds among the compounds represented by Formula (1) as the active ingredient for the insecticide of the invention will be given in Table 1 to Table 5, but the invention is not intended to be limited thereto.

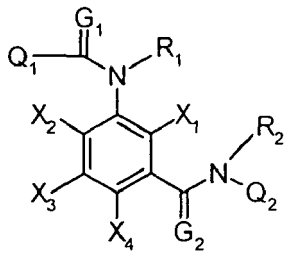
[0164] In Table 6 and Table 7, the compound representative of the compound of Formula (6) will be given.

[0165] In Table 8 to Table 10, the compounds representative of the compounds of Formula (8), Formula (11) and Formula (13).

[0166] Also provided in these tables are reference compounds.

[0167] In addition, the abbreviations in the tables have the following meanings: "n-" represents normal, "Me" a methyl group, "Et" an ethyl group, "n-Pr" a normal propyl group, "i-Pr" an isopropyl group, "n-Bu" a normal butyl group, "i-Bu" an isobutyl group, "s-Bu" a secondary butyl group, "t-Bu" a tertiary butyl group, "H" a hydrogen atom, "O" an oxygen atom, "S" a sulfur atom, "C" a carbon atom, "N" a nitrogen atom, "F" a fluorine atom, "Cl" a chlorine atom, "Br' a bromine atom, "I" an iodine atom, "CF_3" a trifluoromethyl group, "MeS" a methylthio group, "MeSO " methylsulfinyl group, "$MeSO_2$" a methylsulfonyl group, "MeO" a methoxy group, "NH_2" an amino group, "MeNH" a methylamino group, and "Me_2N" is a dimethylamino group; and "OH" a hydroxyl group, respectively.

[Table 1]



(X_1, X_2, X_3, X_4, R_1, R_2 = a hydrogen atom, G_1, G_2 = an oxygen atom)

Comp. No.	Q_1	Q_2
1	phenyl	2,6-dimethyl-4-(pentafluoroethyl)phenyl
2	phenyl	2,6-dichloro-4-(pentafluoroethyl)phenyl
3	2-fluorophenyl	2,6-dichloro-4-(pentafluoroethyl)phenyl
4	phenyl	2,6-dibromo-4-(pentafluoroethyl)phenyl
5	2-fluorophenyl	2,6-dibromo-4-(pentafluoroethyl)phenyl
6	phenyl	2,6-dichloro-4-(heptafluoroisopropyl)phenyl
7	phenyl	2,6-dibromo-4-(heptafluoroisopropyl)phenyl
8	2-fluorophenyl	2,6-dibromo-4-(heptafluoroisopropyl)phenyl
9	phenyl	2,6-dimethyl-4-(heptafluoro-n-propyl)phenyl
10	phenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
11	2-methylphenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
12	3-methylphenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
13	4-methylphenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
14	2-ethylphenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
15	3-ethylphenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
16	4-ethylphenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
17	2-fluorophenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
18	3-fluorophenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
19	4-fluorophenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
20	2-chlorophenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
21	3-chlorophenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
22	4-chlorophenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
23	2-bromophenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
24	3-bromophenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
25	4-bromophenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl

(continued)

Comp. No.	Q_1	Q_2
26	2-iodophenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
27	3-iodophenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
28	4-iodophenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
29	3-cyanophenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
30	4-cyanophenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
31	2-nitrophenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
32	3-nitrophenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
33	4-nitrophenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
34	2-aminophenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
35	3-aminophenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
36	4-aminophenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
37	2-trifluoromethylphenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
38	3-trifluoromethylphenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
39	4-trifluoromethylphenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
40	2-hydroxyphenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
41	2-methoxyphenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
42	3-methoxyphenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
43	4-methoxyphenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
44	2-phenoxyphenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
45	4-(1,1-dimethylethyl)phenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
46	3-(dimethylamino)phenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
47	4-(dimethylamino)phenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
48	4-trifluoromethoxyphenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
49	2-(acetylamino)phenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
50	3-(acetylamino)phenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
51	4-(acetylamino)phenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
52	2-acetoxyphenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
53	2-(methoxycarbonyl)phenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
54	4-(methoxycarbonyl)phenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
55	2-(4-trifluoromethylphenyl) phenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
56	2,3-dimethylphenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
57	2,4-dimethylphenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
58	2,6-dimethylphenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
59	2,3-difluorophenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
60	2,9-difluorophenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
61	2,5-difluorophenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
62	2,6-difluorophenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
63	3,4-difluorophenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl

(continued)

Comp. No.	Q_1	Q_2
64	3,5-difluorophenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
65	2,3-dichlorophenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
66	2,4-dichlorophenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
67	2,5-dichlorophenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
68	2,6-dichlorophenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
69	3,4-dichlorophenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
70	2,4-dinitrophenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
71	3,4-dinitrophenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
72	2,6-dimethoxyphenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
73	3,5-dimethoxyphenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
74	3-methyl-4-nitrophenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
75	5-amino-2-fluorophenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
76	3-fluoro-2-methylphenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
77	2-fluoro-5-nitrophenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
78	4-fluoro-3-nitrophenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
79	5-fluoro-2-nitrophenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
80	2-fluoro-6-iodophenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
81	2-fluoro-5-trifluoromethylphenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
82	2-chloro-4-nitrophenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
83	2-chloro-4-fluorophenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
84	2-chloro-6-fluorophenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
85	3-chloro-4-fluorophenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
86	4-chloro-2-fluorophenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
87	4-chloro-2-nitrophenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
88	3-methoxy-4-nitrophenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
89	2-methoxy-4-nitrophenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
90	2,3,4-trifluorophenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
91	2,4,6-trimethylphenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
92	2,3,6-trifluorophenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
93	2,4,5-trimethoxyphenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
94	3,4,5-trimethoxyphenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
95	2,3,4,5,6-pentafluorophenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
96	2-biphenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
97	3-biphenyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
98	1-naphthyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
99	2-naphthyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
100	pyridin-2-yl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
101	pyridin-3-yl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl

(continued)

Comp. No.	Q_1	Q_2
102	pyridin-4-yl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
103	2-methylpyridin-5-yl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
104	3-methylpyridin-2-yl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
105	2-fluoropyridin-3-yl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
106	2-chloropyridin-3-yl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
107	2-chloropyridin-4-yl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
108	2-chloropyridin-6-yl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
109	2-chloropyridin-5-yl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
110	5-chloropyridin-2-yl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
111	4-trifluoromethylpyridin-3-yl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
112	3-hydroxypyridin-2-yl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
113	2-phenoxypyridin-3-yl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
114	2-methylthiopyridin-3-yl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
115	2,6-dimethoxypyridin-3-yl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
116	2,3-dichloropyridin-5-yl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
117	2,5-dichloropyridin-3-yl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
118	2,6-dichloropyridin-3-yl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
119	3,5-dichloropyridin-4-yl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
120	(pyridine-N-oxide)-2-yl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
121	N-methylpyrrol-2-yl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
122	pyrazin-2-yl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
123	2-methylpyrazin-5-yl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
124	4-trifluoromethylpyrimidin-5-yl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
125	furan-2-yl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
126	furan-3-yl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
127	2-tetrahydrofuranyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
128	3-tetrahydrofuranyl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
129	benzofuran-2-yl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
130	tetrahydropyran-2-yl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
131	2-methyl-5,6-dihydro-4Hpyran-3-yl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
132	thiophen-2-yl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
133	thiophen-3-yl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
134	3-methylthiophen-2-yl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
135	2-nitrothiophen-4-yl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
136	2-methylthiophen-5-yl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
137	3-chlorothiophen-2-yl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
138	2-chlorothiophen-5-yl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
139	3-bromothiophen-2-yl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl

(continued)

Comp. No.	Q_1	Q_2
140	2-bromothiophen-5-yl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
141	3-iodothiophen-2-yl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
142	3-phenylthiophen-2-yl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
143	2,4-dimethylthiophen-5-yl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
144	benzothiophen-2-yl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
145	4-nitro-1H-pyrrol-2-yl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
146	3-ethyl-3H-pyrazol-4-yl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
147	1-methyl-3-nitro-1H-pyrazol-4-yl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
148	3-chloro-1-methyl-1H-pyrazol-4-yl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
149	3-bromo-1-methyl-1H-pyrazol-4-yl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
150	1-methyl-3-trifluoromethyl-1H-pyrazol-4-yl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
151	1-methyl-5-trifluoromethyl-1H-pyrazol-4-yl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
152	isoxazol-5-yl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
153	4-trifluoromethylthiazol-5-yl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
154	2,4-dimethylthiazol-5-yl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
155	2-ethyl-4-methylthiazol-5-yl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
156	2-chloro-4-methylthiazol-5-yl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
157	3-methyl-isothiazol-5-yl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
158	3,4-dichloro-isothiazol-5-yl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
159	3-chlorobenzothiazol-2-yl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
160	2,2-difluoro-benzo[1.3]dioxol-5-yl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
161	2,2-difluoro-benzo[1.3]dioxol-4-yl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
162	2-phenylquinolin-4-yl	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
163	phenyl	2-bromo-4-(heptafluoroisopropyl)-6-methylphenyl
164	phenyl	2-ethyl-4-(heptafluoroisopropyl)-6-methylphenyl
165	2-fluorophenyl	2-ethyl-4-(heptafluoroisopropyl)-6-methylphenyl
166	phenyl	4-(heptafluoroisopropyl)-2-iodo-6-methylphenyl
167	phenyl	4-(heptafluoroisopropyl)-2-hydroxy-6-methylphenyl
168	phenyl	2-chloro-6-ethyl-4-(heptafluoroisopropyl)phenyl
169	phenyl	2-bromo-6-ethyl-4-(heptafluoroisopropyl)phenyl
170	2-fluorophenyl	2-bromo-6-ethyl-4-(heptafluoroisopropyl)phenyl
171	phenyl	2-ethyl-4-(heptafluoroisopropyl)-6-iodophenyl
172	2-fluorophenyl	2-ethyl-4-(heptafluoroisopropyl)-6-iodophenyl
173	4-nitrophenyl	2-ethyl-4-(heptafluoroisopropyl)-6-iodophenyl
174	4-cyanophenyl	2-ethyl-4-(heptafluoroisopropyl)-6-iodophenyl
175	4-nitrophenyl	4-(heptafluoroisopropyl)-2-methyl-6-n-propylphenyl
176	phenyl	4-(heptafluoroisopropyl)-2-isopropyl-6-methylphenyl
177	2-fluorophenyl	4-(heptafluoroisopropyl)-2-isopropyl-6-methylphenyl

(continued)

Comp. No.	Q_1	Q_2
178	phenyl	2-bromo-4-(heptafluoroisopropyl)-6-n-propylphenyl
179	2-fluorophenyl	2-bromo-4-(heptafluoroisopropyl)-6-n-propylphenyl
180	4-nitrophenyl	2-bromo-4-(heptafluoroisopropyl)-6-n-propylphenyl
181	4-cyanophenyl	2-bromo-4-(heptafluoroisopropyl)-6-n-propylphenyl
182	phenyl	4-(heptafluoroisopropyl)-2-iodo-6-n-propylphenyl
183	2-fluorophenyl	4-(heptafluoroisopropyl)-2-iodo-6-n-propylphenyl
184	4-nitrophenyl	4-(heptafluoroisopropyl)-2-iodo-6-n-propylphenyl
185	4-cyanophenyl	4-(heptafluoroisopropyl)-2-iodo-6-n-propylphenyl
186	4-trifluoromethylphenyl	4-(heptafluoroisopropyl)-2-iodo-6-n-propylphenyl
187	phenyl	2-chloro-4-(heptafluoroisopropyl)-6-n-butylphenyl
188	2-fluorophenyl	2-chloro-4-(heptafluoroisopropyl)-6-n-butylphenyl
189	phenyl	2-bromo-4-(heptafluoroisopropyl)-6-n-butylphenyl
190	2-fluorophenyl	2-bromo-4-(heptafluoroisopropyl)-6-n-butylphenyl
191	phenyl	4-(heptafluoroisopropyl)-2-iodo-6-n-butylphenyl
192	2-fluorophenyl	4-(heptafluoroisopropyl)-2-iodo-6-n-butylphenyl
193	phenyl	2-(2-butyl)-6-chloro-4-(heptafluoroisopropyl)phenyl
194	phenyl	2-bromo-6-(2-butyl)-4-(heptafluoroisopropyl)phenyl
195	2-fluorophenyl	2-bromo-6-(2-butyl)-4-(heptafluoroisopropyl)phenyl
196	phenyl	2-(2-butyl)-4-(heptafluoroisopropyl)-6-iodophenyl
197	2-fluorophenyl	2-bromo-6-cyano-4-(heptafluoroisopropyl)phenyl
198	phenyl	2-bromo-4-(heptafluoroisopropyl)-6-methylthiophenyl
199	2-fluorophenyl	2-bromo-4-(heptafluoroisopropyl)-6-methylthiophenyl
200	phenyl	2-bromo-4-(heptafluoroisopropyl)-6-(methylsulfinyl)phenyl
201	2-fluorophenyl	2-chloro-4-(heptafluoroisopropyl)-6-(methylsulfonyl)phenyl
202	2-chloropyridin-3-yl	2-chloro-4-(heptafluoroisopropyl)-6-(methylsulfonyl)phenyl
203	phenyl	2-bromo-4-(heptafluoroisopropyl)-6-(methylsulfonyl)phenyl
204	2-fluorophenyl	2-bromo-4-(heptafluoroisopropyl)-6-(methylsulfonyl)phenyl
205	4-fluorophenyl	2-bromo-4-(heptafluoroisopropyl)-6-(methylsulfonyl)phenyl
206	4-nitrophenyl	2-bromo-4-(heptafluoroisopropyl)-6-(methylsulfonyl)phenyl
207	4-cyanophenyl	2-bromo-4-(heptafluoroisopropyl)-6-(methylsulfonyl)phenyl

(continued)

Comp. No.	Q_1	Q_2
208	2-chloropyridin-3-yl	2-bromo-4-(heptafluoroisopropyl)-6-(methylsulfonyl)phenyl
209	phenyl	4-(heptafluoroisopropyl)-2-methylthiomethyl-6-trifluoromethylphenyl
210	phenyl	2-bromo-4-(heptafluoroisopropyl)-6-(trifluoromethylthio)phenyl
211	phenyl	2,6-dimethyl-4-(nonafluoro-n-butyl)phenyl
212	phenyl	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
213	2-methylphenyl	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
214	4-methylphenyl	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
215	2-fluorophenyl	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
216	3-fluorophenyl	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
217	4-fluorophenyl	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
218	2-chlorophenyl	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
219	4-chlorophenyl	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
220	2-bromophenyl	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
221	2-iodophenyl	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
222	3-cyanophenyl	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
223	4-cyanophenyl	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
224	2-nitrophenyl	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
225	3-nitrophenyl	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
226	4-nitrophenyl	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
227	2-trifluoromethylphenyl	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
228	4-trifluoromethylphenyl	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
229	4-trifluoromethoxyphenyl	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
230	2,3-difluorophenyl	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
231	2,4-difluorophenyl	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
232	2,5-difluorophenyl	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
233	2,6-difluorophenyl	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
234	2,4-dichlorophenyl	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
235	2,6-dichlorophenyl	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
236	3,4-dichlorophenyl	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
237	2-chloro-4-nitrophenyl	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
238	2-chloro-4-fluorophenyl	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
239	2-chloro-6-fluorophenyl	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
240	4-chloro-2-fluorophenyl	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
241	4-chloro-2-nitrophenyl	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
242	2,3,6-trifluorophenyl	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
243	pyridin-2-yl	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl

(continued)

Comp. No.	Q_1	Q_2
244	pyridin-3-yl	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
245	2-fluoropyridin-3-yl	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
246	2-chloropyridin-3-yl	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
247	2-chloropyridin-5-yl	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
248	2-methylthiopyridin-3-yl	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
249	pyrazin-2-yl	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
250	furan-2-yl	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
251	furan-3-yl	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
252	2-tetrahydrofuranyl	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
253	benzofuran-2-yl	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
254	thiophen-2-yl	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
255	2,6-difluorophenyl	2,6-dichloro-4-(trifluoromethylthio)phenyl
256	phenyl	2,6-dibromo-4-(trifluoromethylthio)phenyl
257	2,6-difluorophenyl	2,6-dibromo-4-(trifluoromethylthio)phenyl
258	phenyl	2,6-dibromo-4-(pentafluoroethylthio)phenyl
259	2-fluorophenyl	2,6-dibromo-4-(pentafluoroethylthio)phenyl
260	phenyl	2,6-dimethyl-4-(heptafluoro-n-propylthio)phenyl
261	2-fluorophenyl	2,6-dimethyl-4-(heptafluoro-n-propylthio)phenyl
262	phenyl	2,6-dichloro-4-(heptafluoro-n-propylthio)phenyl
263	phenyl	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
264	2-methylphenyl	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
265	4-methylphenyl	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
266	2-fluorophenyl	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
267	3-fluorophenyl	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
268	4-fluorophenyl	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
269	2-chlorophenyl	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
270	4-chlorophenyl	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
271	2-bromophenyl	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
272	2-iodophenyl	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
273	3-cyanophenyl	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
274	4-cyanophenyl	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
275	2-nitrophenyl	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
276	3-nitrophenyl	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
277	4-nitrophenyl	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
278	2-trifluoromethylphenyl	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
279	4-trifluoromethylphenyl	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
280	4-trifluoromethoxyphenyl	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
281	2,3-difluorophenyl	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl

(continued)

Comp. No.	Q_1	Q_2
282	2,4-difluorophenyl	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
283	2,5-difluorophenyl	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
284	2,6-difluorophenyl	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
285	3-aminophenyl	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
286	3-(acetylamino)phenyl	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
287	3-(methylsulfonylamino)phenyl	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
288	2,4-dinitrophenyl	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
289	3,4-dinitrophenyl	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
290	3-methyl-4-nitrophenyl	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
291	5-amino-2-fluorophenyl	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
292	2-fluoro-5-nitrophenyl	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
293	2-fluoro-5-(methylsulfonylamino)phenyl	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
294	2-methoxy-4-nitrophenyl	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
295	3-methoxy-4-nitrophenyl	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
296	5-(acetylamino)-2-fluorophenyl	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
297	2,4-dichlorophenyl	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
298	2,6-dichlorophenyl	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
299	3,4-dichlorophenyl	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
300	2-chloro-4-nitrophenyl	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
301	2-chloro-4-fluorophenyl	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
302	2-chloro-6-fluorophenyl	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
303	4-chloro-2-fluorophenyl	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
304	4-chloro-2-nitrophenyl	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
305	2,3,6-trifluorophenyl	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
306	pyridin-2-yl	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
307	pyridin-3-yl	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
308	2-fluoropyridin-3-yl	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
309	2-chloropyridin-3-yl	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
310	2-chloropyridin-5-yl	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
311	2-methylthiopyridin-3-yl	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
312	2,6-dichloropyridin-3-yl	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
313	2,6-dichloropyridin-4-yl	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
314	2-chloro-6-methylpyridin-3-yl	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
315	pyridin-N-oxide-2-yl	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
316	pyrazin-2-yl	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
317	1-methyl-3-nitro-1Hpyrazol-4-yl	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
318	1-methyl-3-trifluoromethyl-1H-pyrazol -4-yl	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
319	1-methyl-5-trifluoromethyl-1H-pyrazol -4-yl	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl

(continued)

Comp. No.	Q_1	Q_2
320	2-tetrahydrofuranyl	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
321	2-phenylthiazol-4-yl	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
322	furan-2-yl	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
323	furan-3-yl	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
324	2-tetrahydrofuranyl	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
325	benzofuran-2-yl	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
326	thiophen-2-yl	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
327	phenyl	2,6-diiodo-4-(heptafluoro-n-propylthio)phenyl
328	2-fluorophenyl	2,6-diiodo-4-(heptafluoro-n-propylthio)phenyl
329	phenyl	2,6-dichloro-4-(heptafluoroisopropylthio)phenyl
330	2-fluorophenyl	2,6-dichloro-4-(heptafluoroisopropylthio)phenyl
331	2-chloropyridin-3-yl	2,6-dichloro-4-(heptafluoroisopropylthio)phenyl
332	phenyl	2,6-dibromo-4-(heptafluoroisopropylthio)phenyl
333	phenyl	2,6-dibromo-4-(nonafluoro-n-butylthio)phenyl
334	2-fluorophenyl	2,6-dibromo-4-(nonafluoro-n-butylthio)phenyl
335	phenyl	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
336	2-methylphenyl	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
337	4-methylphenyl	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
338	2-fluorophenyl	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
339	3-fluorophenyl	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
340	4-fluorophenyl	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
341	2-chlorophenyl	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
342	4-chlorophenyl	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
343	2-bromophenyl	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
344	2-iodophenyl	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
345	3-cyanophenyl	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
346	4-cyanophenyl	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
347	2-nitrophenyl	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
348	3-nitrophenyl	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
349	4-nitrophenyl	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
350	2-trifluoromethylphenyl	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
351	4-trifluoromethylphenyl	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
352	4-trifluoromethoxyphenyl	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
353	2,3-difluorophenyl	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
354	2,4-difluorophenyl	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
355	2,5-difluorophenyl	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
356	2,6-difluorophenyl	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
357	2,4-dichlorophenyl	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl

(continued)

Comp. No.	Q_1	Q_2
358	2,6-dichlorophenyl	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
359	3,4-dichlorophenyl	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
360	2-chloro-4-nitrophenyl	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
361	2-chloro-4-fluorophenyl	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
362	2-chloro-6-fluorophenyl	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
363	4-chloro-2-fluorophenyl	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
364	4-chloro-2-nitrophenyl	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
365	2,3,6-trifluorophenyl	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
366	pyridin-2-yl	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
367	pyridin-3-yl	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
368	2-fluoropyridin-3-yl	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
369	2-chloropyridin-3-yl	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
370	2-chloropyridin-5-yl	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
371	2-methylthiopyridin-3-yl	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
372	pyrazin-2-yl	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
373	furan-2-yl	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
374	thiophen-2-yl	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
375	2,6-difluorophenyl	2,6-dichloro-4-(trifluoromethylsulfonyl)phenyl
376	phenyl	2,6-dibromo-4-(trifluoromethylsulfonyl)phenyl
377	2,6-difluorophenyl	2,6-dibromo-4-(trifluoromethylsulfonyl)phenyl
378	2-fluorophenyl	2,6-dichloro-4-(heptafluoroisopropylsulfonyl)phenyl
379	phenyl	2,6-dichloro-4-(heptafluoroisopropylsulfonyl)phenyl
380	phenyl	2,6-dibromo-4-(heptafluoro-n-propylsulfonyl)phenyl
381	2-methylphenyl	2,6-dibromo-4-(heptafluoro-n-propylsulfonyl)phenyl
382	4-methylphenyl	2,6-dibromo-4-(heptafluoro-n-propylsulfonyl)phenyl
383	2-fluorophenyl	2,6-dibromo-4-(heptafluoro-n-propylsulfonyl)phenyl
384	3-fluorophenyl	2,6-dibromo-4-(heptafluoro-n-propylsulfonyl)phenyl
385	4-fluorophenyl	2,6-dibromo-4-(heptafluoro-n-propylsulfonyl)phenyl
386	2-chlorophenyl	2,6-dibromo-4-(heptafluoro-n-propylsulfonyl)phenyl
387	4-chlorophenyl	2,6-dibromo-4-(heptafluoro-n-propylsulfonyl)phenyl
388	2-bromophenyl	2,6-dibromo-4-(heptafluoro-n-propylsulfonyl)phenyl
389	2-iodophenyl	2,6-dibromo-4-(heptafluoro-n-propylsulfonyl)phenyl
390	3-cyanophenyl	2,6-dibromo-4-(heptafluoro-n-propylsulfonyl)phenyl
391	4-cyanophenyl	2,6-dibromo-4-(heptafluoro-n-propylsulfonyl)phenyl
392	2-nitrophenyl	2,6-dibromo-4-(heptafluoro-n-propylsulfonyl)phenyl
393	3-nitrophenyl	2,6-dibromo-4-(heptafluoro-n-propylsulfonyl)phenyl
394	4-nitrophenyl	2,6-dibromo-4-(heptafluoro-n-propylsulfonyl)phenyl
395	2-trifluoromethylphenyl	2,6-dibromo-4-(heptafluoro-n-propylsulfonyl)phenyl

(continued)

Comp. No.	Q_1	Q_2
396	4-trifluoromethylphenyl	2,6-dibromo-4-(heptafluoro-n-propylsulfonyl)phenyl
397	4-trifluoromethoxyphenyl	2,6-dibromo-4-(heptafluoro-n-propylsulfonyl)phenyl
398	2,3-difluorophenyl	2,6-dibromo-4-(heptafluoro-n-propylsulfonyl)phenyl
399	2,4-difluorophenyl	2,6-dibromo-4-(heptafluoro-n-propylsulfonyl)phenyl
400	2,5-difluorophenyl	2,6-dibromo-4-(heptafluoro-n-propylsulfonyl)phenyl
401	2,6-difluorophenyl	2,6-dibromo-4-(heptafluoro-n-propylsulfonyl)phenyl
402	2,4-dichlorophenyl	2,6-dibromo-4-(heptafluoro-n-propylsulfonyl)phenyl
403	2,6-dichlorophenyl	2,6-dibromo-4-(heptafluoro-n-propylsulfonyl)phenyl
404	3,4-dichlorophenyl	2,6-dibromo-4-(heptafluoro-n-propylsulfonyl)phenyl
405	2-chloro-4-nitrophenyl	2,6-dibromo-4-(heptafluoro-n-propylsulfonyl)phenyl
406	2-chloro-4-fluorophenyl	2,6-dibromo-4-(heptafluoro-n-propylsulfonyl)phenyl
407	2-chloro-6-fluorophenyl	2,6-dibromo-4-(heptafluoro-n-propylsulfonyl)phenyl
408	4-chloro-2-fluorophenyl	2,6-dibromo-4-(heptafluoro-n-propylsulfonyl)phenyl
409	4-chloro-2-nitrophenyl	2,6-dibromo-4-(heptafluoro-n-propylsulfonyl)phenyl
410	2,3,6-trifluorophenyl	2,6-dibromo-4-(heptafluoro-n-propylsulfonyl)phenyl
411	pyridin-2-yl	2,6-dibromo-4-(heptafluoro-n-propylsulfonyl)phenyl
412	pyridin-3-yl	2,6-dibromo-4-(heptafluoro-n-propylsulfonyl)phenyl
413	2-fluoropyridin-3-yl	2,6-dibromo-4-(heptafluoro-n-propylsulfonyl)phenyl
414	2-chloropyridin-3-yl	2,6-dibromo-4-(heptafluoro-n-propylsulfonyl)phenyl
415	2-chloropyridin-5-yl	2,6-dibromo-4-(heptafluoro-n-propylsulfonyl)phenyl
416	2-methylthiopyridin-3-yl	2,6-dibromo-4-(heptafluoro-n-propylsulfonyl)phenyl
417	pyrazin-2-yl	2,6-dibromo-4-(heptafluoro-n-propylsulfonyl)phenyl
418	furan-2-yl	2,6-dibromo-4-(heptafluoro-n-propylsulfonyl)phenyl
419	thiophen-2-yl	2,6-dibromo-4-(heptafluoro-n-propylsulfonyl)phenyl
420	phenyl	2,6-dimethyl-4-(heptafluoro-n-propylthio)phenyl
421	2-methylphenyl	2,6-dimethyl-4-(heptafluoro-n-propylthio)phenyl
422	4-methylphenyl	2,6-dimethyl-4-(heptafluoro-n-propylthio)phenyl
423	2-fluorophenyl	2,6-dimethyl-4-(heptafluoro-n-propylthio)phenyl
424	3-fluorophenyl	2,6-dimethyl-4-(heptafluoro-n-propylthio)phenyl
425	4-fluorophenyl	2,6-dimethyl-4-(heptafluoro-n-propylthio)phenyl
426	2-chlorophenyl	2,6-dimethyl-4-(heptafluoro-n-propylthio)phenyl
427	4-chlorophenyl	2,6-dimethyl-4-(heptafluoro-n-propylthio)phenyl
428	2-bromophenyl	2,6-dimethyl-4-(heptafluoro-n-propylthio)phenyl
429	2-iodophenyl	2,6-dimethyl-4-(heptafluoro-n-propylthio)phenyl
430	3-cyanophenyl	2,6-dimethyl-4-(heptafluoro-n-propylthio)phenyl
431	4-cyanophenyl	2,6-dimethyl-4-(heptafluoro-n-propylthio)phenyl
432	2-nitrophenyl	2,6-dimethyl-4-(heptafluoro-n-propylthio)phenyl
433	3-nitrophenyl	2,6-dimethyl-4-(heptafluoro-n-propylthio)phenyl

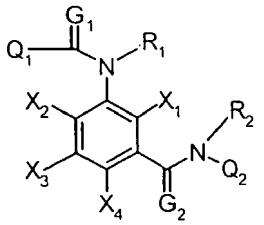
(continued)

Comp. No.	Q_1	Q_2
434	4-nitrophenyl	2,6-dimethyl-4-(heptafluoro-n-propylthio)phenyl
435	2-trifluoromethylphenyl	2,6-dimethyl-4-(heptafluoro-n-propylthio)phenyl
436	4-trifluoromethylphenyl	2,6-dimethyl-4-(heptafluoro-n-propylthio)phenyl
437	4-trifluoromethoxyphenyl	2,6-dimethyl-4-(heptafluoro-n-propylthio)phenyl
438	2,3-difluorophenyl	2,6-dimethyl-4-(heptafluoro-n-propylthio)phenyl
439	2,4-difluorophenyl	2,6-dimethyl-4-(heptafluoro-n-propylthio)phenyl
440	2,5-difluorophenyl	2,6-dimethyl-4-(heptafluoro-n-propylthio)phenyl
441	2,6-difluorophenyl	2,6-dimethyl-4-(heptafluoro-n-propylthio)phenyl
442	2,4-dichlorophenyl	2,6-dimethyl-4-(heptafluoro-n-propylthio)phenyl
443	2,6-dichlorophenyl	2,6-dimethyl-4-(heptafluoro-n-propylthio)phenyl
444	3,4-dichlorophenyl	2,6-dimethyl-4-(heptafluoro-n-propylthio)phenyl
445	2-chloro-4-nitrophenyl	2,6-dimethyl-4-(heptafluoro-n-propylthio)phenyl
446	2-chloro-4-fluorophenyl	2,6-dimethyl-4-(heptafluoro-n-propylthio)phenyl
447	2-chloro-6-fluorophenyl	2,6-dimethyl-4-(heptafluoro-n-propylthio)phenyl
448	4-chloro-2-fluorophenyl	2,6-dimethyl-4-(heptafluoro-n-propylthio)phenyl
449	4-chloro-2-nitrophenyl	2,6-dimethyl-4-(heptafluoro-n-propylthio)phenyl
450	2,3,6-trifluorophenyl	2,6-dimethyl-4-(heptafluoro-n-propylthio)phenyl
451	pyridin-2-yl	2,6-dimethyl-4-(heptafluoro-n-propylthio)phenyl
452	pyridin-3-yl	2,6-dimethyl-4-(heptafluoro-n-propylthio)phenyl
453	2-fluoropyridin-3-yl	2,6-dimethyl-4-(heptafluoro-n-propylthio)phenyl
454	2-chloropyridin-3-yl	2,6-dimethyl-4-(heptafluoro-n-propylthio)phenyl
455	2-chloropyridin-5-yl	2,6-dimethyl-4-(heptafluoro-n-propylthio)phenyl
456	2-methylthiopyridin-3-yl	2,6-dimethyl-4-(heptafluoro-n-propylthio)phenyl
457	pyrazin-2-yl	2,6-dimethyl-4-(heptafluoro-n-propylthio)phenyl
458	furan-2-yl	2,6-dimethyl-4-(heptafluoro-n-propylthio)phenyl
459	thiophen-2-yl	2,6-dimethyl-4-(heptafluoro-n-propylthio)phenyl
460	2,6-difluorophenyl	2,6-dichloro-4-(trifluoromethylsulfonyl)phenyl
461	phenyl	2-bromo-6-(heptafluoroisopropyloxy)-4-methylpyridin-3 -yl
462	2-fluorophenyl	2-bromo-6-(heptafluoroisopropyloxy)-4-methylpyridin-3 -yl
463	phenyl	2,4-dimethyl-6-(2,2,2-trifluoro-1-trifluoromethylethoxy)pyridin-3-yl
464	phenyl	2-chloro-4-methyl-6-(2,2,2-trifluoro-1-trifluoromethylethoxy)pyridin-3-yl
965	phenyl	2-bromo-4-methyl-6-(2,2,2-trifluoro-1-trifluoromethylethoxy)pyridin-3-yl
466	2-fluorophenyl	2-bromo-4-methyl-6-(2,2,2-trifluoro-1-trifluoromethylethoxy)pyridin-3-yl

(continued)

Comp. No.	Q_1	Q_2
467	phenyl	2-iodo-4-methyl-6-(2,2,2-trifluoro-1-trifluoromethyle thoxy)pyridin-3-yl

[Table 2]



(R_1, R_2 = a hydrogen atom, G_1, G_2 = an oxygen atom)

Comp. No.	Q_1	X_1	X_2	X_3	X_4	Q_2
601	phenyl	F	H	H	H	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
602	2-methylphenyl	F	H	H	H	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
603	3-methylphenyl	F	H	H	H	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
604	4-methylphenyl	F	H	H	H	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
605	2-nitrophenyl	F	H	H	H	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
606	3-nitrophenyl	F	H	H	H	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
607	4-nitrophenyl	F	H	H	H	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
608	3-cyanophenyl	F	H	H	H	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
609	4-cyanophenyl	F	H	H	H	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
610	2-fluorophenyl	F	H	H	H	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
611	3-fluorophenyl	F	H	H	H	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
612	4-fluorophenyl	F	H	H	H	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
613	2-chlorophenyl	F	H	H	H	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
614	4-chlorophenyl	F	H	H	H	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
615	2-bromophenyl	F	H	H	H	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
616	2-iodophenyl	F	H	H	H	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
617	2-trifluoromethyl phenyl	F	H	H	H	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
618	4-trifluoromethyl phenyl	F	H	H	H	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
619	4-trifluoromethoxy phenyl	F	H	H	H	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
620	4-(dimethylamino) phenyl	F	H	H	H	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
621	2.3-difluorophenyl	F	H	H	H	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
622	2.4-difluorophenyl	F	H	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
623	2.5-difluorophenyl	F	H	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
624	2,6-difluorophenyl	F	H	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl

(continued)

Comp. No.	Q_1	X_1	X_2	X_3	X_4	Q_2
625	2,4-dichlorophenyl	F	H	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
626	2,6-dichlorophenyl	F	H	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
627	3,4-dichlorophenyl	F	H	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
628	2-fluoro-4-nitrophenyl	F	H	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
629	4-fluoro-2-nitrophenyl	F	H	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
630	2-chloro-4-fluorophenyl	F	H	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
631	4-chloro-2-fluorophenyl	F	H	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
632	2-chloro-6-fluorophenyl	F	H	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
633	2-chloro-4-nitrophenyl	F	H	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
634	4-chloro-2-nitrophenyl	F	H	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
635	2,3,6-trifluorophenyl	F	H	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
636	pyridin-2-yl	F	H	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
637	pyridin-3-yl	F	H	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
638	2-fluoropyridin-3-yl	F	H	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
639	2-chloropyridin-3-yl	F	H	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
640	2-chloropyridin-5-yl	F	H	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
641	2-methylthiopyridin-3-yl	F	H	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
642	pyrazin-2-yl	F	H	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
643	furan-2-yl	F	H	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
644	furan-3-yl	F	H	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
645	2-tetrahydrofuranyl	F	H	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
646	benzofuran-2-yl	F	H	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
647	thiophen-2-yl	F	H	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
648	2-methyl-5,6-dihydro-4H-pyran-3-yl	F	H	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
649	phenyl	H	Cl	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
650	phenyl	H	F	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
651	4-nitrophenyl	H	F	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
652	4-cyanophenyl	H	F	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
653	2-fluorophenyl	H	F	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
654	4-fluorophenyl	H	F	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
655	4-trifluoromethylphenyl	H	F	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
656	2.4-difluorophenyl	H	F	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
657	2-chloropyridin-3-yl	H	F	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
658	phenyl	H	H	CF_3	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
659	phenyl	H	H	H	F	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
660	phenyl	H	H	H	Cl	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl

(continued)

Comp. No.	Q_1	X_1	X_2	X_3	X_4	Q_2
661	phenyl	H	H	H	Br	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
662	phenyl	H	H	H	I	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
663	phenyl	F	H	H	F	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
664	phenyl	H	Br	H	Br	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
665	phenyl	F	H	H	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
666	2-methylphenyl	F	H	H	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
667	4-methylphenyl	F	H	H	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
668	2-fluorophenyl	F	H	H	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
669	3-fluorophenyl	F	H	H	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
670	4-fluorophenyl	F	H	H	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
671	2-chlorophenyl	F	H	H	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
672	4-chlorophenyl	F	H	H	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
673	2-bromophenyl	F	H	H	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
674	2-iodophenyl	F	H	H	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
675	3-cyanophenyl	F	H	H	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
676	4-cyanophenyl	F	H	H	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
677	2-nitrophenyl	F	H	H	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
678	3-nitrophenyl	F	H	H	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
679	4-nitrophenyl	F	H	H	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
680	2-trifluoromethylphenyl	F	H	H	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
681	4-trifluoromethylphenyl	F	H	H	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
682	4-trifluoromethoxyphenyl	F	H	H	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
683	2.3-difluorophenyl	F	H	H	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
684	2.4-difluorophenyl	F	H	H	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
685	2.5-difluorophenyl	F	H	H	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
686	2,6-difluorophenyl	F	H	H	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
687	2,4-dichlorophenyl	F	H	H	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
688	2,6-dichlorophenyl	F	H	H	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
689	3,4-dichlorophenyl	F	H	H	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
690	2-chloro-4-nitrophenyl	F	H	H	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
691	2-chloro-4-fluorophenyl	F	H	H	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
692	2-chloro-6-fluorophenyl	F	H	H	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
693	4-chloro-2-fluorophenyl	F	H	H	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
694	4-chloro-2-nitrophenyl	F	H	H	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
695	2,3,6-trifluorophenyl	F	H	H	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
696	pyridin-2-yl	F	H	H	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl

(continued)

Comp. No.	Q_1	X_1	X_2	X_3	X_4	Q_2
697	pyridin-3-yl	F	H	H	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
698	2-fluoropyridin-3-yl	F	H	H	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
699	2-chloropyridin-3-yl	F	H	H	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
700	2-chloropyridin-5-yl	F	H	H	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
701	2-methylthiopyridin-3-yl	F	H	H	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
702	pyrazin-2-yl	F	H	H	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
703	furan-2-yl	F	H	H	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
704	furan-3-yl	F	H	H	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
705	2-tetrahydrofuranyl	F	H	H	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
706	benzofuran-2-yl	F	H	H	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
707	thiophen-2-yl	F	H	H	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
708	phenyl	F	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
709	2-methylphenyl	F	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
710	4-methylphenyl	F	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
711	2-fluorophenyl	F	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
712	3-fluorophenyl	F	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
713	4-fluorophenyl	F	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
714	2-chlorophenyl	F	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
715	4-chlorophenyl	F	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
716	2-bromophenyl	F	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
717	2-iodophenyl	F	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
718	3-cyanophenyl	F	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
719	4-cyanophenyl	F	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
720	2-nitrophenyl	F	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
721	3-nitrophenyl	F	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
722	4-nitrophenyl	F	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
723	2-trifluoromethylphenyl	F	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
724	4-trifluoromethylphenyl	F	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
725	4-trifluoromethoxyphenyl	F	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
726	2,3-difluorophenyl	F	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
727	2,4-difluorophenyl	F	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
728	2,5-difluorophenyl	F	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
729	2,6-difluorophenyl	F	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
730	2,4-dichlorophenyl	F	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
731	2,6-dichlorophenyl	F	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
732	3,4-dichlorophenyl	F	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl

(continued)

Comp. No.	Q_1	X_1	X_2	X_3	X_4	Q_2
733	2-chloro-4-nitrophenyl	F	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
734	2-chloro-4-fluorophenyl	F	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
735	2-chloro-6-fluorophenyl	F	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
736	4-chloro-2-fluorophenyl	F	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
737	4-chloro-2-nitrophenyl	F	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
738	2,3,6-trifluorophenyl	F	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
739	pyridin-2-yl	F	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
740	pyridin-3-yl	F	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
741	2-fluoropyridin-3-yl	F	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
742	2-chloropyridin-3-yl	F	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
743	2-chloropyridin-5-yl	F	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
744	2-methylthiopyridin-3-yl	F	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
745	pyrazin-2-yl	F	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
746	furan-2-yl	F	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
747	furan-3-yl	F	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
748	2-tetrahydrofuranyl	F	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
749	benzofuran-2-yl	F	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
750	thiophen-2-yl	F	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
751	phenyl	F	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
752	2-methylphenyl	F	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
753	4-methylphenyl	F	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
754	2-fluorophenyl	F	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
755	3-fluorophenyl	F	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
756	4-fluorophenyl	F	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
757	2-chlorophenyl	F	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
758	4-chlorophenyl	F	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
759	2-bromophenyl	F	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
760	2-iodophenyl	F	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
761	3-cyanophenyl	F	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl

(continued)

Comp. No.	Q_1	X_1	X_2	X_3	X_4	Q_2
762	4-cyanophenyl	F	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
763	2-nitrophenyl	F	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
764	3-nitrophenyl	F	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
765	4-nitrophenyl	F	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
766	2-trifluoromethylphenyl	F	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
767	4-trifluoromethylphenyl	F	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
768	4-trifluoromethoxyphenyl	F	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
769	2,3-difluorophenyl	F	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
770	2,4-difluorophenyl	F	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
771	2,5-difluorophenyl	F	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
772	2,6-difluorophenyl	F	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
773	2,4-dichlorophenyl	F	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
774	2,6-dichlorophenyl	F	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
775	3,4-dichlorophenyl	F	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
776	2-chloro-4-nitrophenyl	F	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
777	2-chloro-4-fluorophenyl	F	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
778	2-chloro-6-fluorophenyl	F	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
779	4-chloro-2-fluorophenyl	F	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
780	4-chloro-2-nitrophenyl	F	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
781	2,3,6-trifluorophenyl	F	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
782	pyridin-2-yl	F	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
783	pyridin-3-yl	F	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl

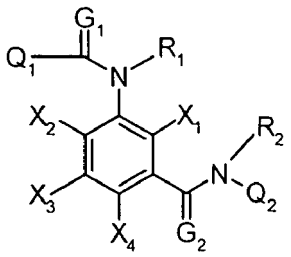
(continued)

Comp. No.	Q_1	X_1	X_2	X_3	X_4	Q_2
784	2-fluoropyridin-3-yl	F	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
785	2-chloropyridin-3-yl	F	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
786	2-chloropyridin-5-yl	F	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
787	2-methylthiopyridin-3-yl	F	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
788	pyrazin-2-yl	F	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
789	furan-2-yl	F	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
790	thiophen-2-yl	F	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
791	phenyl	F	H	H	H	2,6-dimethyl-4-(heptafluoro-n-propylthio)phenyl
792	2-methylphenyl	F	H	H	H	2,6-dimethyl-4-(heptafluoro-n-propylthio)phenyl
793	4-methylphenyl	F	H	H	H	2,6-dimethyl-4-(heptafluoro-n-propylthio)phenyl
794	2-fluorophenyl	F	H	H	H	2,6-dimethyl-4-(heptafluoro-n-propylthio)phenyl
795	3-fluorophenyl	F	H	H	H	2,6-dimethyl-4-(heptafluoro-n-propylthio)phenyl
796	4-fluorophenyl	F	H	H	H	2,6-dimethyl-4-(heptafluoro-n-propylthio)phenyl
797	2-chlorophenyl	F	H	H	H	2,6-dimethyl-4-(heptafluoro-n-propylthio)phenyl
798	4-chlorophenyl	F	H	H	H	2,6-dimethyl-4-(heptafluoro-n-propylthio)phenyl
799	2-bromophenyl	F	H	H	H	2,6-dimethyl-4-(heptafluoro-n-propylthio)phenyl
800	2-iodophenyl	F	H	H	H	2,6-dimethyl-4-(heptafluoro-n-propylthio)phenyl
801	3-cyanophenyl	F	H	H	H	2,6-dimethyl-4-(heptafluoro-n-propylthio)phenyl
802	4-cyanophenyl	F	H	H	H	2,6-dimethyl-4-(heptafluoro-n-propylthio)phenyl
803	2-nitrophenyl	F	H	H	H	2,6-dimethyl-4-(heptafluoro-n-propylthio)phenyl
804	3-nitrophenyl	F	H	H	H	2,6-dimethyl-4-(heptafluoro-n-propylthio)phenyl
805	4-nitrophenyl	F	H	H	H	2,6-dimethyl-4-(heptafluoro-n-propylthio)phenyl
806	2-trifluoromethylphenyl	F	H	H	H	2,6-dimethyl-4-(heptafluoro-n-propylthio)phenyl
807	4-trifluoromethylphenyl	F	H	H	H	2,6-dimethyl-4-(heptafluoro-n-propylthio)phenyl
808	4-trifluoromethoxyphenyl	F	H	H	H	2,6-dimethyl-4-(heptafluoro-n-propylthio)phenyl
809	2,3-difluorophenyl	F	H	H	H	2,6-dimethyl-4-(heptafluoro-n-propylthio)phenyl
810	2,4-difluorophenyl	F	H	H	H	2,6-dimethyl-4-(heptafluoro-n-propylthio)phenyl
811	2,5-difluorophenyl	F	H	H	H	2,6-dimethyl-4-(heptafluoro-n-propylthio)phenyl
812	2,6-difluorophenyl	F	H	H	H	2,6-dimethyl-4-(heptafluoro-n-propylthio)phenyl
813	2,4-dichlorophenyl	F	H	H	H	2,6-dimethyl-4-(heptafluoro-n-propylthio)phenyl
814	2,6-dichlorophenyl	F	H	H	H	2,6-dimethyl-4-(heptafluoro-n-propylthio)phenyl

(continued)

Comp. No.	Q_1	X_1	X_2	X_3	X_4	Q_2
815	3,4-dichlorophenyl	F	H	H	H	2,6-dimethyl-4-(heptafluoro-n-propylthio)phenyl
816	2-chloro-4-nitrophenyl	F	H	H	H	2,6-dimethyl-4-(heptafluoro-n-propylthio)phenyl
817	2-chloro-4-fluorophenyl	F	H	H	H	2,6-dimethyl-4-(heptafluoro-n-propylthio)phenyl
818	2-chloro-6-fluorophenyl	F	H	H	H	2,6-dimethyl-4-(heptafluoro-n-propylthio)phenyl
819	4-chloro-2-fluorophenyl	F	H	H	H	2,6-dimethyl-4-(heptafluoro-n-propylthio)phenyl
820	4-chloro-2-nitrophenyl	F	H	H	H	2,6-dimethyl-4-(heptafluoro-n-propylthio)phenyl
821	2,3,6-trifluorophenyl	F	H	H	H	2,6-dimethyl-4-(heptafluoro-n-propylthio)phenyl
822	pyridin-2-yl	F	H	H	H	2,6-dimethyl-4-(heptafluoro-n-propylthio)phenyl
823	pyridin-3-yl	F	H	H	H	2,6-dimethyl-4-(heptafluoro-n-propylthio)phenyl
824	2-fluoropyridin-3-yl	F	H	H	H	2,6-dimethyl-4-(heptafluoro-n-propylthio)phenyl
825	2-chloropyridin-3-yl	F	H	H	H	2,6-dimethyl-4-(heptafluoro-n-propylthio)phenyl
826	2-chloropyridin-5-yl	F	H	H	H	2,6-dimethyl-4-(heptafluoro-n-propylthio)phenyl
827	2-methylthiopyridin-3-yl	F	H	H	H	2,6-dimethyl-4-(heptafluoro-n-propylthio)phenyl
828	pyrazin-2-yl	F	H	H	H	2,6-dimethyl-4-(heptafluoro-n-propylthio)phenyl
829	furan-2-yl	F	H	H	H	2,6-dimethyl-4-(heptafluoro-n-propylthio)phenyl
830	thiophen-2-yl	F	H	H	H	2,6-dimethyl-4-(heptafluoro-n-propylthio)phenyl
831	phenyl	Cl	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
832	2-fluorophenyl	Cl	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
833	2-chloropyridin-3-yl	Cl	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl

[Table 3]



(X_3, X_4 = a hydrogen atom, G_1, G_2 = an oxygen atom)

Comp. No.	Q_1	R_1	R_2	X_1	X_2	Q_2
1001	phenyl	Me	H	H	H	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
1002	2-methylphenyl	Me	H	H	H	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
1003	4-methylphenyl	Me	H	H	H	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
1004	2-fluorophenyl	Me	H	H	H	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl

(continued)

Comp. No.	Q_1	R_1	R_2	X_1	X_2	Q_2
1005	3-fluorophenyl	Me	H	H	H	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
1006	4-fluorophenyl	Me	H	H	H	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
1007	2-chlorophenyl	Me	H	H	H	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
1008	4-chlorophenyl	Me	H	H	H	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
1009	2-bromophenyl	Me	H	H	H	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
1010	2-iodophenyl	Me	H	H	H	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
1011	3-cyanophenyl	Me	H	H	H	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
1012	4-cyanophenyl	Me	H	H	H	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
1013	2-nitrophenyl	Me	H	H	H	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
1014	3-nitrophenyl	Me	H	H	H	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
1015	4-nitrophenyl	Me	H	H	H	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
1016	2-trifluoromethyl phenyl	Me	H	H	H	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
1017	4-trifluoromethyl phenyl	Me	H	H	H	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
1018	4-trifluoromethoxy phenyl	Me	H	H	H	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
1019	2,3-difluorophenyl	Me	H	H	H	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
1020	2,4-difluorophenyl	Me	H	H	H	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
1021	2,5-difluorophenyl	Me	H	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1022	2,6-difluorophenyl	Me	H	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1023	2,4-dichlorophenyl	Me	H	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1024	2,6-dichlorophenyl	Me	H	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1025	3,4-dichlorophenyl	Me	H	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1026	2-chloro-4 -nitrophenyl	Me	H	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl

(continued)

Comp. No.	Q_1	R_1	R_2	X_1	X_2	Q_2
1027	2-chloro-4 -fluorophenyl	Me	H	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1028	2-chloro-6 -fluorophenyl	Me	H	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1029	4-chloro-2 -fluorophenyl	Me	H	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1030	4-chloro-2 -nitrophenyl	Me	H	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1031	2,3,6-trifluorophenyl	Me	H	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1032	3-(acetylamino)phenyl	Me	H	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1033	pyridin-2-yl	Me	H	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1034	pyridin-3-yl	Me	H	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1035	2-fluoropyridin-3-yl	Me	H	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1036	2-chloropyridin-3-yl	Me	H	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1037	2-chloropyridin-5-yl	Me	H	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1038	2-trifluoromethylpyridin -3-yl	Me	H	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1039	2-methylthiopyridin-3-yl	Me	H	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1040	pyrazin-2-yl	Me	H	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1041	furan-2-yl	Me	H	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1042	furan-3-yl	Me	H	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1043	2-tetrahydrofuranyl	Me	H	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1044	benzofuran-2-yl	Me	H	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1045	thiophen-2-yl	Me	H	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1046	phenyl	Me	H	H	H	2-bromo-4-(heptafluoroisopropyl)-6-(methyl sulfonyl)phenyl
1047	2-methylphenyl	Me	H	H	H	2-bromo-4-(heptafluoroisopropyl)-6-(methyl sulfonyl)phenyl
1048	4-methylphenyl	Me	H	H	H	2-bromo-4-(heptafluoroisopropyl)-6-(methyl sulfonyl)phenyl

(continued)

Comp. No.	Q_1	R_1	R_2	X_1	X_2	Q_2
1049	2-fluorophenyl	Me	H	H	H	2-bromo-4-(heptafluoroisopropyl)-6-(methyl sulfonyl)phenyl
1050	3-fluorophenyl	Me	H	H	H	2-bromo-4-(heptafluoroisopropyl)-6-(methyl sulfonyl)phenyl
1051	4-fluorophenyl	Me	H	H	H	2-bromo-4-(heptafluoroisopropyl)-6-(methyl sulfonyl)phenyl
1052	2-chlorophenyl	Me	H	H	H	2-bromo-4-(heptafluoroisopropyl)-6-(methyl sulfonyl)phenyl
1053	4-chlorophenyl	Me	H	H	H	2-bromo-4-(heptafluoroisopropyl)-6-(methyl sulfonyl)phenyl
1054	2-bromophenyl	Me	H	H	H	2-bromo-4-(heptafluoroisopropyl)-6-(methyl sulfonyl)phenyl
1055	2-iodophenyl	Me	H	H	H	2-bromo-4-(heptafluoroisopropyl)-6-(methyl sulfonyl)phenyl
1056	3-cyanophenyl	Me	H	H	H	2-bromo-4-(heptafluoroisopropyl)-6-(methyl sulfonyl)phenyl
1057	4-cyanophenyl	Me	H	H	H	2-bromo-4-(heptafluoroisopropyl)-6-(methyl sulfonyl)phenyl
1058	2-nitrophenyl	Me	H	H	H	2-bromo-4-(heptafluoroisopropyl)-6-(methyl sulfonyl)phenyl
1059	3-nitrophenyl	Me	H	H	H	2-bromo-4-(heptafluoroisopropyl)-6-(methyl sulfonyl)phenyl
1060	4-nitrophenyl	Me	H	H	H	2-bromo-4-(heptafluoroisopropyl)-6-(methyl sulfonyl)phenyl
1061	2-trifluoromethylphenyl	Me	H	H	H	2-bromo-4-(heptafluoroisopropyl)-6-(meth ylsulfonyl)phenyl
1062	4-trifluoromethylphenyl	Me	H	H	H	2-bromo-4-(heptafluoroisopropyl)-6-(meth ylsulfonyl)phenyl
1063	4-trifluoromethoxyphenyl	Me	H	H	H	2-bromo-4-(heptafluoroisopropyl)-6-(meth ylsulfonyl)phenyl
1064	2,3-difluorophenyl	Me	H	H	H	2-bromo-4-(heptafluoroisopropyl)-6-(meth ylsulfonyl)phenyl
1065	2,4-difluorophenyl	Me	H	H	H	2-bromo-4-(heptafluoroisopropyl)-6-(meth ylsulfonyl)phenyl
1066	2,5-difluorophenyl	Me	H	H	H	2-bromo-4-(heptafluoroisopropyl)-6-(meth ylsulfonyl)phenyl
1067	2,6-difluorophenyl	Me	H	H	H	2-bromo-4-(heptafluoroisopropyl)-6-(meth ylsulfonyl)phenyl
1068	2,4-dichlorophenyl	Me	H	H	H	2-bromo-4-(heptafluoroisopropyl)-6-(meth ylsulfonyl)phenyl
1069	2,6-dichlorophenyl	Me	H	H	H	2-bromo-4-(heptafluoroisopropyl)-6-(meth ylsulfonyl)phenyl
1070	3,4-dichlorophenyl	Me	H	H	H	2-bromo-4-(heptafluoroisopropyl)-6-(meth ylsulfonyl)phenyl

(continued)

Comp. No.	Q_1	R_1	R_2	X_1	X_2	Q_2
1071	2-chloro-4-nitrophenyl	Me	H	H	H	2-bromo-4-(heptafluoroisopropyl)-6-(meth ylsulfonyl)phenyl
1072	2-chloro-4-fluorophenyl	Me	H	H	H	2-bromo-4-(heptafluoroisopropyl)-6-(meth ylsulfonyl)phenyl
1073	2-chloro-6-fluorophenyl	Me	H	H	H	2-bromo-4-(heptafluoroisopropyl)-6-(meth ylsulfonyl)phenyl
1074	4-chloro-2-fluorophenyl	Me	H	H	H	2-bromo-4-(heptafluoroisopropyl)-6-(meth ylsulfonyl)phenyl
1075	4-chloro-2-nitrophenyl	Me	H	H	H	2-bromo-4-(heptafluoroisopropyl)-6-(meth ylsulfonyl)phenyl
1076	2,3,6-trifluorophenyl	Me	H	H	H	2-bromo-4-(heptafluoroisopropyl)-6-(meth ylsulfonyl)phenyl
1077	pyridin-2-yl	Me	H	H	H	2-bromo-4-(heptafluoroisopropyl)-6-(meth ylsulfonyl)phenyl
1078	pyridin-3-yl	Me	H	H	H	2-bromo-4-(heptafluoroisopropyl)-6-(meth ylsulfonyl)phenyl
1079	2-fluoropyridin-3-yl	Me	H	H	H	2-bromo-4-(heptafluoroisopropyl)-6-(meth ylsulfonyl)phenyl
1080	2-chloropyridin-3-yl	Me	H	H	H	2-bromo-4-(heptafluoroisopropyl)-6-(meth ylsulfonyl)phenyl
1081	2-chloropyridin-5-yl	Me	H	H	H	2-bromo-4-(heptafluoroisopropyl)-6-(methyl sulfonyl)phenyl
1082	2-methylthiopyridin -3-yl	Me	H	H	H	2-bromo-4-(heptafluoroisopropyl)-6-(methyl sulfonyl)phenyl
1083	pyrazin-2-yl	Me	H	H	H	2-bromo-4-(heptafluoroisopropyl)-6-(methyl sulfonyl)phenyl
1084	furan-2-yl	Me	H	H	H	2-bromo-4-(heptafluoroisopropyl)-6-(methyl sulfonyl)phenyl
1085	thiophen-2-yl	Me	H	H	H	2-bromo-4-(heptafluoroisopropyl)-6-(methyl sulfonyl)phenyl
1086	phenyl	Me	H	H	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1087	2-methylphenyl	Me	H	H	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1088	4-methylphenyl	Me	H	H	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1089	2-fluorophenyl	Me	H	H	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1090	3-fluorophenyl	Me	H	H	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1091	4-fluorophenyl	Me	H	H	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1092	2-chlorophenyl	Me	H	H	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl

(continued)

Comp. No.	Q_1	R_1	R_2	X_1	X_2	Q_2
1093	4-chlorophenyl	Me	H	H	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1094	2-bromophenyl	Me	H	H	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1095	2-iodophenyl	Me	H	H	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1096	3-cyanophenyl	Me	H	H	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1097	4-cyanophenyl	Me	H	H	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1098	2-nitrophenyl	Me	H	H	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1099	3-nitrophenyl	Me	H	H	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1100	4-nitrophenyl	Me	H	H	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1101	2-trifluoromethylphenyl	Me	H	H	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1102	4-trifluoromethylphenyl	Me	H	H	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1103	4-trifluoromethoxyphenyl	Me	H	H	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1104	2,3-difluorophenyl	Me	H	H	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1105	2,4-difluorophenyl	Me	H	H	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1106	2,5-difluorophenyl	Me	H	H	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1107	2,6-difluorophenyl	Me	H	H	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1108	2,4-dichlorophenyl	Me	H	H	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1109	2,6-dichlorophenyl	Me	H	H	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1110	3,4-dichlorophenyl	Me	H	H	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1111	2-chloro-4-nitrophenyl	Me	H	H	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1112	2-chloro-4-fluorophenyl	Me	H	H	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1113	2-chloro-6-fluorophenyl	Me	H	H	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1114	4-chloro-2-fluorophenyl	Me	H	H	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl

(continued)

Comp. No.	Q_1	R_1	R_2	X_1	X_2	Q_2
1115	4-chloro-2-nitrophenyl	Me	H	H	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1116	2,3,6-trifluorophenyl	Me	H	H	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1117	pyridin-2-yl	Me	H	H	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1118	pyridin-3-yl	Me	H	H	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1119	2-fluoropyridin-3-yl	Me	H	H	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1120	2-chloropyridin-3-yl	Me	H	H	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1121	2-chloropyridin-5-yl	Me	H	H	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1122	2-methylthiopyridin -3-yl	Me	H	H	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1123	pyrazin-2-yl	Me	H	H	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1124	furan-2-yl	Me	H	H	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1125	2-fluorophenyl	Me	H	H	H	2,6-dimethyl-4-(heptafluoro-n-propylthio)phenyl
1126	phenyl	Me	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1127	2-methylphenyl	Me	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1128	4-methylphenyl	Me	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1129	2-fluorophenyl	Me	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1130	3-fluorophenyl	Me	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1131	4-fluorophenyl	Me	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1132	2-chlorophenyl	Me	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1133	4-chlorophenyl	Me	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1134	2-bromophenyl	Me	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1135	2-iodophenyl	Me	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1136	3-cyanophenyl	Me	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio) phenyl

(continued)

Comp. No.	Q_1	R_1	R_2	X_1	X_2	Q_2
1137	4-cyanophenyl	Me	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1138	2-nitrophenyl	Me	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1139	3-nitrophenyl	Me	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1140	4-nitrophenyl	Me	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1141	2-trifluoromethylphenyl	Me	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio) phenyl
1142	4-trifluoromethylphenyl	Me	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio) phenyl
1143	4-trifluoromethoxyphenyl	Me	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio) phenyl
1144	2,3-difluorophenyl	Me	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio) phenyl
1145	2,4-difluorophenyl	Me	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio) phenyl
1146	2,5-difluorophenyl	Me	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio) phenyl
1147	2,6-difluorophenyl	Me	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio) phenyl
1148	2,4-dichlorophenyl	Me	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio) phenyl
1149	2,6-dichlorophenyl	Me	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio) phenyl
1150	3,4-dichlorophenyl	Me	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio) phenyl
1151	2-chloro-4-nitrophenyl	Me	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio) phenyl
1152	2-chloro-4-fluorophenyl	Me	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio) phenyl
1153	2-chloro-6-fluorophenyl	Me	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio) phenyl
1154	4-chloro-2-fluorophenyl	Me	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio) phenyl
1155	4-chloro-2-nitrophenyl	Me	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio) phenyl
1156	2,3,6-trifluorophenyl	Me	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio) phenyl
1157	pyridin-2-yl	Me	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio) phenyl
1158	pyridin-3-yl	Me	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio) phenyl

(continued)

Comp. No.	Q_1	R_1	R_2	X_1	X_2	Q_2
1159	2-fluoropyridin-3-yl	Me	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio) phenyl
1160	2-chloropyridin-3-yl	Me	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio) phenyl
1161	2-chloropyridin-5-yl	Me	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1162	2-methylthiopyridin -3-yl	Me	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1163	pyrazin-2-yl	Me	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1164	furan-2-yl	Me	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1165	thiophen-2-yl	Me	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1166	phenyl	Me	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1167	2-methylphenyl	Me	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1168	4-methylphenyl	Me	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1169	2-fluorophenyl	Me	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1170	3-fluorophenyl	Me	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1171	4-fluorophenyl	Me	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1172	2-chlorophenyl	Me	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1173	4-chlorophenyl	Me	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1174	2-bromophenyl	Me	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1175	2-iodophenyl	Me	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1176	3-cyanophenyl	Me	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1177	4-cyanophenyl	Me	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1178	2-nitrophenyl	Me	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1179	3-nitrophenyl	Me	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1180	4-nitrophenyl	Me	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl

(continued)

Comp. No.	Q_1	R_1	R_2	X_1	X_2	Q_2
1181	2-trifluoromethylphenyl	Me	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1182	4-trifluoromethylphenyl	Me	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1183	4-trifluoromethoxyphenyl	Me	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1184	2,3-difluorophenyl	Me	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1185	2,4-difluorophenyl	Me	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1186	2,5-difluorophenyl	Me	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1187	2,6-difluorophenyl	Me	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1188	2,4-dichlorophenyl	Me	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1189	2,6-dichlorophenyl	Me	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1190	3,4-dichlorophenyl	Me	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1191	2-chloro-4-nitrophenyl	Me	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1192	2-chloro-4-fluorophenyl	Me	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1193	2-chloro-6-fluorophenyl	Me	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1194	4-chloro-2-fluorophenyl	Me	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfirtyl)phenyl
1195	4-chloro-2-nitrophenyl	Me	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1196	2,3,6-trifluorophenyl	Me	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1197	pyridin-2-yl	Me	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1198	pyridin-3-yl	Me	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1199	2-fluoropyridin-3-yl	Me	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1200	2-chloropyridin-3-yl	Me	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1201	2-chloropyridin-5-yl	Me	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1202	2-methylthiopyridin-3-yl	Me	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl

(continued)

Comp. No.	Q_1	R_1	R_2	X_1	X_2	Q_2
1203	pyrazin-2-yl	Me	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1204	furan-2-yl	Me	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1205	thiophen-2-yl	Me	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1206	2-fluorophenyl	Et	H	H	H	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
1207	pyridin-3-yl	Et	H	H	H	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
1208	phenyl	Me	H	F	H	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
1209	2-methylphenyl	Me	H	F	H	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
1210	3-methylphenyl	Me	H	F	H	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
1211	4-methylphenyl	Me	H	F	H	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
1212	2-nitrophenyl	Me	H	F	H	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
1213	3-nitrophenyl	Me	H	F	H	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
1214	4-nitrophenyl	Me	H	F	H	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
1215	2-cyanophenyl	Me	H	F	H	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
1216	3-cyanophenyl	Me	H	F	H	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
1217	4-cyanophenyl	Me	H	F	H	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
1218	2-fluorophenyl	Me	H	F	H	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
1219	3-fluorophenyl	Me	H	F	H	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
1220	4-fluorophenyl	Me	H	F	H	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
1221	2-chlorophenyl	Me	H	F	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1222	4-chlorophenyl	Me	H	F	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1223	2-bromophenyl	Me	H	F	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1224	2-iodophenyl	Me	H	F	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl

(continued)

Comp. No.	Q_1	R_1	R_2	X_1	X_2	Q_2
1225	2-trifluoromethylphenyl	Me	H	F	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1226	4-trifluoromethylphenyl	Me	H	F	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1227	4-trifluoromethoxyphenyl	Me	H	F	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1228	2,3-difluorophenyl	Me	H	F	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1229	2.4-difluorophenyl	Me	H	F	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1230	2,5-difluorophenyl	Me	H	F	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1231	2,6-difluorophenyl	Me	H	F	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1232	2,4-dichlorophenyl	Me	H	F	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1233	2,6-dichlorophenyl	Me	H	F	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1234	3,4-dichlorophenyl	Me	H	F	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1235	2-fluoro-4-nitrophenyl	Me	H	F	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1236	4-fluoro-2-nitrophenyl	Me	H	F	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1237	2-chloro-4-fluorophenyl	Me	H	F	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1238	4-chloro-2-fluorophenyl	Me	H	F	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1239	2-chloro-6-fluorophenyl	Me	H	F	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1240	2-chloro-4-nitrophenyl	Me	H	F	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1241	4-chloro-2-nitrophenyl	Me	H	F	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1242	2,3,6-trifluorophenyl	Me	H	F	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1243	pyridin-2-yl	Me	H	F	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1244	pyridin-3-yl	Me	H	F	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1245	2-chloropyridin-3-yl	Me	H	F	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1246	2-fluoropyridin-3-yl	Me	H	F	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl

(continued)

Comp. No.	Q_1	R_1	R_2	X_1	X_2	Q_2
1247	2-chloropyridin-5-yl	Me	H	F	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1248	2-methylthiopyridin-3-yl	Me	H	F	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1249	pyrazin-2-yl	Me	H	F	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1250	furan-2-yl	Me	H	F	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1251	furan-3-yl	Me	H	F	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1252	2-tetrahydrofuranyl	Me	H	F	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1253	benzofuran-2-yl	Me	H	F	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1254	thiophen-2-yl	Me	H	F	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1255	phenyl	Me	H	F	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
1256	2-methylphenyl	Me	H	F	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
1257	3-methylphenyl	Me	H	F	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
1258	4-methylphenyl	Me	H	F	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
1259	2-nitrophenyl	Me	H	F	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
1260	3-nitrophenyl	Me	H	F	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
1261	4-nitrophenyl	Me	H	F	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
1262	2-cyanophenyl	Me	H	F	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
1263	3-cyanophenyl	Me	H	F	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
1264	4-cyanophenyl	Me	H	F	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
1265	2-fluorophenyl	Me	H	F	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
1266	3-fluorophenyl	Me	H	F	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
1267	4-fluorophenyl	Me	H	F	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
1268	2-chlorophenyl	Me	H	F	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl

(continued)

Comp. No.	Q_1	R_1	R_2	X_1	X_2	Q_2
1269	4-chlorophenyl	Me	H	F	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
1270	2-bromophenyl	Me	H	F	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
1271	2-iodophenyl	Me	H	F	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
1272	2-trifluoromethylphenyl	Me	H	F	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
1273	4-trifluoromethylphenyl	Me	H	F	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
1274	4-trifluoromethoxyphenyl	Me	H	F	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
1275	2,3-difluorophenyl	Me	H	F	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
1276	2.4-difluorophenyl	Me	H	F	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
1277	2,5-difluorophenyl	Me	H	F	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
1278	2,6-difluorophenyl	Me	H	F	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
1279	2,4-dichlorophenyl	Me	H	F	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
1280	2,6-dichlorophenyl	Me	H	F	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
1281	3,4-dichlorophenyl	Me	H	F	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
1282	2-fluoro-4-nitrophenyl	Me	H	F	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
1283	4-fluoro-2-nitrophenyl	Me	H	F	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
1284	2-chloro-4-fluorophenyl	Me	H	F	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
1285	4-chloro-2-fluorophenyl	Me	H	F	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
1286	2-chloro-6-fluorophenyl	Me	H	F	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
1287	2-chloro-4-nitrophenyl	Me	H	F	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
1288	4-chloro-2-nitrophenyl	Me	H	F	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
1289	2,3,6-trifluorophenyl	Me	H	F	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
1290	pyridin-2-yl	Me	H	F	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl

(continued)

Comp. No.	Q_1	R_1	R_2	X_1	X_2	Q_2
1291	pyridin-3-yl	Me	H	F	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
1292	2-fluoropyridin-3-yl	Me	H	F	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
1293	2-chloropyridin-3-yl	Me	H	F	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
1294	2-chloropyridin-5-yl	Me	H	F	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
1295	2-methylthiopyridin-3-yl	Me	H	F	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
1296	pyrazin-2-yl	Me	H	F	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
1297	furan-2-yl	Me	H	F	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
1298	furan-3-yl	Me	H	F	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
1299	2-tetrahydrofuranyl	Me	H	F	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
1300	benzofuran-2-yl	Me	H	F	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
1301	thiophen-2-yl	Me	H	F	H	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
1302	phenyl	Me	H	F	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1303	2-methylphenyl	Me	H	F	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1304	4-methylphenyl	Me	H	F	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1305	2-fluorophenyl	Me	H	F	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1306	3-fluorophenyl	Me	H	F	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1307	4-fluorophenyl	Me	H	F	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1308	2-chlorophenyl	Me	H	F	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1309	4-chlorophenyl	Me	H	F	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1310	2-bromophenyl	Me	H	F	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1311	2-iodophenyl	Me	H	F	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1312	3-cyanophenyl	Me	H	F	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl

(continued)

Comp. No.	Q_1	R_1	R_2	X_1	X_2	Q_2
1313	4-cyanophenyl	Me	H	F	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1314	2-nitrophenyl	Me	H	F	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1315	3-nitrophenyl	Me	H	F	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1316	4-nitrophenyl	Me	H	F	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1317	2-trifluoromethylphenyl	Me	H	F	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1318	4-trifluoromethylphenyl	Me	H	F	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1319	4-trifluoromethoxyphenyl	Me	H	F	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1320	2,3-difluorophenyl	Me	H	F	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1321	2,4-difluorophenyl	Me	H	F	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1322	2,5-difluorophenyl	Me	H	F	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1323	2,6-difluorophenyl	Me	H	F	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1324	2,4-dichlorophenyl	Me	H	F	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1325	2,6-dichlorophenyl	Me	H	F	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1326	3,4-dichlorophenyl	Me	H	F	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1327	2-chloro-4-nitrophenyl	Me	H	F	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1328	2-chloro-4-fluorophenyl	Me	H	F	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1329	2-chloro-6-fluorophenyl	Me	H	F	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1330	4-chloro-2-fluorophenyl	Me	H	F	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1331	4-chloro-2-nitrophenyl	Me	H	F	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1332	2,3,6-trifluorophenyl	Me	H	F	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1333	pyridin-2-yl	Me	H	F	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1334	pyridin-3-yl	Me	H	F	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl

(continued)

Comp. No.	Q_1	R_1	R_2	X_1	X_2	Q_2
1335	2-fluoropyridin-3-yl	Me	H	F	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1336	2-chloropyridin-3-yl	Me	H	F	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1337	2-chloropyridin-5-yl	Me	H	F	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1338	2-methylthiopyridin-3-yl	Me	H	F	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1339	pyrazin-2-yl	Me	H	F	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1340	furan-2-yl	Me	H	F	H	2-bromo-4-(heptafluoroisopropyl) ' -6-(methylsulfonyl)phenyl
1341	thiophen-2-yl	Me	H	F	H	2-bromo-4-(heptafluoroisopropyl)- 6-(methylsulfonyl)phenyl
1342	phenyl	Me	H	F	H	2-n-propyl-6-iodo- 4-(heptafluoroisopropyl)phenyl
1343	2-methylphenyl	Me	H	F	H	2-n-propyl-6-iodo- 4-(heptafluoroisopropyl)phenyl
1344	4-methylphenyl	Me	H	F	H	2-n-propyl-6-iodo- 4-(heptafluoroisopropyl)phenyl
1345	2-fluorophenyl	Me	H	F	H	2-n-propyl-6-iodo- 4-(heptafluoroisopropyl)phenyl
1346	3-fluorophenyl	Me	H	F	H	2-n-propyl-6-iodo- 4-(heptafluoroisopropyl)phenyl
1347	4-fluorophenyl	Me	H	F	H	2-n-propyl-6-iodo- 4-(heptafluoroisopropyl)phenyl
1348	2-chlorophenyl	Me	H	F	H	2-n-propyl-6-iodo- 4-(heptafluoroisopropyl)phenyl
1349	4-chlorophenyl	Me	H	F	H	2-n-propyl-6-iodo- 4-(heptafluoroisopropyl)phenyl
1350	2-bromophenyl	Me	H	F	H	2-n-propyl-6-iodo- 4-(heptafluoroisopropyl)phenyl
1351	2-iodophenyl	Me	H	F	H	2-n-propyl-6-iodo- 4-(heptafluoroisopropyl)phenyl
1352	3-cyanophenyl	Me	H	F	H	2-n-propyl-6-iodo- 4-(heptafluoroisopropyl)phenyl
1353	4-cyanophenyl	Me	H	F	H	2-n-propyl-6-iodo- 4-(heptafluoroisopropyl)phenyl
1354	2-nitrophenyl	Me	H	F	H	2-n-propyl-6-iodo- 4-(heptafluoroisopropyl)phenyl
1355	3-nitrophenyl	Me	H	F	H	2-n-propyl-6-iodo- 4-(heptafluoroisopropyl)phenyl
1356	4-nitrophenyl	Me	H	F	H	2-n-propyl-6-iodo- 4-(heptafluoroisopropyl)phenyl

(continued)

Comp. No.	Q_1	R_1	R_2	X_1	X_2	Q_2
1357	2-trifluoromethylphenyl	Me	H	F	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1358	4-trifluoromethylphenyl	Me	H	F	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1359	4-trifluoromethoxyphenyl	Me	H	F	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1360	2,3-difluorophenyl	Me	H	F	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1361	2,4-difluorophenyl	Me	H	F	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1362	2,5-difluorophenyl	Me	H	F	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1363	2,6-difluorophenyl	Me	H	F	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1364	2,4-dichlorophenyl	Me	H	F	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1365	2,6-dichlorophenyl	Me	H	F	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1366	3,4-dichlorophenyl	Me	H	F	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1367	2-chloro-4-nitrophenyl	Me	H	F	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1368	2-chloro-4-fluorophenyl	Me	H	F	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1369	2-chloro-6-fluorophenyl	Me	H	F	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1370	4-chloro-2-fluorophenyl	Me	H	F	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1371	4-chloro-2-nitrophenyl	Me	H	F	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1372	2,3,6-trifluorophenyl	Me	H	F	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1373	pyridin-2-yl	Me	H	F	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1374	pyridin-3-yl	Me	H	F	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1375	2-fluoropyridin-3-yl	Me	H	F	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1376	2-chloropyridin-3-yl	Me	H	F	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1377	2-chloropyridin-5-yl	Me	H	F	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1378	2-methylthiopyridin-3-yl	Me	H	F	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl

(continued)

Comp. No.	Q_1	R_1	R_2	X_1	X_2	Q_2
1379	pyrazin-2-yl	Me	H	F	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1380	furan-2-yl	Me	H	F	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1381	thiophen-2-yl	Me	H	F	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1382	phenyl	Me	H	F	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1383	2-methylphenyl	Me	H	F	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1384	4-methylphenyl	Me	H	F	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1385	2-fluorophenyl	Me	H	F	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1386	3-fluorophenyl	Me	H	F	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1387	4-fluorophenyl	Me	H	F	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1388	2-chlorophenyl	Me	H	F	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1389	4-chlorophenyl	Me	H	F	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1390	2-bromophenyl	Me	H	F	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1391	2-iodophenyl	Me	H	F	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1392	3-cyanophenyl	Me	H	F	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1393	4-cyanophenyl	Me	H	F	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1394	2-nitrophenyl	Me	H	F	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1395	3-nitrophenyl	Me	H	F	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1396	4-nitrophenyl	Me	H	F	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1397	2-trifluoromethylphenyl	Me	H	F	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1398	4-trifluoromethylphenyl	Me	H	F	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1399	4-trifluoromethoxyphenyl	Me	H	F	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1400	2,3-difluorophenyl	Me	H	F	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl

(continued)

Comp. No.	Q_1	R_1	R_2	X_1	X_2	Q_2
1401	2,4-difluorophenyl	Me	H	F	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1402	2,5-difluorophenyl	Me	H	F	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1403	2,6-difluorophenyl	Me	H	F	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1404	2,4-dichlorophenyl	Me	H	F	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1405	2,6-dichlorophenyl	Me	H	F	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1406	3,4-dichlorophenyl	Me	H	F	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1407	2-chloro-4-nitrophenyl	Me	H	F	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1408	2-chloro-4-fluorophenyl	Me	H	F	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1409	2-chloro-6-fluorophenyl	Me	H	F	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1410	4-chloro-2-fluorophenyl	Me	H	F	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1411	4-chloro-2-nitrophenyl	Me	H	F	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1412	2,3,6-trifluorophenyl	Me	H	F	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1413	pyridin-2-yl	Me	H	F	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1414	pyridin-3-yl	Me	H	F	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1415	2-fluoropyridin-3-yl	Me	H	F	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1416	2-chloropyridin-3-yl	Me	H	F	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1417	2-chloropyridin-5-yl	Me	H	F	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1418	2-methylthiopyridin-3-yl	Me	H	F	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1419	pyrazin-2-yl	Me	H	F	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1420	furan-2-yl	Me	H	F	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1421	thiophen-2-yl	Me	H	F	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1422	phenyl	Me	H	F	H	2,6-dibromo-4-(heptafluoro -n-propylsulfinyl)phenyl

(continued)

Comp. No.	Q_1	R_1	R_2	X_1	X_2	Q_2
1423	2-methylphenyl	Me	H	F	H	2,6-dibromo-4-(heptafluoro -n-propylsulfinyl)phenyl
1424	4-methylphenyl	Me	H	F	H	2,6-dibromo-4-(heptafluoro -n-propylsulfinyl)phenyl
1425	2-fluorophenyl	Me	H	F	H	2,6-dibromo-4-(heptafluoro -n-propylsulfinyl)phenyl
1426	3-fluorophenyl	Me	H	F	H	2,6-dibromo-4-(heptafluoro -n-propylsulfinyl)phenyl
1427	4-fluorophenyl	Me	H	F	H	2,6-dibromo-4-(heptafluoro -n-propylsulfinyl)phenyl
1428	2-chlorophenyl	Me	H	F	H	2,6-dibromo-4-(heptafluoro -n-propylsulfinyl)phenyl
1429	4-chlorophenyl	Me	H	F	H	2,6-dibromo-4-(heptafluoro -n-propylsulfinyl)phenyl
1430	2-bromophenyl	Me	H	F	H	2,6-dibromo-4-(heptafluoro -n-propylsulfinyl)phenyl
1431	2-iodophenyl	Me	H	F	H	2,6-dibromo-4-(heptafluoro -n-propylsulfinyl)phenyl
1432	3-cyanophenyl	Me	H	F	H	2,6-dibromo-4-(heptafluoro -n-propylsulfinyl)phenyl
1433	4-cyanophenyl	Me	H	F	H	2,6-dibromo-4-(heptafluoro -n-propylsulfinyl)phenyl
1434	2-nitrophenyl	Me	H	F	H	2,6-dibromo-4-(heptafluoro -n-propylsulfinyl)phenyl
1435	3-nitrophenyl	Me	H	F	H	2,6-dibromo-4-(heptafluoro -n-propylsulfinyl)phenyl
1436	4-nitrophenyl	Me	H	F	H	2,6-dibromo-4-(heptafluoro -n-propylsulfinyl)phenyl
1437	2-trifluoromethylphenyl	Me	H	F	H	2,6-dibromo-4-(heptafluoro -n-propylsulfinyl)phenyl
1438	4-trifluoromethylphenyl	Me	H	F	H	2,6-dibromo-4-(heptafluoro -n-propylsulfinyl)phenyl
1439	4-trifluoromethoxyphenyl	Me	H	F	H	2,6-dibromo-4-(heptafluoro -n-propylsulfinyl)phenyl
1440	2,3-difluorophenyl	Me	H	F	H	2,6-dibromo-4-(heptafluoro -n-propylsulfinyl)phenyl
1441	2,4-difluorophenyl	Me	H	F	H	2,6-dibromo-4-(heptafluoro -n-propylsulfinyl)phenyl
1442	2,5-difluorophenyl	Me	H	F	H	2,6-dibromo-4-(heptafluoro -n-propylsulfinyl)phenyl
1443	2,6-difluorophenyl	Me	H	F	H	2,6-dibromo-4-(heptafluoro -n-propylsulfinyl)phenyl
1444	2,4-dichlorophenyl	Me	H	F	H	2,6-dibromo-4-(heptafluoro -n-propylsulfinyl)phenyl

(continued)

Comp. No.	Q_1	R_1	R_2	X_1	X_2	Q_2
1445	2,6-dichlorophenyl	Me	H	F	H	2,6-dibromo-4-(heptafluoro -n-propylsulfinyl)phenyl
1446	3,4-dichlorophenyl	Me	H	F	H	2,6-dibromo-4-(heptafluoro -n-propylsulfinyl)phenyl
1447	2-chloro-4-nitrophenyl	Me	H	F	H	2,6-dibromo-4-(heptafluoro -n-propylsulfinyl)phenyl
1448	2-chloro-4-fluorophenyl	Me	H	F	H	2,6-dibromo-4-(heptafluoro -n-propylsulfinyl)phenyl
1449	2-chloro-6-fluorophenyl	Me	H	F	H	2,6-dibromo-4-(heptafluoro -n-propylsulfinyl)phenyl
1450	4-chloro-2-fluorophenyl	Me	H	F	H	2,6-dibromo-4-(heptafluoro -n-propylsulfinyl)phenyl
1451	4-chloro-2-nitrophenyl	Me	H	F	H	2,6-dibromo-4-(heptafluoro -n-propylsulfinyl)phenyl
1452	2,3,6-trifluorophenyl	Me	H	F	H	2,6-dibromo-4-(heptafluoro -n-propylsulfinyl)phenyl
1453	pyridin-2-yl	Me	H	F	H	2,6-dibromo-4-(heptafluoro -n-propylsulfinyl)phenyl
1454	pyridin-3-yl	Me	H	F	H	2,6-dibromo-4-(heptafluoro -n-propylsulfinyl)phenyl
1455	2-fluoropyridin-3-yl	Me	H	F	H	2,6-dibromo-4-(heptafluoro -n-propylsulfinyl)phenyl
1456	2-chloropyridin-3-yl	Me	H	F	H	2,6-dibromo-4-(heptafluoro -n-propylsulfinyl)phenyl
1457	2-chloropyridin-5-yl	Me	H	F	H	2,6-dibromo-4-(heptafluoro -n-propylsulfinyl)phenyl
1458	2-methylthiopyridin-3-yl	Me	H	F	H	2,6-dibromo-4-(heptafluoro -n-propylsulfinyl)phenyl
1459	pyrazin-2-yl	Me	H	F	H	2,6-dibromo-4-(heptafluoro -n-propylsulfinyl)phenyl
1460	furan-2-yl	Me	H	F	H	2,6-dibromo-4-(heptafluoro -n-propylsulfinyl)phenyl
1461	thiophen-2-yl	Me	H	F	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1462	phenyl	Et	H	F	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1463	phenyl	Me	H	H	F	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1464	4-nitrophenyl	Me	H	H	F	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1465	4-cyanophenyl	Me	H	H	F	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1466	phenyl	Me	H	H	F	2-bromo-4-(heptafluoroisopropyl)-6-(methylsulfonyl)phenyl

(continued)

Comp. No.	Q_1	R_1	R_2	X_1	X_2	Q_2
1467	4-nitrophenyl	Me	H	H	F	2-bromo-4-(heptafluoroisopropyl)-6-(methylsulfonyl)phenyl
1468	4-cyanophenyl	Me	H	H	F	2-bromo-4-(heptafluoroisopropyl)-6-(methylsulfonyl)phenyl
1469	phenyl	Me	H	H	F	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1470	4-nitrophenyl	Me	H	H	F	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1471	4-cyanophenyl	Me	H	H	F	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1472	phenyl	Me	H	H	F	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1473	4-nitrophenyl	Me	H	H	F	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1474	4-cyanophenyl	Me	H	H	F	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1475	phenyl	Me	H	H	F	2,6-dibromo-4-(heptafluoro-n-propylsulfonyl)phenyl
1476	4-nitrophenyl	Me	H	H	F	2,6-dibromo-4-(heptafluoro-n-propylsulfonyl)phenyl
1477	4-cyanophenyl	Me	H	H	F	2,6-dibromo-4-(heptafluoro-n-propylsulfonyl)phenyl
1478	phenyl	H	Me	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1479	phenyl	H	Me	H	H	2-bromo-4-(heptafluoro isopropyl)-6-methylphenyl
1480	phenyl	H	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1481	2-fluorophenyl	H	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1482	phenyl	H	Et	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1483	phenyl	H	i-Pr	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1484	phenyl	H	acetyl	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1485	phenyl	H	Me	F	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1486	2-fluorophenyl	H	Me	F	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1487	phenyl	Me	Me	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1488	2-methylphenyl	Me	Me	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl

(continued)

Comp. No.	Q_1	R_1	R_2	X_1	X_2	Q_2
1489	4-methylphenyl	Me	Me	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1490	2-fluorophenyl	Me	Me	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1491	3-fluorophenyl	Me	Me	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1492	4-fluorophenyl	Me	Me	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1493	2-chlorophenyl	Me	Me	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1494	4-chlorophenyl	Me	Me	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1495	2-bromophenyl	Me	Me	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1496	2-iodophenyl	Me	Me	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1497	3-cyanophenyl	Me	Me	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1498	4-cyanophenyl	Me	Me	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1499	2-nitrophenyl	Me	Me	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1500	3-nitrophenyl	Me	Me	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1501	4-nitrophenyl	Me	Me	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1502	2-trifluoromethylphenyl	Me	Me	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1503	4-trifluoromethylphenyl	Me	Me	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1504	4-trifluoromethoxyphenyl	Me	Me	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1505	2,3-difluorophenyl	Me	Me	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1506	2,4-difluorophenyl	Me	Me	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1507	2,5-difluorophenyl	Me	Me	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1508	2,6-difluorophenyl	Me	Me	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1509	2,4-dichlorophenyl	Me	Me	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1510	2,6-dichlorophenyl	Me	Me	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl

(continued)

Comp. No.	Q_1	R_1	R_2	X_1	X_2	Q_2
1511	3,4-dichlorophenyl	Me	Me	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1512	2-chloro-4-nitrophenyl	Me	Me	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1513	2-chloro-4-fluorophenyl	Me	Me	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1514	2-chloro-6-fluorophenyl	Me	Me	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1515	4-chloro-2-fluorophenyl	Me	Me	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1516	4-chloro-2-nitrophenyl	Me	Me	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1517	2,3,6-trifluorophenyl	Me	Me	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1518	pyridin-2-yl	Me	Me	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1519	pyridin-3-yl	Me	Me	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1520	2-fluoropyridin-3-yl	Me	Me	H	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1521	2-chloropyridin-3-yl	Me	Me	H	H	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
1522	2-chloropyridin-5-yl	Me	Me	H	H	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
1523	2-methylthiopyridin-3-yl	Me	Me	H	H	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
1524	pyrazin-2-yl	Me	Me	H	H	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
1525	furan-2-yl	Me	Me	H	H	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
1526	thiophen-2-yl	Me	Me	H	H	2,6-dimethyl-4-(heptafluoroisopropyl)phenyl
1527	phenyl	Me	Me	H	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1528	2-methylphenyl	Me	Me	H	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1529	4-methylphenyl	Me	Me	H	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1530	2-fluorophenyl	Me	Me	H	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1531	3-fluorophenyl	Me	Me	H	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1532	4-fluorophenyl	Me	Me	H	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl

(continued)

Comp. No.	Q_1	R_1	R_2	X_1	X_2	Q_2
1533	2-chlorophenyl	Me	Me	H	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1534	4-chlorophenyl	Me	Me	H	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1535	2-bromophenyl	Me	Me	H	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1536	2-iodophenyl	Me	Me	H	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1537	3-cyanophenyl	Me	Me	H	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1538	4-cyanophenyl	Me	Me	H	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1539	2-nitrophenyl	Me	Me	H	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1540	3-nitrophenyl	Me	Me	H	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1541	4-nitrophenyl	Me	Me	H	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1542	2-trifluoromethylphenyl	Me	Me	H	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1543	4-trifluoromethylphenyl	Me	Me	H	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1544	4-trifluoromethoxyphenyl	Me	Me	H	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1545	2,3-difluorophenyl	Me	Me	H	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1546	2,4-difluorophenyl	Me	Me	H	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1547	2,5-difluorophenyl	Me	Me	H	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1548	2,6-difluorophenyl	Me	Me	H	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1549	2,4-dichlorophenyl	Me	Me	H	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1550	2,6-dichlorophenyl	Me	Me	H	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1551	3,4-dichlorophenyl	Me	Me	H	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1552	2-chloro-4-nitrophenyl	Me	Me	H	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1553	2-chloro-4-fluorophenyl	Me	Me	H	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1554	2-chloro-6-fluorophenyl	Me	Me	H	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl

(continued)

Comp. No.	Q_1	R_1	R_2	X_1	X_2	Q_2
1555	4-chloro-2-fluorophenyl	Me	Me	H	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1556	4-chloro-2-nitrophenyl	Me	Me	H	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1557	2,3,6-trifluorophenyl	Me	Me	H	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1558	pyridin-2-yl	Me	Me	H	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1559	pyridin-3-yl	Me	Me	H	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1560	2-fluoropyridin-3-yl	Me	Me	H	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1561	2-chloropyridin-3-yl	Me	Me	H	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1562	2-chloropyridin-5-yl	Me	Me	H	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1563	2-methylthiopyridin -3-yl	Me	Me	H	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1564	pyrazin-2-yl	Me	Me	H	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1565	furan-2-yl	Me	Me	H	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1566	thiophen-2-yl	Me	Me	H	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1567	phenyl	Me	Me	H	H	2-n-propyl-6-iodo- 4-(heptafluoroisopropyl)phenyl
1568	2-methylphenyl	Me	Me	H	H	2-n-propyl-6-iodo- 4-(heptafluoroisopropyl)phenyl
1569	4-methylphenyl	Me	Me	H	H	2-n-propyl-6-iodo- 4-(heptafluoroisopropyl)phenyl
1570	2-fluorophenyl	Me	Me	H	H	2-n-propyl-6-iodo- 4-(heptafluoroisopropyl)phenyl
1571	3-fluorophenyl	Me	Me	H	H	2-n-propyl-6-iodo- 4-(heptafluoroisopropyl)phenyl
1572	4-fluorophenyl	Me	Me	H	H	2-n-propyl-6-iodo- 4-(heptafluoroisopropyl)phenyl
1573	2-chlorophenyl	Me	Me	H	H	2-n-propyl-6-iodo- 4-(heptafluoroisopropyl)phenyl
1574	4-chlorophenyl	Me	Me	H	H	2-n-propyl-6-iodo- 4-(heptafluoroisopropyl)phenyl
1575	2-bromophenyl	Me	Me	H	H	2-n-propyl-6-iodo- 4-(heptafluoroisopropyl)phenyl
1576	2-iodophenyl	Me	Me	H	H	2-n-propyl-6-iodo- 4-(heptafluoroisopropyl)phenyl

(continued)

Comp. No.	Q_1	R_1	R_2	X_1	X_2	Q_2
1577	3-cyanophenyl	Me	Me	H	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1578	4-cyanophenyl	Me	Me	H	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1579	2-nitrophenyl	Me	Me	H	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1580	3-nitrophenyl	Me	Me	H	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1581	4-nitrophenyl	Me	Me	H	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1582	2-trifluoromethylphenyl	Me	Me	H	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1583	4-trifluoromethylphenyl	Me	Me	H	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1584	4-trifluoromethoxyphenyl	Me	Me	H	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1585	2,3-difluorophenyl	Me	Me	H	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1586	2,4-difluorophenyl	Me	Me	H	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1587	2,5-difluorophenyl	Me	Me	H	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1588	2,6-difluorophenyl	Me	Me	H	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1589	2,4-dichlorophenyl	Me	Me	H	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1590	2,6-dichlorophenyl	Me	Me	H	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1591	3,4-dichlorophenyl	Me	Me	H	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1592	2-chloro-4-nitrophenyl	Me	Me	H	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1593	2-chloro-4-fluorophenyl	Me	Me	H	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1594	2-chloro-6-fluorophenyl	Me	Me	H	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1595	4-chloro-2-fluorophenyl	Me	Me	H	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1596	4-chloro-2-nitrophenyl	Me	Me	H	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1597	2,3,6-trifluorophenyl	Me	Me	H	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1598	pyridin-2-yl	Me	Me	H	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl

(continued)

Comp. No.	Q_1	R_1	R_2	X_1	X_2	Q_2
1599	pyridin-3-yl	Me	Me	H	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1600	2-fluoropyridin-3-yl	Me	Me	H	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1601	2-chloropyridin-3-yl	Me	Me	H	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1602	2-chloropyridin-5-yl	Me	Me	H	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1603	2-methylthiopyridin-3-yl	Me	Me	H	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1604	pyrazin-2-yl	Me	Me	H	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1605	furan-2-yl	Me	Me	H	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1606	thiophen-2-yl	Me	Me	H	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1607	phenyl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1608	2-methylphenyl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1609	3-methylphenyl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1610	4-methylphenyl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1611	2-nitrophenyl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1612	3-nitrophenyl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1613	4-nitrophenyl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1614	2-cyanophenyl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1615	3-cyanophenyl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1616	4-cyanophenyl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1617	2-fluorophenyl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1618	3-fluorophenyl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1619	4-fluorophenyl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1620	2-chlorophenyl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl

(continued)

Comp. No.	Q_1	R_1	R_2	X_1	X_2	Q_2
1621	4-chlorophenyl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1622	2-bromophenyl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1623	2-iodophenyl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1624	2-trifluoromethylphenyl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1625	4-trifluoromethylphenyl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1626	4-trifluoromethoxyphenyl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1627	2,3-difluorophenyl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1628	2.4-difluorophenyl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1629	2,5-difluorophenyl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1630	2,6-difluorophenyl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1631	2,4-dichlorophenyl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1632	2,6-dichlorophenyl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1633	3,4-dichlorophenyl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1634	2-fluoro-4-nitrophenyl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1635	4-fluoro-2-nitrophenyl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1636	2-chloro-4-fluorophenyl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1637	4-chloro-2-fluorophenyl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1638	2-chloro-6-fluorophenyl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1639	2-chloro-4-nitrophenyl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1640	4-chloro-2-nitrophenyl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1641	2,3,6-trifluorophenyl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1642	pyridin-2-yl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl

(continued)

Comp. No.	Q_1	R_1	R_2	X_1	X_2	Q_2
1643	pyridin-3-yl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1644	2-fluoropyridin-3-yl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1645	2-chloropyridin-3-yl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1646	2-chloropyridin-5-yl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1647	2-methylthiopyridin-3-yl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1648	pyrazin-2-yl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1649	furan-2-yl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1650	furan-3-yl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1651	2-tetrahydrofuranyl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1652	benzofuran-2-yl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1653	thiophen-2-yl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1654	3,4-dinitrophenyl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1655	3-methoxy-4-nitrophenyl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1656	2,3,4-trifluorophenyl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1657	phenyl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1658	2-methylphenyl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1659	4-methylphenyl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1660	2-fluorophenyl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1661	3-fluorophenyl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1662	4-fluorophenyl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1663	2-chlorophenyl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1664	4-chlorophenyl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl

(continued)

Comp. No.	Q_1	R_1	R_2	X_1	X_2	Q_2
1665	2-bromophenyl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1666	2-iodophenyl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1667	3-cyanophenyl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1668	4-cyanophenyl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1669	2-nitrophenyl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1670	3-nitrophenyl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1671	4-nitrophenyl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1672	2-trifluoromethylphenyl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1673	4-trifluoromethylphenyl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1674	4-trifluoromethoxyphenyl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1675	2,3-difluorophenyl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1676	2,4-difluorophenyl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1677	2,5-difluorophenyl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1678	2,6-difluorophenyl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1679	2,4-dichlorophenyl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1680	2,6-dichlorophenyl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1681	3,4-dichlorophenyl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1682	2-chloro-4-nitrophenyl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1683	2-chloro-4-fluorophenyl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1684	2-chloro-6-fluorophenyl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1685	4-chloro-2-fluorophenyl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1686	4-chloro-2-nitrophenyl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl

(continued)

Comp. No.	Q_1	R_1	R_2	X_1	X_2	Q_2
1687	2,3,6-trifluorophenyl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1688	pyridin-2-yl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1689	pyridin-3-yl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1690	2-fluoropyridin-3-yl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1691	2-chloropyridin-3-yl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1692	2-chloropyridin-5-yl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1693	2-methylthiopyridin-3-yl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1694	pyrazin-2-yl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1695	furan-2-yl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1696	thiophen-2-yl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1697	phenyl	Me	Me	F	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1698	2-methylphenyl	Me	Me	F	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1699	4-methylphenyl	Me	Me	F	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1700	2-fluorophenyl	Me	Me	F	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1701	3-fluorophenyl	Me	Me	F	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1702	4-fluorophenyl	Me	Me	F	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1703	2-chlorophenyl	Me	Me	F	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1704	4-chlorophenyl	Me	Me	F	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1705	2-bromophenyl	Me	Me	F	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1706	2-iodophenyl	Me	Me	F	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1707	3-cyanophenyl	Me	Me	F	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1708	4-cyanophenyl	Me	Me	F	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl

(continued)

Comp. No.	Q_1	R_1	R_2	X_1	X_2	Q_2
1709	2-nitrophenyl	Me	Me	F	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1710	3-nitrophenyl	Me	Me	F	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1711	4-nitrophenyl	Me	Me	F	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1712	2-trifluoromethylphenyl	Me	Me	F	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1713	4-trifluoromethylphenyl	Me	Me	F	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1714	4-trifluoromethoxyphenyl	Me	Me	F	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1715	2,3-difluorophenyl	Me	Me	F	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1716	2,4-difluorophenyl	Me	Me	F	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1717	2,5-difluorophenyl	Me	Me	F	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1718	2,6-difluorophenyl	Me	Me	F	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1719	2,4-dichlorophenyl	Me	Me	F	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1720	2,6-dichlorophenyl	Me	Me	F	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1721	3,4-dichlorophenyl	Me	Me	F	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1722	2-chloro-4-nitrophenyl	Me	Me	F	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1723	2-chloro-4-fluorophenyl	Me	Me	F	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1724	2-chloro-6-fluorophenyl	Me	Me	F	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1725	4-chloro-2-fluorophenyl	Me	Me	F	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1726	4-chloro-2-nitrophenyl	Me	Me	F	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1727	2,3,6-trifluorophenyl	Me	Me	F	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1728	pyridin-2-yl	Me	Me	F	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1729	pyridin-3-yl	Me	Me	F	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1730	2-fluoropyridin-3-yl	Me	Me	F	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl

(continued)

Comp. No.	Q_1	R_1	R_2	X_1	X_2	Q_2
1731	2-chloropyridin-3-yl	Me	Me	F	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1732	2-chloropyridin-5-yl	Me	Me	F	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1733	2-methylthiopyridin-3-yl	Me	Me	F	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1734	pyrazin-2-yl	Me	Me	F	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1735	furan-2-yl	Me	Me	F	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1736	thiophen-2-yl	Me	Me	F	H	2,6-dimethyl-4-(heptafluoro isopropyl)phenyl
1737	phenyl	Me	Me	F	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1738	2-methylphenyl	Me	Me	F	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1739	4-methylphenyl	Me	Me	F	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1740	2-fluorophenyl	Me	Me	F	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1741	3-fluorophenyl	Me	Me	F	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1742	4-fluorophenyl	Me	Me	F	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1793	2-chlorophenyl	Me	Me	F	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1744	4-chlorophenyl	Me	Me	F	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1745	2-bromophenyl	Me	Me	F	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1746	2-iodophenyl	Me	Me	F	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1747	3-cyanophenyl	Me	Me	F	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1798	4-cyanophenyl	Me	Me	F	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1749	2-nitrophenyl	Me	Me	F	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1750	3-nitrophenyl	Me	Me	F	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1751	4-nitrophenyl	Me	Me	F	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1752	2-trifluoromethylphenyl	Me	Me	F	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl

(continued)

Comp. No.	Q_1	R_1	R_2	X_1	X_2	Q_2
1753	4-trifluoromethylphenyl	Me	Me	F	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1754	4-trifluoromethoxyphenyl	Me	Me	F	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1755	2,3-difluorophenyl	Me	Me	F	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1756	2,4-difluorophenyl	Me	Me	F	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1757	2,5-difluorophenyl	Me	Me	F	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1758	2,6-difluorophenyl	Me	Me	F	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1759	2,4-dichlorophenyl	Me	Me	F	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1760	2,6-dichlorophenyl	Me	Me	F	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1761	3,4-dichlorophenyl	Me	Me	F	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1762	2-chloro-4-nitrophenyl	Me	Me	F	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1763	2-chloro-4-fluorophenyl	Me	Me	F	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1764	2-chloro-6-fluorophenyl	Me	Me	F	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1765	4-chloro-2-fluorophenyl	Me	Me	F	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1766	4-chloro-2-nitrophenyl	Me	Me	F	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1767	2,3,6-trifluorophenyl	Me	Me	F	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1768	pyridin-2-yl	Me	Me	F	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1769	pyridin-3-yl	Me	Me	F	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1770	2-fluoropyridin-3-yl	Me	Me	F	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1771	2-chloropyridin-3-yl	Me	Me	F	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1772	2-chloropyridin-5-yl	Me	Me	F	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1773	2-methylthiopyridin-3-yl	Me	Me	F	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1774	pyrazin-2-yl	Me	Me	F	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl

(continued)

Comp. No.	Q_1	R_1	R_2	X_1	X_2	Q_2
1775	furan-2-yl	Me	Me	F	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1776	thiophen-2-yl	Me	Me	F	H	2-bromo-4-(heptafluoroisopropyl) -6-(methylsulfonyl)phenyl
1777	phenyl	Me	Me	F	H	2-n-propyl-6-iodo- 4-(heptafluoroisopropyl)phenyl
1778	2-methylphenyl	Me	Me	F	H	2-n-propyl-6-iodo- 4-(heptafluoroisopropyl)phenyl
1779	4-methylphenyl	Me	Me	F	H	2-n-propyl-6-iodo- 4-(heptafluoroisopropyl)phenyl
1780	2-fluorophenyl	Me	Me	F	H	2-n-propyl-6-iodo- 4-(heptafluoroisopropyl)phenyl
1781	3-fluorophenyl	Me	Me	F	H	2-n-propyl-6-iodo- 4-(heptafluoroisopropyl) phenyl
1782	4-fluorophenyl	Me	Me	F	H	2-n-propyl-6-iodo- 4-(heptafluoroisopropyl)phenyl
1783	2-chlorophenyl	Me	Me	F	H	2-n-propyl-6-iodo- 4-(heptafluoroisopropyl)phenyl
1784	4-chlorophenyl	Me	Me	F	H	2-n-propyl-6-iodo- 4-(heptafluoroisopropyl)phenyl
1785	2-bromophenyl	Me	Me	F	H	2-n-propyl-6-iodo- 4-(heptafluoroisopropyl)phenyl
1786	2-iodophenyl	Me	Me	F	H	2-n-propyl-6-iodo- 4-(heptafluoroisopropyl)phenyl
1787	3-cyanophenyl	Me	Me	F	H	2-n-propyl-6-iodo- 4-(heptafluoroisopropyl)phenyl
1788	4-cyanophenyl	Me	Me	F	H	2-n-propyl-6-iodo- 4-(heptafluoroisopropyl)phenyl
1789	2-nitrophenyl	Me	Me	F	H	2-n-propyl-6-iodo- 4-(heptafluoroisopropyl)phenyl
1790	3-nitrophenyl	Me	Me	F	H	2-n-propyl-6-iodo- 4-(heptafluoroisopropyl)phenyl
1791	4-nitrophenyl	Me	Me	F	H	2-n-propyl-6-iodo- 4-(heptafluoroisopropyl)phenyl
1792	2-trifluoromethylphenyl	Me	Me	F	H	2-n-propyl-6-iodo- 4-(heptafluoroisopropyl)phenyl
1793	4-trifluoromethylphenyl	Me	Me	F	H	2-n-propyl-6-iodo- 4-(heptafluoroisopropyl)phenyl
1794	4-trifluoromethoxyphenyl	Me	Me	F	H	2-n-propyl-6-iodo- 4-(heptafluoroisopropyl)phenyl
1795	2,3-difluorophenyl	Me	Me	F	H	2-n-propyl-6-iodo- 4-(heptafluoroisopropyl)phenyl
1796	2,4-difluorophenyl	Me	Me	F	H	2-n-propyl-6-iodo- 4-(heptafluoroisopropyl)phenyl

(continued)

Comp. No.	Q_1	R_1	R_2	X_1	X_2	Q_2
1797	2,5-difluorophenyl	Me	Me	F	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1798	2,6-difluorophenyl	Me	Me	F	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1799	2,4-dichlorophenyl	Me	Me	F	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1800	2,6-dichlorophenyl	Me	Me	F	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1801	3,4-dichlorophenyl	Me	Me	F	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1802	2-chloro-4-nitrophenyl	Me	Me	F	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1803	2-chloro-4-fluorophenyl	Me	Me	F	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1804	2-chloro-6-fluorophenyl	Me	Me	F	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1805	4-chloro-2-fluorophenyl	Me	Me	F	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1806	4-chloro-2-nitrophenyl	Me	Me	F	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1807	2,3,6-trifluorophenyl	Me	Me	F	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1808	pyridin-2-yl	Me	Me	F	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1809	pyridin-3-yl	Me	Me	F	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1810	2-fluoropyridin-3-yl	Me	Me	F	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1811	2-chloropyridin-3-yl	Me	Me	F	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1812	2-chloropyridin-5-yl	Me	Me	F	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1813	2-methylthiopyridin-3-yl	Me	Me	F	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1814	pyrazin-2-yl	Me	Me	F	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1815	furan-2-yl	Me	Me	F	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1816	thiophen-2-yl	Me	Me	F	H	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
1817	phenyl	Me	Me	F	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1818	2-methylphenyl	Me	Me	F	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl

(continued)

Comp. No.	Q_1	R_1	R_2	X_1	X_2	Q_2
1819	4-methylphenyl	Me	Me	F	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1820	2-fluorophenyl	Me	Me	F	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1821	3-fluorophenyl	Me	Me	F	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1822	4-fluorophenyl	Me	Me	F	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1823	2-chlorophenyl	Me	Me	F	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1824	4-chlorophenyl	Me	Me	F	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1825	2-bromophenyl	Me	Me	F	H	2,6-dibromo-4-(heptafluoro-*n*-propylthio)phenyl
1826	2-iodophenyl	Me	Me	F	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1827	3-cyanophenyl	Me	Me	F	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1828	4-cyanophenyl	Me	Me	F	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1829	2-nitrophenyl	Me	Me	F	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1830	3-nitrophenyl	Me	Me	F	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1831	4-nitrophenyl	Me	Me	F	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1832	2-trifluoromethylphenyl	Me	Me	F	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1833	4-trifluoromethylphenyl	Me	Me	F	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1834	4-trifluoromethoxyphenyl	Me	Me	F	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1835	2,3-difluorophenyl	Me	Me	F	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1836	2,4-difluorophenyl	Me	Me	F	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1837	2,5-difluorophenyl	Me	Me	F	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1838	2,6-difluorophenyl	Me	Me	F	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1839	2,4-dichlorophenyl	Me	Me	F	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1840	2,6-dichlorophenyl	Me	Me	F	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl

(continued)

Comp. No.	Q_1	R_1	R_2	X_1	X_2	Q_2
1841	3,4-dichlorophenyl	Me	Me	F	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1842	2-chloro-4-nitrophenyl	Me	Me	F	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1843	2-chloro-4-fluorophenyl	Me	Me	F	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1844	2-chloro-6-fluorophenyl	Me	Me	F	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1845	4-chloro-2-fluorophenyl	Me	Me	F	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1846	4-chloro-2-nitrophenyl	Me	Me	F	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1847	2,3,6-trifluorophenyl	Me	Me	F	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1848	pyridin-2-yl	Me	Me	F	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1849	pyridin-3-yl	Me	Me	F	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1850	2-fluoropyridin-3-yl	Me	Me	F	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1851	2-chloropyridin-3-yl	Me	Me	F	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1852	2-chloropyridin-5-yl	Me	Me	F	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1853	2-methylthiopyridin-3-yl	Me	Me	F	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1854	pyrazin-2-yl	Me	Me	F	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1855	furan-2-yl	Me	Me	F	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1856	thiophen-2-yl	Me	Me	F	H	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
1857	phenyl	Me	Me	F	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1858	2-methylphenyl	Me	Me	F	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1859	4-methylphenyl	Me	Me	F	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1860	2-fluorophenyl	Me	Me	F	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1861	3-fluorophenyl	Me	Me	F	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1862	4-fluorophenyl	Me	Me	F	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl

(continued)

Comp. No.	Q_1	R_1	R_2	X_1	X_2	Q_2
1863	2-chlorophenyl	Me	Me	F	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1864	4-chlorophenyl	Me	Me	F	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1865	2-bromophenyl	Me	Me	F	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1866	2-iodophenyl	Me	Me	F	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1867	3-cyanophenyl	Me	Me	F	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1868	4-cyanophenyl	Me	Me	F	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1869	2-nitrophenyl	Me	Me	F	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1870	3-nitrophenyl	Me	Me	F	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1871	4-nitrophenyl	Me	Me	F	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1872	2-trifluoromethylphenyl	Me	Me	F	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1873	4-trifluoromethylphenyl	Me	Me	F	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1874	4-trifluoromethoxyphenyl	Me	Me	F	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1875	2,3-difluorophenyl	Me	Me	F	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1876	2,4-difluorophenyl	Me	Me	F	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1877	2,5-difluorophenyl	Me	Me	F	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1878	2,6-difluorophenyl	Me	Me	F	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1879	2,4-dichlorophenyl	Me	Me	F	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1880	2,6-dichlorophenyl	Me	Me	F	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1881	3,4-dichlorophenyl	Me	Me	F	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1882	2-chloro-4-nitrophenyl	Me	Me	F	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1883	2-chloro-4-fluorophenyl	Me	Me	F	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1884	2-chloro-6-fluorophenyl	Me	Me	F	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl

(continued)

Comp. No.	Q_1	R_1	R_2	X_1	X_2	Q_2
1885	4-chloro-2-fluorophenyl	Me	Me	F	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1886	4-chloro-2-nitrophenyl	Me	Me	F	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1887	2,3,6-trifluorophenyl	Me	Me	F	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1888	pyridin-2-yl	Me	Me	F	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1889	pyridin-3-yl	Me	Me	F	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1890	2-fluoropyridin-3-yl	Me	Me	F	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1891	2-chloropyridin-3-yl	Me	Me	F	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1892	2-chloropyridin-5-yl	Me	Me	F	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1893	2-methylthiopyridin-3-yl	Me	Me	F	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1894	pyrazin-2-yl	Me	Me	F	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1895	furan-2-yl	Me	Me	F	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1896	thiophen-2-yl	Me	Me	F	H	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
1897	2-fluorophenyl	Me	H	H	H	2,6-dibromo-4-(pentafluoroethyl)phenyl
1898	2-fluorophenyl	Me	H	H	H	2-bromo-4-heptafluoro isopropyl)-6-methylphenyl
1899	2-fluorophenyl	Me	H	H	H	2-ethyl-4-(heptafluoro isopropyl)-6-methylphenyl
1900	2-fluorophenyl	Me	H	H	H	4-(heptafluoroisopropyl)-2-iodo-6-methylphenyl
1901	2-fluorophenyl	Me	H	H	H	2-chloro-6-ethyl-4-(heptafluoro isopropyl)phenyl
1902	2-fluorophenyl	Me	H	H	H	2-bromo-6-ethyl-4-(heptafluoro isopropyl)phenyl
1903	2-fluorophenyl	Me	H	H	H	2-ethyl-4-(heptafluoro isopropyl)-6-iodophenyl
1904	2-fluorophenyl	Me	H	H	H	4-(heptafluoroisopropyl)-2-isopropyl-6-methylphenyl
1905	2-fluorophenyl	Me	H	H	H	2-bromo-4-(heptafluoro isopropyl)-6-n-propylphenyl
1906	2-fluorophenyl	Me	H	H	H	2-bromo-4-(heptafluoroisopropyl)-6-(trifluoromethylthio)phenyl

(continued)

Comp. No.	Q_1	R_1	R_2	X_1	X_2	Q_2
1907	2-fluorophenyl	Me	H	H	H	2,6-dibromo-4-(trifluoro methylthio)phenyl
1908	2-fluorophenyl	Me	H	H	H	2,6-dibromo-4-(pentafluoro ethylthio)phenyl
1909	2-fluorophenyl	Me	H	H	H	2,6-dibromo-4-(nonafluoro-n-butylthio)phenyl
1910	2-fluorophenyl	Me	H	H	H	2,6-dichloro-4-(heptafluoro isopropylsulfonyl)phenyl
1911	2-fluorophenyl	Me	H	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfonyl)phenyl
1912	2-fluorophenyl	Me	H	H	H	2-bromo-6-(heptafluoroisopropyloxy)-4-methylpyridin-3-yl
1913	2-fluorophenyl	Me	H	H	H	2,4-dimethyl-6-(2,2,2-trifluoro-1-trifluoro methylethoxy)pyridin-3-yl
1914	2-fluorophenyl	Me	H	H	H	2-chloro-4-methyl-6-(2,2,2-trifluoro-1-trifluoromethylethoxy)pyridin-3-yl
1915	2-fluorophenyl	Me	H	H	H	2-bromo-4-methyl-6-(2,2,2-trifluoro-1-trifluoromethylethoxy)pyridin-3-yl
1916	2-fluorophenyl	Me	H	H	H	2-iodo-4-methyl-6-(2,2,2-trifluoro-1-trifluoromethylethoxy)pyridin-3-yl
1917	2-fluorophenyl	Me	H	F	H	2,6-dibromo-4-(pentafluoroethyl)phenyl
1918	2-fluorophenyl	Me	H	F	H	2-bromo-4-(heptafluoroisopropyl)-6-methylphenyl
1919	2-fluorophenyl	Me	H	F	H	2-ethyl-4-(heptafluoroisopropyl)-6-methylphenyl
1920	2-fluorophenyl	Me	H	F	H	4-(heptafluoroisopropyl)-2-iodo-6-methylphenyl
1921	2-fluorophenyl	Me	H	F	H	2-chloro-6-ethyl-4-(heptafluoro isopropyl)phenyl
1922	2-fluorophenyl	Me	H	F	H	2-bromo-6-ethyl-4-(heptafluoro isopropyl)phenyl
1923	2-fluorophenyl	Me	H	F	H	2-ethyl-4-(heptafluoroisopropyl)-6-iodophenyl
1924	2-fluorophenyl	Me	H	F	H	4-(heptafluoroisopropyl)-2-isopropyl-6-methylphenyl
1925	2-fluorophenyl	Me	H	F	H	2-bromo-4-(heptafluoroisopropyl)-6-n-propylphenyl
1926	2-fluorophenyl	Me	H	F	H	2-bromo-4-(heptafluoroisopropyl)-6-(trifluoromethylthio)phenyl
1927	2-fluorophenyl	Me	H	F	H	2,6-dibromo-4-(trifluoromethylthio)phenyl
1928	2-fluorophenyl	Me	H	F	H	2,6-dibromo-4-(pentafluoroethylthio)phenyl

(continued)

Comp. No.	Q_1	R_1	R_2	X_1	X_2	Q_2
1929	2-fluorophenyl	Me	H	F	H	2,6-dibromo-4-(nonafluoro-n-butylthio)phenyl
1930	2-fluorophenyl	Me	H	F	H	2,6-dichloro-4-(heptafluoro isopropylsulfonyl)phenyl
1931	2-fluorophenyl	Me	H	F	H	2,6-dibromo-4-(heptafluoro-n-propylsulfonyl)phenyl
1932	2-fluorophenyl	Me	H	F	H	2-bromo-6-(heptafluoroisopropyloxy)-4-methylpyridin-3-yl
1933	2-fluorophenyl	Me	H	F	H	2,4-dimethyl-6-(2,2,2-trifluoro-1-trifluoromethylethoxy)pyridin-3-yl
1934	2-fluorophenyl	Me	H	F	H	2-chloro-4-methyl-6-(2,2,2-trifluoro-1-trifluoromethylethoxy)pyridin-3-yl
1935	2-fluorophenyl	Me	H	F	H	2-bromo-4-methyl-6-(2,2,2-trifluoro-1-trifluoromethylethoxy)pyridin-3-yl
1936	2-fluorophenyl	Me	H	F	H	2-iodo-4-methyl-6-(2,2,2-trifluoro-1-trifluoromethylethoxy)pyridin-3-yl
1937	2-fluorophenyl	Me	Me	H	H	2,6-dibromo-4-(pentafluoroethyl)phenyl
1938	2-fluorophenyl	Me	Me	H	H	2-bromo-4-(heptafluoroisopropyl)-6-methylphenyl
1939	2-fluorophenyl	Me	Me	H	H	2-ethyl-4-(heptafluoroisopropyl)-6-methylphenyl
1940	2-fluorophenyl	Me	Me	H	H	4-(heptafluoroisopropyl)-2-iodo-6-methylphenyl
1941	2-fluorophenyl	Me	Me	H	H	2-chloro-6-ethyl-4-(heptafluoro isopropyl)phenyl
1942	2-fluorophenyl	Me	Me	H	H	2-bromo-6-ethyl-4-(heptafluoro isopropyl)phenyl
1943	2-fluorophenyl	Me	Me	H	H	2-ethyl-4-(heptafluoroisopropyl)-6-iodophenyl
1944	2-fluorophenyl	Me	Me	H	H	4-(heptafluoroisopropyl)-2-isopropyl-6-methylphenyl
1945	2-fluorophenyl	Me	Me	H	H	2-bromo-4-(heptafluoroisopropyl)-6-n-propylphenyl
1946	2-fluorophenyl	Me	Me	H	H	2-bromo-4-(heptafluoroisopropyl)-6-(trifluoromethylthio)phenyl
1947	2-fluorophenyl	Me	Me	H	H	2,6-dibromo-4-(trifluoromethylthio)phenyl
1948	2-fluorophenyl	Me	Me	H	H	2,6-dibromo-4-(pentafluoroethylthio)phenyl
1949	2-fluorophenyl	Me	Me	H	H	2,6-dibromo-4-(nonafluoro-n-butylthio)phenyl
1950	2-fluorophenyl	Me	Me	H	H	2,6-dichloro-4-(heptafluoro isopropylsulfonyl)phenyl

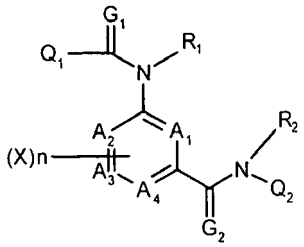
(continued)

Comp. No.	Q_1	R_1	R_2	X_1	X_2	Q_2
1951	2-fluorophenyl	Me	Me	H	H	2,6-dibromo-4-(heptafluoro-n-propylsulfonyl)phenyl
1952	2-fluorophenyl	Me	Me	H	H	2-bromo-6-(heptafluoroisopropyloxy)-4-methylpyridin-3-yl
1953	2-fluorophenyl	Me	Me	H	H	2,4-dimethyl-6-(2,2,2-trifluoro-1-trifluoromethylethoxy)pyridin-3-yl
1954	2-fluorophenyl	Me	Me	H	H	2-chloro-4-methyl-6-(2,2,2-trifluoro-1-trifluoromethylethoxy)pyridin-3-y1
1955	2-fluorophenyl	Me	Me	H	H	2-bromo-4-methyl-6-(2,2,2-trifluoro-1-trifluoromethylethoxy)pyridin-3-yl
1956	2-fluorophenyl	Me	Me	H	H	2-iodo-4-methyl-6-(2,2,2-trifluoro-1-trifluoromethylethoxy)pyridin-3-yl
1957	2-fluorophenyl	Me	Me	F	H	2,6-dibromo-4-(pentafluoroethyl)phenyl
1958	2-fluorophenyl	Me	Me	F	H	2-bromo-4-(heptafluoroisopropyl)-6-methylphenyl
1959	2-fluorophenyl	Me	Me	F	H	2-ethyl-4-(heptafluoroisopropyl)-6-methylphenyl
1960	2-fluorophenyl	Me	Me	F	H	4-(heptafluoroisopropyl)-2-iodo-6-methylphenyl
1961	2-fluorophenyl	Me	Me	F	H	2-chloro-6-ethyl-4-(heptafluoro isopropyl)phenyl
1962	2-fluorophenyl	Me	Me	F	H	2-bromo-6-ethyl-4-(heptafluoro isopropyl)phenyl
1963	2-fluorophenyl	Me	Me	F	H	2-ethyl-4-(heptafluoroisopropyl)-6-iodophenyl
1964	2-fluorophenyl	Me	Me	F	H	4-(heptafluoroisopropyl)-2-isopropyl-6-methylphenyl
1965	2-fluorophenyl	Me	Me	F	H	2-bromo-4-(heptafluoroisopropyl)-6-n-propylphenyl
1966	2-fluorophenyl	Me	Me	F	H	2-bromo-4-(heptafluoroisopropyl)-6-(trifluoromethylthio)phenyl
1967	2-fluorophenyl	Me	Me	F	H	2,6-dibromo-4-(trifluoromethylthio)phenyl
1968	2-fluorophenyl	Me	Me	F	H	2,6-dibromo-4-(pentafluoroethylthio)phenyl
1969	2-fluorophenyl	Me	Me	F	H	2,6-dibromo-4-(nonafluoro-n-butylthio)phenyl
1970	2-fluorophenyl	Me	Me	F	H	2,6-dichloro-4-(heptafluoro isopropylsulfonyl)phenyl
1971	2-fluorophenyl	Me	Me	F	H	2,6-dibromo-4-(heptafluoro-n-propylsulfonyl)phenyl
1972	2-fluorophenyl	Me	Me	F	H	2-bromo-6-(heptafluoroisopropyloxy)-4-methylpyridin-3-yl

(continued)

Comp. No.	Q_1	R_1	R_2	X_1	X_2	Q_2
1973	2-fluorophenyl	Me	Me	F	H	2,4-dimethyl-6-(2,2,2-trifluoro-1-trifluoromethylethoxy)pyridin-3-yl
1974	2-fluorophenyl	Me	Me	F	H	2-chloro-4-methyl-6-(2,2,2-trifluoro-1-trifluoromethylethoxy)pyridin-3-yl
1975	2-fluorophenyl	Me	Me	F	H	2-bromo-4-methyl-6-(2,2,2-trifluoro-1-trifluoromethylethoxy)pyridin-3-yl
1976	2-fluorophenyl	Me	Me	F	H	2-iodo-4-methyl-6-(2,2,2-trifluoro-1-trifluoromethylethoxy)pyridin-3-yl

[Table 4]



(X, R_2 = a hydrogen atom, A_3, A_4 = a carbon atom, G_1, G_2 = an oxygen atom, n = 0)

Comp. No.	Q_1	R_1	A_1	A_2	Q_2
2001	phenyl	H	N	C	2,6-dimethyl-4-heptafluoroisopropylphenyl
2002	2-methylphenyl	H	N	C	2,6-dimethyl-4-heptafluoroisopropylphenyl
2003	4-methylphenyl	H	N	C	2,6-dimethyl-4-heptafluoroisopropylphenyl
2004	2-fluorophenyl	H	N	C	2,6-dimethyl-4-heptafluoroisopropylphenyl
2005	3-fluorophenyl	H	N	C	2,6-dimethyl-4-heptafluoroisopropylphenyl
2006	4-fluorophenyl	H	N	C	2,6-dimethyl-4-heptafluoroisopropylphenyl
2007	2-chlorophenyl	H	N	C	2,6-dimethyl-4-heptafluoroisopropylphenyl
2008	4-chlorophenyl	H	N	C	2,6-dimethyl-4-heptafluoroisopropylphenyl
2009	2-bromophenyl	H	N	C	2,6-dimethyl-4-heptafluoroisopropylphenyl
2010	2-iodophenyl	H	N	C	2,6-dimethyl-4-heptafluoroisopropylphenyl
2011	3-cyanophenyl	H	N	C	2,6-dimethyl-4-heptafluoroisopropylphenyl
2012	4-cyanophenyl	H	N	C	2,6-dimethyl-4-heptafluoroisopropylphenyl
2013	2-nitrophenyl	H	N	C	2,6-dimethyl-4-heptafluoroisopropylphenyl
2014	3-nitrophenyl	H	N	C	2,6-dimethyl-4-heptafluoroisopropylphenyl
2015	4-nitrophenyl	H	N	C	2,6-dimethyl-4-heptafluoroisopropylphenyl
2016	2-trifluoromethylphenyl	H	N	C	2,6-dimethyl-4-heptafluoroisopropylphenyl
2017	4-trifluoromethylphenyl	H	N	C	2,6-dimethyl-4-heptafluoroisopropylphenyl
2018	4-trifluoromethoxyphenyl	H	N	C	2,6-dimethyl-4-heptafluoroisopropylphenyl
2019	2,3-difluorophenyl	H	N	C	2,6-dimethyl-4-heptafluoroisopropylphenyl
2020	2,4-difluorophenyl	H	N	C	2,6-dimethyl-4-heptafluoroisopropylphenyl

(continued)

Comp. No.	Q_1	R_1	A_1	A_2	Q_2
2021	2,5-difluorophenyl	H	N	C	2,6-dimethyl-4-heptafluoroisopropylphenyl
2022	2,6-difluorophenyl	H	N	C	2,6-dimethyl-4-heptafluoroisopropylphenyl
2023	2,4-dichlorophenyl	H	N	C	2,6-dimethyl-4-heptafluoroisopropylphenyl
2024	2,6-dichlorophenyl	H	N	C	2,6-dimethyl-4-heptafluoroisopropylphenyl
2025	3,4-dichlorophenyl	H	N	C	2,6-dimethyl-4-heptafluoroisopropylphenyl
2026	2-chloro-4-nitrophenyl	H	N	C	2,6-dimethyl-4-heptafluoroisopropylphenyl
2027	2-chloro-4-fluorophenyl	H	N	C	2,6-dimethyl-4-heptafluoroisopropylphenyl
2028	2-chloro-6-fluorophenyl	H	N	C	2,6-dimethyl-4-heptafluoroisopropylphenyl
2029	4-chloro-2-fluorophenyl	H	N	C	2,6-dimethyl-4-heptafluoroisopropylphenyl
2030	4-chloro-2-nitrophenyl	H	N	C	2,6-dimethyl-4-heptafluoroisopropylphenyl
2031	2,3,6-trifluoro phenyl	H	N	C	2,6-dimethyl-4-heptafluoroisopropylphenyl
2032	pyridin-2-yl	H	N	C	2,6-dimethyl-4-heptafluoroisopropylphenyl
2033	pyridin-3-yl	H	N	C	2,6-dimethyl-4-heptafluoroisopropylphenyl
2034	pyridin-4-yl	H	N	C	2,6-dimethyl-4-heptafluoroisopropylphenyl
2035	2-fluoropyridin-3-yl	H	N	C	2,6-dimethyl-4-heptafluoroisopropylphenyl
2036	2-chloropyridin-3-yl	H	N	C	2,6-dimethyl-4-heptafluoroisopropylphenyl
2037	2-chloropyridin-5-yl	H	N	C	2,6-dimethyl-4-heptafluoroisopropylphenyl
2038	2-methylthiopyridin-3-yl	H	N	C	2,6-dimethyl-4-heptafluoroisopropylphenyl
2039	pyrazin-2-yl	H	N	C	2,6-dimethyl-4-heptafluoroisopropylphenyl
2040	furan-2-yl	H	N	C	2,6-dimethyl-4-heptafluoroisopropylphenyl
2041	thiophen-2-yl	H	N	C	2,6-dimethyl-4-heptafluoroisopropylphenyl
2042	phenyl	H	N	C	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
2043	2-methylphenyl	H	N	C	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
2044	4-methylphenyl	H	N	C	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
2045	2-fluorophenyl	H	N	C	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
2046	3-fluorophenyl	H	N	C	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
2047	4-fluorophenyl	H	N	C	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
2048	2-chlorophenyl	H	N	C	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
2049	4-chlorophenyl	H	N	C	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
2050	2-bromophenyl	H	N	C	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
2051	2-iodophenyl	H	N	C	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
2052	3-cyanophenyl	H	N	C	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
2053	4-cyanophenyl	H	N	C	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
2054	2-nitrophenyl	H	N	C	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
2055	3-nitrophenyl	H	N	C	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
2056	4-nitrophenyl	H	N	C	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
2057	2-trifluoromethyl phenyl	H	N	C	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
2058	4-trifluoromethyl phenyl	H	N	C	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl

(continued)

Comp. No.	Q_1	R_1	A_1	A_2	Q_2
2059	4-trifluoromethoxy phenyl	H	N	C	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
2060	2,3-difluorophenyl	H	N	C	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
2061	2,4-difluorophenyl	H	N	C	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
2062	2,5-difluorophenyl	H	N	C	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
2063	2,6-difluorophenyl	H	N	C	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
2064	2,4-dichlorophenyl	H	N	C	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
2065	2,6-dichlorophenyl	H	N	C	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
2066	3,4-dichlorophenyl	H	N	C	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
2067	2-chloro-4-nitro phenyl	H	N	C	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
2068	2-chloro-4-fluoro phenyl	H	N	C	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
2069	2-chloro-6-fluoro phenyl	H	N	C	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
2070	4-chloro-2-fluoro phenyl	H	N	C	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
2071	4-chloro-2-nitro phenyl	H	N	C	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
2072	2,3,6-trifluoro phenyl	H	N	C	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
2073	pyridin-2-yl	H	N	C	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
2074	pyridin-3-yl	H	N	C	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
2075	2-fluoropyridin-3-yl	H	N	C	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
2076	2-chloropyridin-3-yl	H	N	C	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
2077	2-chloropyridin-5-yl	H	N	C	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
2078	2-methylthiopyridin-3-yl	H	N	C	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
2079	pyrazin-2-yl	H	N	C	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
2080	furan-2-yl	H	N	C	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
2081	thiophen-2-yl	H	N	C	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
2082	phenyl	Me	N	C	2,6-dimethyl-4-heptafluoroisopropylphenyl
2083	2-methylphenyl	Me	N	C	2,6-dimethyl-4-heptafluoroisopropylphenyl
2084	4-methylphenyl	Me	N	C	2,6-dimethyl-4-heptafluoroisopropylphenyl
2085	2-fluorophenyl	Me	N	C	2,6-dimethyl-4-heptafluoroisopropylphenyl
2086	3-fluorophenyl	Me	N	C	2,6-dimethyl-4-heptafluoroisopropylphenyl
2087	4-fluorophenyl	Me	N	C	2,6-dimethyl-4-heptafluoroisopropylphenyl
2088	2-chlorophenyl	Me	N	C	2,6-dimethyl-4-heptafluoroisopropylphenyl
2089	4-chlorophenyl	Me	N	C	2,6-dimethyl-4-heptafluoroisopropylphenyl
2090	2-bromophenyl	Me	N	C	2,6-dimethyl-4-heptafluoroisopropylphenyl
2091	2-iodophenyl	Me	N	C	2,6-dimethyl-4-heptafluoroisopropylphenyl
2092	3-cyanophenyl	Me	N	C	2,6-dimethyl-4-heptafluoroisopropylphenyl
2093	4-cyanophenyl	Me	N	C	2,6-dimethyl-4-heptafluoroisopropylphenyl
2094	2-nitrophenyl	Me	N	C	2,6-dimethyl-4-heptafluoroisopropylphenyl
2095	3-nitrophenyl	Me	N	C	2,6-dimethyl-4-heptafluoroisopropylphenyl
2096	4-nitrophenyl	Me	N	C	2,6-dimethyl-4-heptafluoroisopropylphenyl

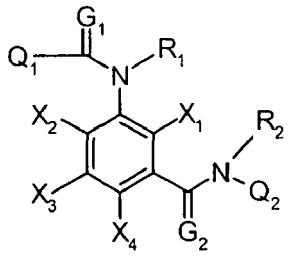
(continued)

Comp. No.	Q_1	R_1	A_1	A_2	Q_2
2097	2-trifluoromethyl phenyl	Me	N	C	2,6-dimethyl-4-heptafluoroisopropylphenyl
2098	4-trifluoromethyl phenyl	Me	N	C	2,6-dimethyl-4-heptafluoroisopropylphenyl
2099	4-trifluoromethoxy phenyl	Me	N	C	2,6-dimethyl-4-heptafluoroisopropylphenyl
2100	2,3-difluorophenyl	Me	N	C	2,6-dimethyl-4-heptafluoroisopropylphenyl
2101	2,4-difluorophenyl	Me	N	C	2,6-dimethyl-4-heptafluoroisopropylphenyl
2102	2,5-difluorophenyl	Me	N	C	2,6-dimethyl-4-heptafluoroisopropylphenyl
2103	2,6-difluorophenyl	Me	N	C	2,6-dimethyl-4-heptafluoroisopropylphenyl
2104	2,4-dichlorophenyl	Me	N	C	2,6-dimethyl-4-heptafluoroisopropylphenyl
2105	2,6-dichlorophenyl	Me	N	C	2,6-dimethyl-4-heptafluoroisopropylphenyl
2106	3,4-dichlorophenyl	Me	N	C	2,6-dimethyl-4-heptafluoroisopropylphenyl
2107	2-chloro-4-nitro phenyl	Me	N	C	2,6-dimethyl-4-heptafluoroisopropylphenyl
2108	2-chloro-4-fluoro phenyl	Me	N	C	2,6-dimethyl-4-heptafluoroisopropylphenyl
2109	2-chloro-6-fluoro phenyl	Me	N	C	2,6-dimethyl-4-heptafluoroisopropylphenyl
2110	4-chloro-2-fluoro phenyl	Me	N	C	2,6-dimethyl-4-heptafluoroisopropylphenyl
2111	4-chloro-2-nitro phenyl	Me	N	C	2,6-dimethyl-4-heptafluoroisopropylphenyl
2112	2,3,6-trifluoro phenyl	Me	N	C	2,6-dimethyl-4-heptafluoroisopropylphenyl
2113	pyridin-2-yl	Me	N	C	2,6-dimethyl-4-heptafluoroisopropylphenyl
2114	pyridin-3-yl	Me	N	C	2,6-dimethyl-4-heptafluoroisopropylphenyl
2115	2-fluoropyridin-3-yl	Me	N	C	2,6-dimethyl-4-heptafluoroisopropylphenyl
2116	2-chloropyridin-3-yl	Me	N	C	2,6-dimethyl-4-heptafluoroisopropylphenyl
2117	2-chloropyridin-5-yl	Me	N	C	2,6-dimethyl-4-heptafluoroisopropylphenyl
2118	2-methylthiopyridin-3-yl	Me	N	C	2,6-dimethyl-4-heptafluoroisopropylphenyl
2119	pyrazin-2-yl	Me	N	C	2,6-dimethyl-4-heptafluoroisopropylphenyl
2120	furan-2-yl	Me	N	C	2,6-dimethyl-4-heptafluoroisopropylphenyl
2121	thiophen-2-yl	Me	N	C	2,6-dimethyl-4-heptafluoroisopropylphenyl
2122	phenyl	Me	N	C	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
2123	2-methylphenyl	Me	N	C	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
2124	4-methylphenyl	Me	N	C	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
2125	2-fluorophenyl	Me	N	C	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
2126	3-fluorophenyl	Me	N	C	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
2127	4-fluorophenyl	Me	N	C	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
2128	2-chlorophenyl	Me	N	C	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
2129	4-chlorophenyl	Me	N	C	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
2130	2-bromophenyl	Me	N	C	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
2131	2-iodophenyl	Me	N	C	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
2132	3-cyanophenyl	Me	N	C	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
2133	4-cyanophenyl	Me	N	C	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
2134	2-nitrophenyl	Me	N	C	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl

(continued)

Comp. No.	Q_1	R_1	A_1	A_2	Q_2
2135	3-nitrophenyl	Me	N	C	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
2136	4-nitrophenyl	Me	N	C	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
2137	2-trifluoromethyl phenyl	Me	N	C	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
2138	4-trifluoromethyl phenyl	Me	N	C	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
2139	4-trifluoromethoxy phenyl	Me	N	C	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
2140	2,3-difluorophenyl	Me	N	C	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
2141	2,4-difluorophenyl	Me	N	C	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
2142	2,5-difluorophenyl	Me	N	C	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
2143	2,6-difluorophenyl	Me	N	C	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
2144	2,4-dichlorophenyl	Me	N	C	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
2145	2,6-dichlorophenyl	Me	N	C	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
2146	3,4-dichlorophenyl	Me	N	C	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
2147	2-chloro-4-nitro phenyl	Me	N	C	2,6-dibromo-4-(heptafluozo-n-propylthio)phenyl
2148	2-chloro-4-fluoro phenyl	Me	N	C	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
2149	2-chloro-6-fluoro phenyl	Me	N	C	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
2150	4-chloro-2-fluoro phenyl	Me	N	C	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
2151	4-chloro-2-nitro phenyl	Me	N	C	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
2152	2,3,6-trifluoro phenyl	Me	N	C	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
2153	pyridin-2-yl	Me	N	C	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
2154	pyridin-3-yl	Me	N	C	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
2155	2-fluoropyridin-3-yl	Me	N	C	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
2156	2-chloropyridin-3-yl	Me	N	C	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
2157	2-chloropyridin-5-yl	Me	N	C	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
2158	2-methylthiopyridi n-3-yl	Me	N	C	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
2159	pyrazin-2-yl	Me	N	C	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
2160	furan-2-yl	Me	N	C	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
2161	thiophen-2-yl	Me	N	C	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
2162	phenyl	H	C	N	2,6-dimethyl-4-heptafluoro isopropylphenyl
2163	phenyl	H	C	N-oxide	2,6-dimethyl-4-heptafluoro isopropylphenyl
2164	phenyl	H	N-oxide	C	2,6-dimethyl-4-heptafluoro isopropylphenyl
2165	2-fluorophenyl	H	N-oxide	C	2,6-dimethyl-4-heptafluoro isopropylphenyl
2166	phenyl	H	N-oxide	C	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
2167	2-fluorophenyl	H	N-oxide	C	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
2168	phenyl	Me	N-oxide	C	2,6-dimethyl-4-heptafluoro isopropylphenyl
2169	2-fluorophenyl	Me	N-oxide	C	2,6-dimethyl-4-heptafluoro isopropylphenyl
2170	phenyl	Me	N-oxide	C	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
2171	2-fluorophenyl	Me	N-oxide	C	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl

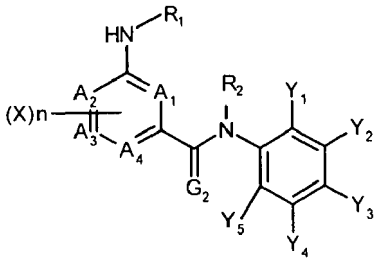
[Table 5]



(X_1, X_2, X_3, X_4, R_1, R_2 = a hydrogen atom, Q_1 = phenyl)

Comp. No.	G_1	G_2	Q_2
2201	O	S	2,6-dimethyl-4-heptafluoroisopropylphenyl
2202	S	O	2,6-dimethyl-4-heptafluoroisopropylphenyl
2203	S	S	2,6-dimethyl-4-heptafluoroisopropylphenyl
2204	O	S	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
2205	S	O	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
2206	S	S	2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl
2207	O	S	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
2208	S	O	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
2209	S	S	2,6-dimethyl-4-(nonafluoro-2-butyl)phenyl
2210	O	S	2-bromo-4-(heptafluoroisopropyl)-6-(methylsulfonyl)phenyl
2211	S	O	2-bromo-4-(heptafluoroisopropyl)-6-(methylsulfonyl)phenyl
2212	S	S	2-bromo-4-(heptafluoroisopropyl)-6-(methylsulfonyl)phenyl
2213	O	S	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
2214	S	O	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
2215	S	S	2-n-propyl-6-iodo-4-(heptafluoroisopropyl)phenyl
2216	O	S	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
2217	S	O	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
2218	S	S	2,6-dibromo-4-(heptafluoro-n-propylsulfinyl)phenyl
2219	O	S	2,6-dichloro-4-(heptafluoro-n-propylthio)phenyl
2220	S	O	2,6-dichloro-4-(heptafluoro-n-propylthio)phenyl
2221	S	S	2,6-dichloro-4-(heptafluoro-n-propylthio)phenyl

[Table 6]



(A_1, A_2, A_3, A_4 = a carbon atom, X = a hydrogen atom, n = 0, G_2 = an oxygen atom)

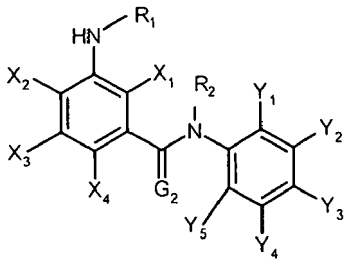
(continued)

Comp. No.	R_1	R_2	Y_1	Y_2	Y_3	Y_4	Y_5
I-1	H	H	Me	H	heptafluoro-n-propyl	H	Me
I-2	H	H	Me	H	heptafluoroisopropyl	H	Me
I-3	H	H	Me	Me	heptafluoroisopropyl	H	Cl
I-4	H	H	Me	I	heptafluoroisopropyl	H	Cl
I-5	H	Me	Me	H	heptafluoroisopropyl	H	Me
I-6	H	i-Pr	Me	H	heptafluoroisopropyl	H	Me
I-7	H	H	Et	H	heptafluoroisopropyl	H	Me
I-8	H	H	Et	H	heptafluoroisopropyl	H	Et
I-9	H	H	Et	H	heptafluoroisopropyl	H	I
I-10	H	H	i-Pr	H	heptafluoroisopropyl	H	Me
I-11	H	H	MeO	H	heptafluoroisopropyl	H	Me
I-12	H	H	Cl	H	heptafluoroisopropyl	H	Et
I-13	H	H	Cl	Me	heptafluoroisopropyl	H	Me
I-14	H	H	Br	H	heptafluoroisopropyl	H	Me
I-15	H	H	Br	H	heptafluoroisopropyl	H	Et
I-16	H	H	Br	H	heptafluoroisopropyl	H	n-Pr
I-17	H	H	Br	H	heptafluoroisopropyl	H	n-Bu
I-18	H	H	Br	Me	heptafluoroisopropyl	H	Me
I-19	H	H	I	H	heptafluoroisopropyl	H	Me
I-20	H	H	I	H	heptafluoroisopropyl	H	n-Pr
I-21	H	H	Me	H	nonafluoto-n-butyl	H	Me
I-22	H	H	Me	H	nonafluoto-2-butyl	H	Me
I-23	H	H	Br	H	trifluoromethylthio	H	Br
I-24	H	H	Br	H	trifluoromethylsulfonyl	H	Br
I-25	H	H	Cl	H	heptafluoroisopropylthio	H	Cl
I-26	H	H	Br	H	heptafluoroisopropylthio	H	Br
I-27	H	H	Cl	H	heptafluoro-n-propylthio	H	Cl
I-28	H	H	Br	H	heptafluoro-n-propylthio	H	Br
I-29	H	H	Cl	H	heptafluoroisopropylsulfonyl	H	Cl
I-30	H	H	Br	H	nonafluoto-n-butylthio	H	Br
I-31	H	H	Br	H	pentafluoroethylthio	H	Br
I-32	H	H	Br	H	heptafluoro-n-propylsulfinyl	H	Br
I-33	Me	H	Me	H	heptafluoro-n-propylthio	H	Me
I-34	H	Me	Br	H	heptafluoro-n-propylthio	H	Br
I-35	H	H	Cl	H	heptafluoroisopropyl	H	n-Bu
I-36	H	H	I	H	heptafluoroisopropyl	H	n-Bu
I-37	H	H	Br	H	pentafluoroethyl	H	Br
I-38	H	H	Cl	H	heptafluoroisopropyl	H	s-Bu

(continued)

Comp. No.	R_1	R_2	Y_1	Y_2	Y_3	Y_4	Y_5
I-39	H	H	I	H	heptafluoroisopropyl	H	s-Bu
I-40	H	H	Br	H	heptafluoroisopropyl	H	Br
I-41	H	H	Cl	H	pentafluoroethyl	H	Cl
I-92	H	H	Br	H	heptafluoroisopropyl	H	$MeSO_2$
I-43	Me	H	Br	H	heptafluoroisopropyl	H	$MeSO_2$
I-44	Me	Me	Br	H	heptafluoroisopropyl	H	$MeSO_2$
I-95	H	H	Br	H	heptafluoroisopropyl	H	MeSO
I-96	Me	H	Br	H	heptafluoroisopropyl	H	MeSO
I-47	Me	Me	Br	H	heptafluoroisopropyl	H	MeSO
I-98	H	H	Br	H	heptafluoroisopropyl	H	MeS
I-49	Me	H	Br	H	heptafluoroisopropyl	H	MeS
I-50	Me	Me	Br	H	heptafluoroisopropyl	H	MeS
I-51	Me	Me	Me	H	heptafluoroisopropyl	H	Me
I-52	Me	Me	Me	H	nonafluoto-2-butyl	H	Me
I-53	Me	H	I	H	heptafluoroisopropyl	H	n-Pr
I-59	Me	Me	I	H	heptafluoroisopropyl	H	n-Pr
I-55	Me	Me	Br	H	heptafluoro-n-propylthio	H	Br
I-56	Me	H	Br	H	heptafluoro-n-propylthio	H	Br
I-57	H	H	Br	H	heptafluoro-n-propylsulfinyl	H	Br
I-58	Me	H	Br	H	heptafluoro-n-propylsulfinyl	H	Br
I-59	Me	Me	Br	H	heptafluoro-n-propylsulfinyl	H	Br
I-60	H	H	Br	H	heptafluoro-n-propylsulfonyl	H	Br
I-61	Me	H	Br	H	heptafluoro-n-propylsulfonyl	H	Br
I-62	Me	Me	Br	H	heptafluoro-n-propylsulfonyl	H	Br
I-63	Me	Me	Cl	H	heptafluoro-n-propylthio	H	Cl
I-64	Me	H	Cl	H	heptafluoro-n-propylthio	H	Cl
I-65	H	H	Cl	H	heptafluoro-n-propylsulfinyl	H	Cl
I-66	Me	H	Cl	H	heptafluoro-n-propylsulfinyl	H	Cl
I-67	Me	Me	Cl	H	heptafluoro-n-propylsulfinyl	H	Cl
I-68	H	H	Cl	H	heptafluoro-n-propylsulfonyl	H	Cl
I-69	Me	H	Cl	H	heptafluoro-n-propylsulfonyl	H	Cl
I-70	Me	Me	Cl	H	heptafluoro-n-propylsulfonyl	H	Cl

[Table 7]



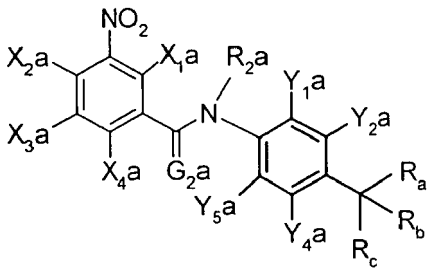
(G_2 = an oxygen atom, Y_2, Y_4 = a hydrogen atom)

Comp. No.	X_1	X_2	X_3	X_4	R_1	R_2	Y_1	Y_3	Y_5
I-81	Me	H	H	H	H	H	Me	heptafluoroisopropyl	Me
I-82	H	Me	H	H	H	H	Me	heptafluoroisopropyl	Me
I-83	H	H	H	Me	H	H	Me	heptafluoroisopropyl	Me
I-84	F	H	H	H	H	H	Me	heptafluoroisopropyl	Me
I-85	F	H	H	H	H	H	Me	heptafluoroisopropylthio	Me
I-86	H	F	H	H	H	H	Me	heptafluoroisopropyl	Me
I-87	H	H	H	F	H	H	Me	heptafluoroisopropyl	Me
I-88	Cl	H	H	H	H	H	Me	heptafluoroisopropyl	Me
I-89	H	Cl	H	H	H	H	Me	heptafluoroisopropyl	Me
I-90	H	H	H	Cl	H	H	Me	heptafluoroisopropyl	Me
I-91	Br	H	H	H	H	H	Me	heptafluoroisopropyl	Me
I-92	H	H	H	I	H	H	Me	heptafluoroisopropyl	Me
I-93	H	H	CF_3	H	H	H	Me	heptafluoroisopropyl	Me
I-94	F	H	H	H	H	Me	Me	heptafluoroisopropyl	Me
I-95	F	H	H	H	Me	H	Me	heptafluoroisopropyl	Me
I-96	F	H	H	H	Me	Me	Me	heptafluoroisopropyl	Me
I-97	F	H	H	H	H	Me	Me	nonafluoto-2-butyl	Me
I-98	F	H	H	H	Me	H	Me	nonafluoto-2-butyl	Me
I-99	F	H	H	H	Me	Me	Me	nonafluoto-2-butyl	Me
I-100	F	H	H	H	H	Me	Br	heptafluoro-n-propylthio	Br
I-101	F	H	H	H	Me	H	Br	heptafluoro-n-propylthio	Br
I-102	F	H	H	H	Me	Me	Br	heptafluoro-n-propylthio	Br
I-103	F	H	H	H	H	Me	Br	heptafluoro-n-propylsulfinyl	Br
I-104	F	H	H	H	Me	H	Br	heptafluoro-n-propylsulfinyl	Br
I-105	F	H	H	H	Me	Me	Br	heptafluoro-n-propylsulfinyl	Br
I-106	F	H	H	H	H	Me	n-Pr	heptafluoroisopropyl	I
I-107	F	H	H	H	Me	H	n-Pr	heptafluoroisopropyl	I
I-108	F	H	H	H	Me	Me	n-Pr	heptafluoroisopropyl	I
I-109	F	H	H	H	H	Me	Br	heptafluoroisopropyl	$MeSO_2$
I-110	F	H	H	H	Me	H	Br	heptafluoroisopropyl	$MeSO_2$

(continued)

Comp. No.	X_1	X_2	X_3	X_4	R_1	R_2	Y_1	Y_3	Y_5
I-111	F	H	H	H	Me	Me	Br	heptafluoroisopropyl	$MeSO_2$
I-112	F	H	H	H	H	Me	Br	heptafluoroisopropyl	MeSO
I-113	F	H	H	H	Me	H	Br	heptafluoroisopropyl	MeSO
I-114	F	H	H	H	Me	Me	Br	heptafluoroisopropyl	MeSO

[Table 8]



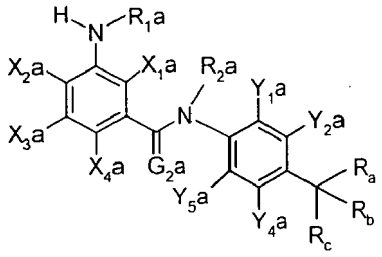
(X_2a, X_3a, X_4a, Y_2a, Y_4a = a hydrogen atom, Y_1a, Y_5a = a methyl group, G_2a = an oxygen atom)

Comp. No.	X_1a	R_2a	R_a	R_b	R_c
I-121	H	H	CF_3	F	OH
I-122	H	H	CF_3	F	Cl
I-123	H	H	CF_3	F	Br
I-124	H	H	CF_3	CF_3	OH
I-125	H	H	CF_3	CF_3	Cl
I-126	H	H	CF_3	CF_3	Br
I-127	H	H	CF_3	C_2F_5	OH
I-128	H	H	CF_3	C_2F_5	Cl
I-129	H	H	CF_3	C_2F_5	Br
I-130	F	H	CF_3	F	OH
I-131	F	H	CF_3	F	Cl
I-132	F	H	CF_3	F	Br
I-133	F	H	CF_3	CF_3	OH
I-134	F	H	CF_3	CF_3	Cl
I-135	F	H	CF_3	CF_3	Br
I-136	F	H	CF_3	C_2F_5	OH
I-137	F	H	CF_3	C_2F_5	Cl
I-138	F	H	CF_3	C_2F_5	Br
I-139	Cl	H	CF_3	F	OH
I-140	Cl	H	CF_3	F	Cl
I-141	Cl	H	CF_3	F	Br
I-142	Cl	H	CF_3	CF_3	OH
I-143	Cl	H	CF_3	CF_3	Cl

(continued)

Comp. No.	X_1a	R_2a	R_a	R_b	R_c
I-144	Cl	H	CF_3	CF_3	Br
I-145	Cl	H	CF_3	C_2F_5	OH
I-146	Cl	H	CF_3	C_2F_5	Cl
I-197	Cl	H	CF_3	C_2F_5	Br
I-148	H	Me	CF_3	F	OH
I-149	H	Me	CF_3	F	Cl
I-150	H	Me	CF_3	F	Br
I-151	H	Me	CF_3	CF_3	OH
I-152	H	Me	CF_3	CF_3	Cl
I-153	H	Me	CF_3	CF_3	Br
I-154	H	Me	CF_3	C_2F_5	OH
I-155	H	Me	CF_3	C_2F_5	Cl
I-156	H	Me	CF_3	C_2F_5	Br
I-157	F	Me	CF_3	F	OH
I-158	F	Me	CF_3	F	Cl
I-159	F	Me	CF_3	F	Br
I-160	F	Me	CF_3	CF_3	OH
I-161	F	Me	CF_3	CF_3	Cl
I-162	F	Me	CF_3	CF_3	Br
I-163	F	Me	CF_3	C_2F_5	OH
I-164	F	Me	CF_3	C_2F_5	Cl
I-165	F	Me	CF_3	C_2F_5	Br
I-166	Cl	Me	CF_3	F	OH
I-167	Cl	Me	CF_3	F	Cl
I-168	Cl	Me	CF_3	F	Br
I-169	Cl	Me	CF_3	CF_3	OH
I-170	Cl	Me	CF_3	CF_3	Cl
I-171	Cl	Me	CF_3	CF_3	Br
I-172	Cl	Me	CF_3	C_2F_5	OH
I-173	Cl	Me	CF_3	C_2F_5	Cl
I-179	Cl	Me	CF_3	C_2F_5	Br

[Table 9]



(X_2a, X_3a, X_4a, Y_2a, Y_4a = a hydrogen atom, Y_1a, Y_5a = a methyl group, G_2a = an oxygen atom)

Comp. No.	X_1a	R_1a	R_2a	R_a	R_b	R_c
I-201	H	H	H	CF_3	F	OH
I-202	H	H	H	CF_3	F	Cl
I-203	H	H	H	CF_3	F	Br
I-204	H	H	H	CF_3	CF_3	OH
I-205	H	H	H	CF_3	CF_3	Cl
I-206	H	H	H	CF_3	CF_3	Br
I-207	H	H	H	CF_3	C_2F_5	OH
I-208	H	H	H	CF_3	C_2F_5	Cl
I-209	H	H	H	CF_3	C_2F_5	Br
I-210	F	H	H	CF_3	F	OH
I-211	F	H	H	CF_3	F	Cl
I-212	F	H	H	CF_3	F	Br
I-213	F	H	H	CF_3	CF_3	OH
I-214	F	H	H	CF_3	CF_3	Cl
I-215	F	H	H	CF_3	CF_3	Br
I-216	F	H	H	CF_3	C_2F_5	OH
I-217	F	H	H	CF_3	C_2F_5	Cl
I-21B	F	H	H	CF_3	C_2F_5	Br
I-219	Cl	H	H	CF_3	F	OH
I-220	Cl	H	H	CF_3	F	Cl
I-221	Cl	H	H	CF_3	F	Br
I-222	Cl	H	H	CF_3	CF_3	OH
I-223	Cl	H	H	CF_3	CF_3	Cl
I-224	Cl	H	H	CF_3	CF_3	Br
I-225	Cl	H	H	CF_3	C_2F_5	OH
I-226	Cl	H	H	CF_3	C_2F_5	Cl
I-227	Cl	H	H	CF_3	C_2F_5	Br
I-228	H	H	Me	CF_3	F	OH
I-229	H	H	Me	CF_3	F	Cl
I-230	H	H	Me	CF_3	F	Br

(continued)

Comp. No.	X_1a	R_1a	R_2a	R_a	R_b	R_c
I-231	H	H	Me	CF_3	CF_3	OH
I-232	H	H	Me	CF_3	CF_3	Cl
I-233	H	H	Me	CF_3	CF_3	Br
I-239	H	H	Me	CF_3	C_2F_5	OH
I-235	H	H	Me	CF_3	C_2F_5	Cl
I-236	H	H	Me	CF_3	C_2F_5	Br
I-237	F	H	Me	CF_3	F	OH
I-238	F	H	Me	CF_3	F	Cl
I-239	F	H	Me	CF_3	F	Br
I-240	F	H	Me	CF_3	CF_3	OH
I-241	F	H	Me	CF_3	CF_3	Cl
I-242	F	H	Me	CF_3	CF_3	Br
I-243	F	H	Me	CF_3	C_2F_5	OH
I-244	F	H	Me	CF_3	C_2F_5	Cl
I-245	F	H	Me	CF_3	C_2F_5	Br
I-246	Cl	H	Me	CF_3	F	OH
I-247	Cl	H	Me	CF_3	F	Cl
I-248	Cl	H	Me	CF_3	F	Br
I-249	Cl	H	Me	CF_3	CF_3	OH
I-250	Cl	H	Me	CF_3	CF_3	Cl
I-251	Cl	H	Me	CF_3	CF_3	Br
I-252	Cl	H	Me	CF_3	c_2F_5	OH
I-253	Cl	H	Me	CF_3	C_2F_5	Cl
I-254	Cl	H	Me	CF_3	C_2F_5	Br
I-255	H	Me	H	CF_3	F	OH
I-256	H	Me	H	CF_3	F	Cl
I-257	H	Me	H	CF_3	F	Br
I-258	H	Me	H	CF_3	CF_3	OH
I-259	H	Me	H	CF_3	CF_3	Cl
I-260	H	Me	H	CF_3	CF_3	Br
I-261	H	Me	H	CF_3	C_2F_5	OH
I-262	H	Me	H	CF_3	C_2F_5	Cl
I-263	H	Me	H	CF_3	C_2F_5	Br
I-264	F	Me	H	CF_3	F	OH
I-265	F	Me	H	CF_3	F	Cl
I-266	F	Me	H	CF_3	F	Br
I-267	F	Me	H	CF_3	CF_3	OH
I-268	F	Me	H	CF_3	CF_3	Cl

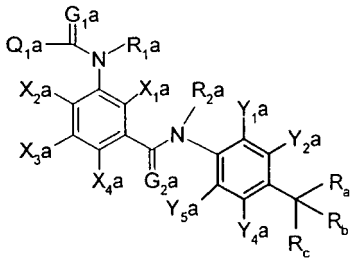
(continued)

Comp. No.	X_1a	R_1a	R_2a	R_a	R_b	R_c
I-269	F	Me	H	CF_3	CF_3	Br
I-270	F	Me	H	CF_3	C_2F_5	OH
I-271	F	Me	H	CF_3	C_2F_5	Cl
I-272	F	Me	H	CF_3	C_2F_5	Br
I-273	Cl	Me	H	CF_3	F	OH
I-274	Cl	Me	H	CF_3	F	Cl
I-275	Cl	Me	H	CF_3	F	Br
I-276	Cl	Me	H	CF_3	CF_3	OH
I-277	Cl	Me	H	CF_3	CF_3	Cl
I-278	Cl	Me	H	CF_3	CF_3	Br
I-279	Cl	Me	H	CF_3	C_2F_5	OH
I-280	Cl	Me	H	CF_3	C_2F_5	Cl
I-281	Cl	Me	H	CF_3	C_2F_5	Br
I-282	H	Me	Me	CF_3	F	OH
I-283	H	Me	Me	CF_3	F	Cl
I-284	H	Me	Me	CF_3	F	Br
I-285	H	Me	Me	CF_3	CF_3	OH
I-286	H	Me	Me	CF_3	CF_3	Cl
I-287	H	Me	Me	CF_3	CF_3	Br
I-288	H	Me	Me	CF_3	C_2F_5	OH
I-289	H	Me	Me	CF_3	C_2F_5	Cl
I-290	H	Me	Me	CF_3	C_2F_5	Br
I-291	F	Me	Me	CF_3	F	OH
I-292	F	Me	Me	CF_3	F	Cl
I-293	F	Me	Me	CF_3	F	Br
I-294	F	Me	Me	CF_3	CF_3	OH
I-295	F	Me	Me	CF_3	CF_3	Cl
I-296	F	Me	Me	CF_3	CF_3	Br
I-297	F	Me	Me	CF_3	C_2F_5	OH
I-298	F	Me	Me	CF_3	C_2F_5	Cl
I-299	F	Me	Me	CF_3	C_2F_5	Br
I-300	Cl	Me	Me	CF_3	F	OH
I-301	Cl	Me	Me	CF_3	F	Cl
I-302	Cl	Me	Me	CF_3	F	Br
I-303	Cl	Me	Me	CF_3	CF_3	OH
I-304	Cl	Me	Me	CF_3	CF_3	Cl
I-305	Cl	Me	Me	CF_3	CF_3	Br
I-306	Cl	Me	Me	CF_3	C_2F_5	OH

(continued)

Comp. No.	X_1a	R_1a	R_2a	R_a	R_b	R_c
I-307	Cl	Me	Me	CF_3	C_2F_5	Cl
I-308	Cl	Me	Me	CF_3	C_2F_5	Br

[Table 10]



(X_2a, X_3a, X_4a, Y_2a, Y_4a = a hydrogen atom, G_1a, G_2a = an oxygen atom, R_a = a trifluoromethyl group)

Comp. No.	Q_1a	X_1a	R_1a	R_2a	Y_1a	Y_5a	R_b	R_c
I-351	phenyl	H	H	H	H	H	CF_3	OH
I-352	2-methylphenyl	H	H	H	H	H	CF_3	OH
I-353	3-methylphenyl	H	H	H	H	H	CF_3	OH
I-354	4-methylphenyl	H	H	H	H	H	CF_3	OH
I-355	2,3-dimethylphenyl	H	H	H	H	H	CF_3	OH
I-356	2,9,6-trimethylphenyl	H	H	H	H	H	CF_3	OH
I-357	4-ethylphenyl	H	H	H	H	H	CF_3	OH
I-358	2-fluorophenyl	H	H	H	H	H	CF_3	OH
I-359	3-fluorophenyl	H	H	H	H	H	CF_3	OH
I-360	4-fluorophenyl	H	H	H	H	H	CF_3	OH
I-361	2-chlorophenyl	H	H	H	H	H	CF_3	OH
I-362	3-chlorophenyl	H	H	H	H	H	CF_3	OH
I-363	4-chlorophenyl	H	H	H	H	H	CF_3	OH
I-364	2-bromophenyl	H	H	H	H	H	CF_3	OH
I-365	4-bromophenyl	H	H	H	H	H	CF_3	OH
I-366	2-iodophenyl	H	H	H	H	H	CF_3	OH
I-367	3-iodophenyl	H	H	H	H	H	CF_3	OH
I-368	4-iodophenyl	H	H	H	H	H	CF_3	OH
I-369	3-cyanophenyl	H	H	H	H	H	CF_3	OH
I-370	4-cyanophenyl	H	H	H	H	H	CF_3	OH
I-371	2-nitrophenyl	H	H	H	H	H	CF_3	OH
I-372	3-nitrophenyl	H	H	H	H	H	CF_3	OH
I-373	4-nitrophenyl	H	H	H	H	H	CF_3	OH
I-374	2-trifluoromethylphenyl	H	H	H	H	H	CF_3	OH
I-375	4-trifluoromethylphenyl	H	H	H	H	H	CF_3	OH

(continued)

Comp. No.	Q_1a	X_1a	R_1a	R_2a	Y_1a	Y_5a	R_b	R_c
I-376	4-trifluoromethoxyphenyl	H	H	H	H	H	CF_3	OH
I-377	2,3-difluorophenyl	H	H	H	H	H	CF_3	OH
I-378	2,4-difluorophenyl	H	H	H	H	H	CF_3	OH
I-379	2,5-difluorophenyl	H	H	H	H	H	CF_3	OH
I-380	2,6-difluorophenyl	H	H	H	H	H	CF_3	OH
I-381	2,4-dichlorophenyl	H	H	H	H	H	CF_3	OH
I-382	2,6-dichlorophenyl	H	H	H	H	H	CF_3	OH
I-383	3,4-dichlorophenyl	H	H	H	H	H	CF_3	OH
I-384	4-fluoro-3-nitrophenyl	H	H	H	H	H	CF_3	OH
I-385	5-fluoro-2-nitrophenyl	H	H	H	H	H	CF_3	OH
I-386	2-chloro-4-nitrophenyl	H	H	H	H	H	CF_3	OH
I-387	2-chloro-4-fluorophenyl	H	H	H	H	H	CF_3	OH
I-388	3-chloro-4-fluorophenyl	H	H	H	H	H	CF_3	OH
I-389	2-chloro-6-fluorophenyl	H	H	H	H	H	CF_3	OH
I-390	4-chloro-2-fluorophenyl	H	H	H	H	H	CF_3	OH
I-391	4-chloro-2-nitrophenyl	H	H	H	H	H	CF_3	OH
I-392	2,3,6-trifluorophenyl	H	H	H	H	H	CF_3	OH
I-393	2,3,4,5,6-pentafluorophenyl	H	H	H	H	H	CF_3	OH
I-394	pyridin-2-yl	H	H	H	H	H	CF_3	OH
I-395	pyridin-3-yl	H	H	H	H	H	CF_3	OH
I-396	2-fluoropyridin-3-yl	H	H	H	H	H	CF_3	OH
I-397	2-chloropyridin-3-yl	H	H	H	H	H	CF_3	OH
I-398	4-chloropyridin-3-yl	H	H	H	H	H	CF_3	OH
I-399	2-chloropyridin-5-yl	H	H	H	H	H	CF_3	OH
I-400	2-methylthiopyridin-3-yl	H	H	H	H	H	CF_3	OH
I-401	2,6-dichloropyridin-3-yl	H	H	H	H	H	CF_3	OH
I-402	2,6-dichloropyridin-4-yl	H	H	H	H	H	CF_3	OH
I-403	pyrazin-2-yl	H	H	H	H	H	CF_3	OH
I-404	furan-2-yl	H	H	H	H	H	CF_3	OH
I-405	thiophen-2-yl	H	H	H	H	H	CF_3	OH
I-406	thiophen-3-yl	H	H	H	H	H	CF_3	OH
I-407	4-methoxyphenyl	H	H	H	H	H	CF_3	OH
I-408	3,4,5-trimethoxyphenyl	H	H	H	H	H	CF_3	OH
I-409	3-methoxyphenyl	H	H	H	H	H	CF_3	OH
I-410	2-methoxyphenyl	H	H	H	H	H	CF_3	OH
I-411	3,5-dimethoxyphenyl	H	H	H	H	H	CF_3	OH
I-412	2,6-dimethoxyphenyl	H	H	H	H	H	CF_3	OH
I-413	4-ethoxyphenyl	H	H	H	H	H	CF_3	OH

(continued)

Comp. No.	Q_1a	X_1a	R_1a	R_2a	Y_1a	Y_5a	R_b	R_c
I-414	2-(4-trifluoromethylphenyl)phenyl	H	H	H	H	H	CF_3	OH
I-415	1-phenyl-5-trifluoromethylpyrazol-4-yl	H	H	H	H	H	CF_3	OH
I-416	5-methylisoxazol-3-yl	H	H	H	H	H	CF_3	OH
I-417	4-methyl-1,2,3-thiadiazol-5-yl	H	H	H	H	H	CF_3	OH
I-418	pyrrole-2-yl	H	H	H	H	H	CF_3	OH
I-419	phenyl	H	H	H	H	H	CF_3	Cl
I-420	2-methylphenyl	H	H	H	H	H	CF_3	Cl
I-421	4-methylphenyl	H	H	H	H	H	CF_3	Cl
I-422	2-fluorophenyl	H	H	H	H	H	CF_3	Cl
I-423	3-fluorophenyl	H	H	H	H	H	CF_3	Cl
I-424	4-fluorophenyl	H	H	H	H	H	CF_3	Cl
I-425	2-chlorophenyl	H	H	H	H	H	CF_3	Cl
I-426	4-chlorophenyl	H	H	H	H	H	CF_3	Cl
I-427	2-bromophenyl	H	H	H	H	H	CF_3	Cl
I-428	2-iodophenyl	H	H	H	H	H	CF_3	Cl
I-429	3-cyanophenyl	H	H	H	H	H	CF_3	Cl
I-430	4-cyanophenyl	H	H	H	H	H	CF_3	Cl
I-431	2-nitrophenyl	H	H	H	H	H	CF_3	Cl
I-432	3-nitrophenyl	H	H	H	H	H	CF_3	Cl
I-433	4-nitrophenyl	H	H	H	H	H	CF_3	Cl
I-434	2-trifluoromethylphenyl	H	H	H	H	H	CF_3	Cl
I-435	4-trifluoromethylphenyl	H	H	H	H	H	CF_3	Cl
I-436	4-trifluoromethoxyphenyl	H	H	H	H	H	CF_3	Cl
I-437	2,3-difluorophenyl	H	H	H	H	H	CF_3	Cl
I-438	2,4-difluorophenyl	H	H	H	H	H	CF_3	Cl
I-439	2,5-difluorophenyl	H	H	H	H	H	CF_3	Cl
I-440	2,6-difluorophenyl	H	H	H	H	H	CF_3	Cl
I-441	2,4-dichlorophenyl	H	H	H	H	H	CF_3	Cl
I-442	2,6-dichlorophenyl	H	H	H	H	H	CF_3	Cl
1-443	3,4-dichlorophenyl	H	H	H	H	H	CF_3	Cl
I-444	2-chloro-4-nitrophenyl	H	H	H	H	H	CF_3	Cl
I-445	2-chloro-4-fluorophenyl	H	H	H	H	H	CF_3	Cl
I-446	2-chloro-6-fluorophenyl	H	H	H	H	H	CF_3	Cl
I-447	4-chloro-2-fluorophenyl	H	H	H	H	H	CF_3	Cl
I-448	4-chloro-2-nitrophenyl	H	H	H	H	H	CF_3	Cl
I-449	2,3,6-trifluorophenyl	H	H	H	H	H	CF_3	Cl
I-450	pyridin-2-yl	H	H	H	H	H	CF_3	Cl
I-451	pyridin-3-yl	H	H	H	H	H	CF_3	Cl

(continued)

Comp. No.	Q_1a	X_1a	R_1a	R_2a	Y_1a	Y_5a	R_b	R_c
I-452	2-fluoropyridin-3-yl	H	H	H	H	H	CF_3	Cl
I-453	2-chloropyridin-3-yl	H	H	H	H	H	CF_3	Cl
I-454	2-chloropyridin-5-yl	H	H	H	H	H	CF_3	Cl
I-455	2-methylthiopyridin-3-yl	H	H	H	H	H	CF_3	Cl
I-456	pyrazin-2-yl	H	H	H	H	H	CF_3	Cl
I-457	furan-2-yl	H	H	H	H	H	CF_3	Cl
I-458	thiophen-2-yl	H	H	H	H	H	CF_3	Cl
I-459	phenyl	F	H	H	H	H	CF_3	OH
I-460	2-methylphenyl	F	H	H	H	H	CF_3	OH
I-461	4-methylphenyl	F	H	H	H	H	CF_3	OH
I-462	2-fluorophenyl	F	H	H	H	H	CF_3	OH
I-463	3-fluorophenyl	F	H	H	H	H	CF_3	OH
I-464	4-fluorophenyl	F	H	H	H	H	CF_3	OH
I-465	2-chlorophenyl	F	H	H	H	H	CF_3	OH
I-466	4-chlorophenyl	F	H	H	H	H	CF_3	OH
I-467	2-bromophenyl	F	H	H	H	H	CF_3	OH
I-468	2-iodophenyl	F	H	H	H	H	CF_3	OH
I-469	3-cyanophenyl	F	H	H	H	H	CF_3	OH
I-470	4-cyanophenyl	F	H	H	H	H	CF_3	OH
I-471	2-nitrophenyl	F	H	H	H	H	CF_3	OH
I-472	3-nitrophenyl	F	H	H	H	H	CF_3	OH
I-473	4-nitrophenyl	F	H	H	H	H	CF_3	OH
I-474	2-trifluoromethylphenyl	F	H	H	H	H	CF_3	OH
I-475	4-trifluoromethylphenyl	F	H	H	H	H	CF_3	OH
I-476	4-trifluoromethoxyphenyl	F	H	H	H	H	CF_3	OH
I-477	2,3-difluorophenyl	F	H	H	H	H	CF_3	OH
I-478	2,4-difluorophenyl	F	H	H	H	H	CF_3	OH
I-479	2,5-difluorophenyl	F	H	H	H	H	CF_3	OH
I-480	2,6-difluorophenyl	F	H	H	H	H	CF_3	OH
I-481	2,4-dichlorophenyl	F	H	H	H	H	CF_3	OH
I-482	2,6-dichlorophenyl	F	H	H	H	H	CF_3	OH
I-483	3,4-dichlorophenyl	F	H	H	H	H	CF_3	OH
I-484	2-chloro-4-nitrophenyl	F	H	H	H	H	CF_3	OH
I-485	2-chloro-4-fluorophenyl	F	H	H	H	H	CF_3	OH
I-486	2-chloro-6-fluorophenyl	F	H	H	H	H	CF_3	OH
I-487	4-chloro-2-fluorophenyl	F	H	H	H	H	CF_3	OH
I-488	4-chloro-2-nitrophenyl	F	H	H	H	H	CF_3	OH
I-489	2,3,6-trifluorophenyl	F	H	H	H	H	CF_3	OH

(continued)

Comp. No.	Q_1a	X_1a	R_1a	R_2a	Y_1a	Y_5a	R_b	R_c
I-490	pyridin-2-yl	F	H	H	H	H	CF_3	OH
I-491	pyridin-3-yl	F	H	H	H	H	CF_3	OH
I-492	2-fluoropyridin-3-yl	F	H	H	H	H	CF_3	OH
I-493	2-chloropyridin-3-yl	F	H	H	H	H	CF_3	OH
I-494	2-chloropyridin-5-yl	F	H	H	H	H	CF_3	OH
I-495	2-methylthiopyridin-3-yl	F	H	H	H	H	CF_3	OH
I-496	pyrazin-2-yl	F	H	H	H	H	CF_3	OH
I-497	furan-2-yl	F	H	H	H	H	CF_3	OH
I-498	thiophen-2-yl	F	H	H	H	H	CF_3	OH
I-499	phenyl	F	H	H	H	H	CF_3	Cl
I-500	2-methylphenyl	F	H	H	H	H	CF_3	Cl
I-501	4-methylphenyl	F	H	H	H	H	CF_3	Cl
I-502	2-fluorophenyl	F	H	H	H	H	CF_3	Cl
I-503	3-fluorophenyl	F	H	H	H	H	CF_3	Cl
I-509	4-fluorophenyl	F	H	H	H	H	CF_3	Cl
I-505	2-chlorophenyl	F	H	H	H	H	CF_3	Cl
I-506	4-chlorophenyl	F	H	H	H	H	CF_3	Cl
I-507	2-bromophenyl	F	H	H	H	H	CF_3	Cl
I-508	2-iodophenyl	F	H	H	H	H	CF_3	Cl
I-509	3-cyanophenyl	F	H	H	H	H	CF_3	Cl
I-510	4-cyanophenyl	F	H	H	H	H	CF_3	Cl
I-511	2-nitrophenyl	F	H	H	H	H	CF_3	Cl
I-512	3-nitrophenyl	F	H	H	H	H	CF_3	Cl
I-513	4-nitrophenyl	F	H	H	H	H	CF_3	Cl
I-519	2-trifluoromethylphenyl	F	H	H	H	H	CF_3	Cl
I-515	4-trifluoromethylphenyl	F	H	H	H	H	CF_3	Cl
I-516	4-trifluoromethoxyphenyl	F	H	H	H	H	CF_3	Cl
I-517	2,3-difluorophenyl	F	H	H	H	H	CF_3	Cl
I-518	2,4-difluorophenyl	F	H	H	H	H	CF_3	Cl
I-519	2,5-difluorophenyl	F	H	H	H	H	CF_3	Cl
I-520	2,6-difluorophenyl	F	H	H	H	H	CF_3	Cl
I-521	2,4-dichlorophenyl	F	H	H	H	H	CF_3	Cl
I-522	2,6-dichlorophenyl	F	H	H	H	H	CF_3	Cl
I-523	3,4-dichlorophenyl	F	H	H	H	H	CF_3	Cl
I-524	2-chloro-4-nitrophenyl	F	H	H	H	H	CF_3	Cl
I-525	2-chloro-4-fluorophenyl	F	H	H	H	H	CF_3	Cl
I-526	2-chloro-6-fluorophenyl	F	H	H	H	H	CF_3	Cl
I-527	4-chloro-2-fluorophenyl	F	H	H	H	H	CF_3	Cl

(continued)

Comp. No.	Q_1a	X_1a	R_1a	R_2a	Y_1a	Y_5a	R_b	R_c
I-528	4-chloro-2-nitrophenyl	F	H	H	H	H	CF_3	Cl
I-529	2,3,6-trifluorophenyl	F	H	H	H	H	CF_3	Cl
I-530	pyridin-2-yl	F	H	H	H	H	CF_3	Cl
I-531	pyridin-3-yl	F	H	H	H	H	CF_3	Cl
I-532	2-fluoropyridin-3-yl	F	H	H	H	H	CF_3	Cl
I-533	2-chloropyridin-3-yl	F	H	H	H	H	CF_3	Cl
I-534	2-chloropyridin-5-yl	F	H	H	H	H	CF_3	Cl
I-535	2-methylthiopyridin-3-yl	F	H	H	H	H	CF_3	Cl
I-536	pyrazin-2-yl	F	H	H	H	H	CF_3	Cl
I-537	furan-2-yl	F	H	H	H	H	CF_3	Cl
I-538	thiophen-2-yl	F	H	H	H	H	CF_3	Cl
I-539	phenyl	H	Me	H	H	H	CF_3	OH
I-540	2-methylphenyl	H	Me	H	H	H	CF_3	OH
I-541	4-methylphenyl	H	Me	H	H	H	CF_3	OH
I-542	2-fluorophenyl	H	Me	H	H	H	CF_3	OH
I-543	3-fluorophenyl	H	Me	H	H	H	CF_3	OH
I-544	4-fluorophenyl	H	Me	H	H	H	CF_3	OH
I-545	2-chlorophenyl	H	Me	H	H	H	CF_3	OH
I-546	4-chlorophenyl	H	Me	H	H	H	CF_3	OH
I-547	2-bromophenyl	H	Me	H	H	H	CF_3	OH
I-548	2-iodophenyl	H	Me	H	H	H	CF_3	OH
I-549	3-cyanophenyl	H	Me	H	H	H	CF_3	OH
I-550	4-cyanophenyl	H	Me	H	H	H	CF_3	OH
I-551	2-nitrophenyl	H	Me	H	H	H	CF_3	OH
I-552	3-nitrophenyl	H	Me	H	H	H	CF_3	OH
I-553	4-nitrophenyl	H	Me	H	H	H	CF_3	OH
I-554	2-trifluoromethylphenyl	H	Me	H	H	H	CF_3	OH
I-555	4-trifluoromethylphenyl	H	Me	H	H	H	CF_3	OH
I-556	4-trifluoromethoxyphenyl	H	Me	H	H	H	CF_3	OH
I-557	2,3-difluorophenyl	H	Me	H	H	H	CF_3	OH
I-558	2,4-difluorophenyl	H	Me	H	H	H	CF_3	OH
I-559	2,5-difluorophenyl	H	Me	H	H	H	CF_3	OH
I-560	2,6-difluorophenyl	H	Me	H	H	H	CF_3	OH
I-561	2,4-dichlorophenyl	H	Me	H	H	H	CF_3	OH
I-562	2,6-dichlorophenyl	H	Me	H	H	H	CF_3	OH
I-563	3,4-dichlorophenyl	H	Me	H	H	H	CF_3	OH
I-564	2-chloro-4-nitrophenyl	H	Me	H	H	H	CF_3	OH
I-565	2-chloro-4-fluorophenyl	H	Me	H	H	H	CF_3	OH

(continued)

Comp. No.	Q_1a	X_1a	R_1a	R_2a	Y_1a	Y_5a	R_b	R_c
I-566	2-chloro-6-fluorophenyl	H	Me	H	H	H	CF_3	OH
I-567	4-chloro-2-fluorophenyl	H	Me	H	H	H	CF_3	OH
I-568	4-chloro-2-nitrophenyl	H	Me	H	H	H	CF_3	OH
I-569	2,3,6-trifluorophenyl	H	Me	H	H	H	CF_3	OH
I-570	pyridin-2-yl	H	Me	H	H	H	CF_3	OH
I-571	pyridin-3-yl	H	Me	H	H	H	CF_3	OH
I-572	2-fluoropyridin-3-yl	H	Me	H	H	H	CF_3	OH
I-573	2-chloropyridin-3-yl	H	Me	H	H	H	CF_3	OH
I-574	2-chloropyridin-5-yl	H	Me	H	H	H	CF_3	OH
I-575	2-methylthiopyridin-3-yl	H	Me	H	H	H	CF_3	OH
I-576	pyrazin-2-yl	H	Me	H	H	H	CF_3	OH
I-577	furan-2-yl	H	Me	H	H	H	CF_3	OH
I-578	thiophen-2-yl	H	Me	H	H	H	CF_3	OH
I-579	phenyl	F	Me	H	H	H	CF_3	Cl
I-580	2-methylphenyl	F	Me	H	H	H	CF_3	Cl
I-581	4-methylphenyl	F	Me	H	H	H	CF_3	Cl
I-582	2-fluorophenyl	F	Me	H	H	H	CF_3	Cl
I-583	3-fluorophenyl	F	Me	H	H	H	CF_3	Cl
I-SB9	4-fluorophenyl	F	Me	H	H	H	CF_3	Cl
I-585	2-chlorophenyl	F	Me	H	H	H	CF_3	Cl
I-586	4-chlorophenyl	F	Me	H	H	H	CF_3	Cl
I-587	2-bromophenyl	F	Me	H	H	H	CF_3	Cl
I-588	2-iodophenyl	F	Me	H	H	H	CF_3	Cl
I-589	3-cyanophenyl	F	Me	H	H	H	CF_3	Cl
I-590	4-cyanophenyl	F	Me	H	H	H	CF_3	Cl
I-591	2-nitrophenyl	F	Me	H	H	H	CF_3	Cl
I-592	3-nitrophenyl	F	Me	H	H	H	CF_3	Cl
I-593	4-nitrophenyl	F	Me	H	H	H	CF_3	Cl
I-594	2-trifluoromethylphenyl	F	Me	H	H	H	CF_3	Cl
I-595	4-trifluoromethylphenyl	F	Me	H	H	H	CF_3	Cl
I-596	4-trifluoromethoxyphenyl	F	Me	H	H	H	CF_3	Cl
I-597	2,3-difluorophenyl	F	Me	H	H	H	CF_3	Cl
I-598	2,4-difluorophenyl	F	Me	H	H	H	CF_3	Cl
I-599	2,5-difluorophenyl	F	Me	H	H	H	CF_3	Cl
I-600	2,6-difluorophenyl	F	Me	H	H	H	CF_3	Cl
I-601	2,4-dichlorophenyl	F	Me	H	H	H	CF_3	Cl
I-602	2,6-dichlorophenyl	F	Me	H	H	H	CF_3	Cl
I-603	3,4-dichlorophenyl	F	Me	H	H	H	CF_3	Cl

(continued)

Comp. No.	Q_1a	X_1a	R_1a	R_2a	Y_1a	Y_5a	R_b	R_c
I-604	2-chloro-4-nitrophenyl	F	Me	H	H	H	CF_3	Cl
I-605	2-chloro-4-fluorophenyl	F	Me	H	H	H	CF_3	Cl
I-606	2-chloro-6-fluorophenyl	F	Me	H	H	H	CF_3	Cl
I-607	4-chloro-2-fluorophenyl	F	Me	H	H	H	CF_3	Cl
I-608	4-chloro-2-nitrophenyl	F	Me	H	H	H	CF_3	Cl
I-609	2,3,6-trifluorophenyl	F	Me	H	H	H	CF_3	Cl
I-610	pyridin-2-yl	F	Me	H	H	H	CF_3	Cl
I-611	pyridin-3-yl	F	Me	H	H	H	CF_3	Cl
I-612	2-fluoropyridin-3-yl	F	Me	H	H	H	CF_3	Cl
I-613	2-chloropyridin-3-yl	F	Me	H	H	H	CF_3	Cl
I-614	2-chloropyridin-5-yl	F	Me	H	H	H	CF_3	Cl
I-615	2-methylthiopyridin-3-yl	F	Me	H	H	H	CF_3	Cl
I-616	pyrazin-2-yl	F	Me	H	H	H	CF_3	Cl
I-617	furan-2-yl	F	Me	H	H	H	CF_3	Cl
I-618	thiophen-2-yl	F	Me	H	H	H	CF_3	Cl
I-619	phenyl	H	Me	Me	H	H	CF_3	OH
I-620	2-methylphenyl	H	Me	Me	H	H	CF_3	OH
I-621	4-methylphenyl	H	Me	Me	H	H	CF_3	OH
I-622	2-fluorophenyl	H	Me	Me	H	H	CF_3	OH
I-623	3-fluorophenyl	H	Me	Me	H	H	CF_3	OH
I-624	4-fluorophenyl	H	Me	Me	H	H	CF_3	OH
I-625	2-chlocophenyl	H	Me	Me	H	H	CF_3	OH
I-626	4-chlorophenyl	H	Me	Me	H	H	CF_3	OH
I-627	2-bromophenyl	H	Me	Me	H	H	CF_3	OH
I-628	2-iodophenyl	H	Me	Me	H	H	CF_3	OH
I-629	3-cyanophenyl	H	Me	Me	H	H	CF_3	OH
I-630	4-cyanophenyl	H	Me	Me	H	H	CF_3	OH
I-631	2-nitrophenyl	H	Me	Me	H	H	CF_3	OH
I-632	3-nitrophenyl	H	Me	Me	H	H	CF_3	OH
I-633	4-nitrophenyl	H	Me	Me	H	H	CF_3	OH
I-634	2-trifluoromethylphenyl	H	Me	Me	H	H	CF_3	OH
I-635	4-trifluoromethylphenyl	H	Me	Me	H	H	CF_3	OH
I-636	4-trifluoromethoxyphenyl	H	Me	Me	H	H	CF_3	OH
I-637	2,3-difluorophenyl	H	Me	Me	H	H	CF_3	OH
I-638	2,4-difluorophenyl	H	Me	Me	H	H	CF_3	OH
I-639	2,5-difluorophenyl	H	Me	Me	H	H	CF_3	OH
I-690	2,6-difluorophenyl	H	Me	Me	H	H	CF_3	OH
I-691	2,4-dichlorophenyl	H	Me	Me	H	H	CF_3	OH

(continued)

Comp. No.	Q_1a	X_1a	R_1a	R_2a	Y_1a	Y_5a	R_b	R_c
I-642	2,6-dichlorophenyl	H	Me	Me	H	H	CF_3	OH
I-643	3,4-dichlorophenyl	H	Me	Me	H	H	CF_3	OH
I-699	2-chloro-4-nitrophenyl	H	Me	Me	H	H	CF_3	OH
I-645	2-chloro-4-fluorophenyl	H	Me	Me	H	H	CF_3	OH
I-646	2-chloro-6-fluorophenyl	H	Me	Me	H	H	CF_3	OH
I-647	4-chloro-2-fluorophenyl	H	Me	Me	H	H	CF_3	OH
I-698	4-chloro-2-nitrophenyl	H	Me	Me	H	H	CF_3	OH
I-649	2,3,6-trifluorophenyl	H	Me	Me	H	H	CF_3	OH
I-650	pyridin-2-yl	H	Me	Me	H	H	CF_3	OH
I-651	pyridin-3-yl	H	Me	Me	H	H	CF_3	OH
I-652	2-fluoropyridin-3-yl	H	Me	Me	H	H	CF_3	OH
I-653	2-chloropyridin-3-yl	H	Me	Me	H	H	CF_3	OH
I-654	2-chloropyridin-5-yl	H	Me	Me	H	H	CF_3	OH
I-655	2-methylthiopyridin-3-yl	H	Me	Me	H	H	CF_3	OH
I-656	pyrazin-2-yl	H	Me	Me	H	H	CF_3	OH
I-657	furan-2-yl	H	Me	Me	H	H	CF_3	OH
I-658	thiophen-2-yl	H	Me	Me	H	H	CF_3	OH
I-659	phenyl	F	Me	Me	H	H	CF_3	Cl
I-660	2-methylphenyl	F	Me	Me	H	H	CF_3	Cl
I-661	4-methylphenyl	F	Me	Me	H	H	CF_3	Cl
I-662	2-fluorophenyl	F	Me	Me	H	H	CF_3	Cl
I-663	3-fluorophenyl	F	Me	Me	H	H	CF_3	Cl
I-664	4-fluorophenyl	F	Me	Me	H	H	CF_3	Cl
I-665	2-chlorophenyl	F	Me	Me	H	H	CF_3	Cl
I-666	4-chlorophenyl	F	Me	Me	H	H	CF_3	Cl
I-667	2-bromophenyl	F	Me	Me	H	H	CF_3	Cl
I-668	2-iodophenyl	F	Me	Me	H	H	CF_3	Cl
I-669	3-cyanophenyl	F	Me	Me	H	H	CF_3	Cl
I-670	4-cyanophenyl	F	Me	Me	H	H	CF_3	Cl
I-671	2-nitrophenyl	F	Me	Me	H	H	CF_3	Cl
I-672	3-nitrophenyl	F	Me	Me	H	H	CF_3	Cl
I-673	4-nitrophenyl	F	Me	Me	H	H	CF_3	Cl
I-674	2-trifluoromethylphenyl	F	Me	Me	H	H	CF_3	Cl
I-675	4-trifluoromethylphenyl	F	Me	Me	H	H	CF_3	Cl
I-676	4-trifluoromethoxyphenyl	F	Me	Me	H	H	CF_3	Cl
I-677	2,3-difluorophenyl	F	Me	Me	H	H	CF_3	Cl
I-678	2,4-difluorophenyl	F	Me	Me	H	H	CF_3	Cl
I-679	2,5-difluorophenyl	F	Me	Me	H	H	CF_3	Cl

(continued)

Comp. No.	Q_1a	X_1a	R_1a	R_2a	Y_1a	Y_5a	R_b	R_c
I-680	2,6-difluorophenyl	F	Me	Me	H	H	CF_3	Cl
I-681	2,4-dichlorophenyl	F	Me	Me	H	H	CF_3	Cl
I-682	2,6-dichlorophenyl	F	Me	Me	H	H	CF_3	Cl
I-683	3,4-dichlorophenyl	F	Me	Me	H	H	CF_3	Cl
I-684	2-chloro-4-nitrophenyl	F	Me	Me	H	H	CF_3	Cl
I-685	2-chloro-4-fluorophenyl	F	Me	Me	H	H	CF_3	Cl
I-686	2-chloro-6-fluorophenyl	F	Me	Me	H	H	CF_3	Cl
I-687	4-chloro-2-fluorophenyl	F	Me	Me	H	H	CF_3	Cl
I-688	4-chloro-2-nitrophenyl	F	Me	Me	H	H	CF_3	Cl
I-689	2,3,6-trifluorophenyl	F	Me	Me	H	H	CF_3	Cl
I-690	pyridin-2-yl	F	Me	Me	H	H	CF_3	Cl
I-691	pyridin-3-yl	F	Me	Me	H	H	CF_3	Cl
I-692	2-fluoropyridin-3-yl	F	Me	Me	H	H	CF_3	Cl
I-693	2-chloropyridin-3-yl	F	Me	Me	H	H	CF_3	Cl
I-699	2-chloropyridin-5-yl	F	Me	Me	H	H	CF_3	Cl
I-695	2-methylthiopyridin-3-yl	F	Me	Me	H	H	CF_3	Cl
I-696	pyrazin-2-yl	F	Me	Me	H	H	CF_3	Cl
I-697	furan-2-yl	F	Me	Me	H	H	CF_3	Cl
I-698	thiophen-2-yl	F	Me	Me	H	H	CF_3	Cl
I-699	2-fluorophenyl	H	H	H	$MeSO_2$	Br	CF_3	OH
I-700	2-fluorophenyl	H	H	H	$MeSO_2$	Br	CF_3	Cl
I-701	2-fluorophenyl	F	H	H	$MeSO_2$	Br	CF_3	OH
I-702	2-fluorophenyl	F	H	H	$MeSO_2$	Br	CF_3	Cl
I-703	2-fluorophenyl	H	Me	H	$MeSO_2$	Br	CF_3	OH
I-704	2-fluorophenyl	H	Me	H	$MeSO_2$	Br	CF_3	Cl
I-705	2-fluorophenyl	F	Me	H	$MeSO_2$	Br	CF_3	OH
I-706	2-fluorophenyl	F	Me	H	$MeSO_2$	Br	CF_3	Cl
I-707	2-fluorophenyl	H	Me	Me	$MeSO_2$	Br	CF_3	OH
I-708	2-fluorophenyl	H	Me	Me	$MeSO_2$	Br	CF_3	Cl
I-709	2-fluorophenyl	F	Me	Me	$MeSO_2$	Br	CF_3	OH
I-710	2-fluorophenyl	F	Me	Me	$MeSO_2$	Br	CF_3	Cl
I-711	2-fluorophenyl	H	H	H	n-Pr	I	CF_3	OH
I-712	2-fluorophenyl	H	H	H	n-Pr	I	CF_3	Cl
I-713	2-fluorophenyl	F	H	H	n-Pr	I	CF_3	OH
I-719	2-fluorophenyl	F	H	H	n-Pr	I	CF_3	Cl
I-715	2-fluorophenyl	H	Me	H	n-Pr	I	CF_3	OH
I-716	2-fluorophenyl	H	Me	H	n-Pr	I	CF_3	Cl
I-717	2-fluorophenyl	F	Me	H	n-Pr	I	CF_3	OH

(continued)

Comp. No.	Q_1a	X_1a	R_1a	R_2a	Y_1a	Y_5a	R_b	R_c
I-718	2-fluorophenyl	F	Me	H	n-Pr	I	CF_3	Cl
I-719	2-fluorophenyl	H	Me	Me	n-Pr	I	CF_3	OH
I-720	2-fluorophenyl	H	Me	Me	n-Pr	I	CF_3	Cl
I-721	2-fluorophenyl	F	Me	Me	n-Pr	I	CF_3	OH
I-722	2-fluorophenyl	F	Me	Me	n-Pr	I	CF_3	Cl
I-723	2-fluorophenyl	H	H	H	H	H	C_2F_5	OH
I-729	2-fluorophenyl	H	H	H	H	H	C_2F_5	Cl
I-725	2-fluorophenyl	F	H	H	H	H	C_2F_5	OH
I-726	2-fluorophenyl	F	H	H	H	H	C_2F_5	Cl
I-727	2-fluorophenyl	H	Me	H	H	H	C_2F_5	OH
I-728	2-fluorophenyl	H	Me	H	H	H	C_2F_5	Cl
I-729	2-fluorophenyl	F	Me	H	H	H	C_2F_5	OH
I-730	2-fluorophenyl	F	Me	H	H	H	C_2F_5	Cl
I-731	2-fluorophenyl	H	Me	Me	H	H	C_2F_5	OH
I-732	2-fluorophenyl	H	Me	Me	H	H	C_2F_5	Cl
I-733	2-fluorophenyl	F	Me	Me	H	H	C_2F_5	OH
I-734	2-fluorophenyl	F	Me	Me	H	H	C_2F_5	Cl
I-35	2-fluorophenyl	H	H	H	H	H	CF_3	Br
I-736	2-fluorophenyl	H	H	H	H	H	CF_3	Br
I-737	2-fluorophenyl	E	H	H	H	H	CF_3	Br
I-738	2-fluorophenyl	F	H	H	H	H	CF_3	Br
I-739	2-fluorophenyl	H	Me	H	H	H	CF_3	Br
I-740	2-fluorophenyl	H	Me	H	H	H	CF_3	Br
I-791	2-fluorophenyl	F	Me	H	H	H	CF_3	Br
I-742	2-fluorophenyl	F	Me	H	H	H	CF_3	Br
I-793	2-fluorophenyl	H	Me	Me	H	H	CF_3	Br
I-744	2-fluorophenyl	H	Me	Me	H	H	CF_3	Br
I-745	2-fluorophenyl	F	Me	Me	H	H	CF_3	Br
I-746	2-fluorophenyl	F	Me	Me	H	H	CF_3	Br

[0168] Hereinbelow, Table 11 and Table 12 represent the properties of the compounds represented by Formulae (1), (6), (8), (11) and (13). The ^{1}H-NMR chemical shift values represented therein are based on tetramethylsilane as the internal standard substance, if not described otherwise.

[Table 11]

Comp. No.	^{1}H-NMR (DMSO-d_6, ppm)
1	($CDCl_3$,) δ 2.36(6H, s), 7.36(2H, s), 7.51-7.65(5H, m), 7.73(1H, d, J = 7.8Hz), 7.86(1H, d, J = 7.8Hz), 7.89(2H, d, J = 7.8Hz), 8.01(1H, s), 8.33(1H, s).
2	δ 7.52-7.63(4H, m). 7.77(1H, d, J = 7.BHz), 7.98-8.09(5H, m). 8.39(1H, s), 10.48(1H, s), 10.59(1H, s).

(continued)

Comp. No.	^{1}H-NMR (DMSO-d_6, ppm)
3	δ 7.32-7.39(2H, m), 7.54-7.63(2H, m), 7.67-7.72(1H, m), 7.77(1H, d, J = 7.8Hz), 7.98(1H, d, J = 7.BHz), 8.03(2H, s), 8.34(1H, s), 10.61(1H, s), 10.65(1H, s).
4	δ 7.53-7.63(4H, m), 7.79(1H, d. J = 8.3Hz), 7.99-8.02(2H, m), 8.08(1H, dd, J = 2.0,8.3Hz), 8.17(2H, s), 8.39(1H, d, J = 2.0Hz), 10.50(1H, s), 10.63(1H, s).
5	δ 7.33-7.40(2H, m), 7.54-7.63(2H, m), 7.68-7.72(1H, m), 7.79(1H, d, J = 7.8Hz), 7.99(1H, d, J = 7.8Hz), 8.17(2H, s), 8.35(1H, s). 10.65(1H, s), 10.67(1H, s).
6	δ 7.52-7.62(4H,m), 7.75(1 H.d,J=7.8Hz), 7.91 (2H,s), 7.97(2H,d,J=7.8Hz), 8,04(1H,d,J=7.8Hz),8.36(1H,s), 10.50(1H,s), 10.61(1H,s).
7	δ 7.53-7.64(4H, m), 7.78(1H, d, J = 7.8Hz), 7.99-8.01(2H, m), 8.06(2H, s), 8.09(1H, dd, J = 2.0,7.BHz), 8.39(1H, s), 10.51(1H, s), 10.63(1H, s).
8	δ 7.33-7.40(2H, m), 7.55-7.63(2H, m), 7.68-7.72(1H, m), 7.78(1H, d, J = 7.8Hz). 7.99(1H, d, J = 7.8Hz), 8.05(2H, s), 8.34(1H, s), 10.65(1H, s), 10.69(1H, s).
9	δ 2.29(6H, s), 7.47(2H, s), 7.51-7.62(4H, m), 7.75(1H, d, J = 7.8Hz), 7.97-8.00(2H, m), 8.03-8.06(1H, m), 8.36(1H, s), 10.00(1H, s), 10.45(1H, s).
10	δ 2.37 (6H, s), 7.34 (2H, s), 7.46-7.57 (4H, m), 7.75 (1H, d, J =7.8Hz), 7.98-8.01 (2H, m), 8.12 (1H, d, J =7.3Hz), 8.34 (1H, s), 8.87 (1H, s), 9.66 (1H, s).
11	($CDCl_3$) δ 2.35 (6H, s), 2.52 (3H, s), 7.26-7.31 (2H, m), 7.36 (2H, s), 7.37-7.42 (1H, m), 7.49-7.54 (2H, m), 7.68-7.73 (3H, m), 7.79 (1H, d, J =7.3Hz), 8.30 (1H, s).
12	δ 2.30 (6H, s), 2.41 (3H, s), 7.42-7.48 (4H, m), 7.54 (1H, d, J =7.94Hz), 7.74-7.82 (3H, m), 8.07 (1H, d, J =7.94Hz), 8:35 (1H, s), 9.99 (1H, s), 10.43 (1H, s).
13	δ 2.30 (6H, s), 2.40 (3H, s), 7.35 (2H, d, J =8.3Hz), 7.45 (2H, s), 7.53 (1H, t, J =7.8Hz), 7.74 (1H, d. J =7.81Hz), 7.92 (2H, d, J =8.3Hz), 8.07 (1H, d, J =7.8Hz), 8.36 (1H, s), 9.98 (1H, s), 10.39 (1H, s).
14	δ 1.18 (3H, t, J =7.6Hz). 2.30 (6H, s), 2.76 (2H, q. J =7.6Hz), 7.30-7.37 (2H, m), 7.42-7.46 (4H, m), 7.52 (1H, t, J =8.0Hz), 7.81 (1H, d, J =8.0Hz), 7.96 (1H, d, J =8.0Hz), 8.35 (1H, s), 9.98 (1H, s), 10.56(1H, s).
16	δ 1.22 (3H, t, J =7.6Hz), 2.31 (6H, s), 2.69 (2H, q, J =7.6Hz), 7.39 (2H, d, J =8.3Hz), 7.45 (2H, t, J =7.9Hz), 7.53 (2H, d, J=8.3Hz), 7.74 (1H, d, J =7.9Hz), 7.94 (1H, d, J =8.3Hz), 8.07 (1H, d, J =7.9Hz), 8.36 (1H, s), 9.99 (1H, s), 10.40 (1H, s).
17	δ 2.30 (6H, s), 7.33-7.76 (8H, m), 7.97 (1H, d, J =8.30Hz), 8.30 (1H, s), 10.01 (1H, s), 10.65 (1H, s).
18	δ 2.30 (6H, s), 7.45-7.64 (5H, m), 7.76-8.05 (3H, m), 8.06 (1H, d, J =8.3Hz), 8.35 (1H, s), 10.00 (1H, s), 10.54 (1H, s).
19	δ 2.30 (6H, s), 7.37-7.45 (4H, m), 7.54 (1H, t, J =7.8Hz), 7.76 (1H, d, J =7.8Hz), 8.05-8.11 (3H, m), 8.34 (1H, s), 10.00 (1H, s), 10.49 (1H, s).
20	($CDCl_3$) δ 2.35 (6H, s), 7.36 (2H, s), 7.37-7.54 (4H, m), 7.69-7.83 (4H, m), 8.13 (1H, s), 8.33 (1H, s).
22	δ 2.30 (6H, s), 7.45 (2H, s), 7.56 (1H, dd, J =7.8,6.8Hz), 7.63 (1H, d, J =8.8Hz), 7.72 (1H, d, J =8.8Hz), 7.77 (1H, d, J =6.8Hz), 7.94 (1H, d, J =8.3Hz), 8.03 (1H, d, J =8.8Hz), 8.17 (1H, d, J =7.8Hz), 8.34 (1H, s), 9.99 (1H, s), 10.54.(1H, s).
23	($CDCl_3$) δ 2.36 (6H, s), 7.34-7.38 (3H, m), 7.42-7.46 (1H, m), 7.53 (1H, t, J =7.8Hz), 7.62 (1H, s), 7.65-7.68 (2H, m), 7.73-7.75 (1H, m), 7.82-7.84 (1H, m), 7.89 (1H, s), 8.32 (1H, s).
26	($CDCl_3$) δ 2.36 (6H, s), 7.19 (1H, dt, J = 2.0,7.8Hz), 7.36 (2H, s), 7.46 (1H, t, J = 7.8Hz), 7.52-7.57 (3H, m), 7.66 (1H, s), 7.74 (1H, d, J = 7.8Hz), 7.85 (1H, d, J = 7.8Hz), 7.94 (1H, d, J = 7.8Hz), 8.31 (1H, s)
28	δ 2.36 (6H, s), 7.33 (2H, s), 7.48 (1H, t, J =7.8Hz), 7.75-7.84 (5H, m), 8.14 (1H, d, J =7.8Hz), 8.31 (1H, s), 9.20 (1H, s), 10.04 (1H, s).
29	δ 2.30 (6H, s), 7.45 (2H, s), 7.57 (1H, d, J =7.BHz), 7.75-7.80 (2H, m), 8.06-8.11 (2H, m), 8.29 (1H, d, J =7.8Hz), 8.34 (1H, s), 8.46 (1H, s), 10.02 (1H, s), 10.65 (1H, s).

(continued)

Comp. No.	^{1}H-NMR (DMSO-d_6, ppm)
30	δ 2.30 (6H, s), 7.45 (2H, s), 7.56 (1H, t. J =7.8Hz), 7.79 (1H, d, J =7.8Hz), 8.04-8.06 (3H, m), 8.16 (2H, d, J =8.3Hz), 8.36 (1H, s), 10.02 (1H, s), 10.72 (1H, s).
31	δ 2.30 (6H, s), 7.45 (2H, s), 7.56 (1H, d, J =7.8Hz), 7.76-7.81 (3H, m), 7.88-7.94 (2H, m), 8.17 (1H, d, J =7.8Hz), 8.24 (1H, s), 10.02 (1H, s), 10.90 (1H, s).
32	δ 2.32(6H, s), 7.46(2H. s), 7.58(1 H, t, J = 7.8Hz), 7.80-7.89(2H, m), 8.11 (1 H, d, J = 7.8Hz), 8.36(1H, s), 8.44-8.48(2H, m). 8.86(1H, s), 10.04(1H, s), 10.83(1H, s).
33	δ 2.31 (6H, s), 7.45 (2H, s), 7.57 (1H, t, J =8.1Hz), 7.80 (1H, d, J =8.1Hz), 8.08 (1H, d, J =8.1Hz), 8.24 (1H, s), 8.36-8.41 (4H, m), 10.01 (1H, s), 10.79 (1H, s).
34	δ 2.30 (6H, s), 6.39 (2H, s), 6.58-6.62 (1H, m), 6.76 (1H, dd, J =1.0,8.3Hz), 7.19-7.24 (1H, m), 7.45 (2H, s), 7.51 (1H, t, J =7.8Hz), 7.66-7.73 (2H, m), 7.94-7.97 (1H, m), 8.30 (1H, d, J =2.0Hz), 9.96 (1H, s), 10.20 (1H, s).
35	δ 2.30 (6H, s), 6.53-6.86 (1H, m), 7.20-7.21 (4H, m), 7.45 (2H, s), 7.52 (1H, t, J =7.8Hz), 7.73 (1H, d, J =7.8Hz), 8.02 (1H, d, J =7.8Hz), 8.35 (1H, s), 9.96 (1H, s), 10.32 (1H, s).
37	($CDCl_3$) δ 2.34 (6H, s), 7.35 (2H, s), 7.51 (1H, t, J =7.8Hz), 7.62-7.80 (8H, m), 8.25 (1H, s).
39	δ 2.31(6H, s), 7.45(2H, s), 7.57(1H, t, J = 7.8Hz), 7.79(1H, d, J = 7.8Hz). 7.94(2H, d, J = 8.3Hz), 8.07(1H, d, J =7.8Hz). 8.20(2H, d, J = 8.3Hz), 8.36(1H, s), 10.01(1H, s), 10.70(1H, s).
40	δ 2.30 (6H, s), 6.96-7.01 (2H, m), 7.43-7.48 (3H, m), 7.56 (1H, t, J =8.3Hz), 7.78 (1H, d, J =8.3Hz). 7.97-8.00 (2H, m), 8.29 (1H, s), 10.01 (1H, s). 10.61 (1H, s).
41	δ 2.30(6H, s), 3.90(3H, s), 7.05-7.10(1H, m), 7.19(1H, d, J = 8.3Hz), 7.45(2H, s), 7.49-7.54(2H, m), 7.63(1H, dd, J =2.0, 7.8Hz), 7.72(1H, d, J=7.8Hz), 7.96(1H, d, J = 7.8Hz), 8.33(1H, s), 9.98(1H, s), 10.33(1H, s).
45	δ 1.33 (9H, s), 2.31 (6H, s), 7.45 (2H, s), 7.53 (1H, t, J =7.8Hz), 7.54 (2H,d,J = 8.3Hz), 7.74 (1H, d, J =7.8Hz), 7.94 (2H, d, J =8.3Hz), 8.06 (1H, d, J =7.8Hz), 8.36 (1H,s), 9.99 (1H, s), 10.40 (1H, s).
46	δ 2.30 (6H, s), 2.98 (6H, s), 6.93-6.95 (1H, m), 7.25-7.35 (3H, m), 7.45 (2H, s), 7.53 (1H, t, J =7.8Hz), 7.74 (1H, d, J =7.8Hz), 8.06 (1H, d, J =7.8Hz), 8.35 (1H, s), 9.99 (1H, s), 10.35 (1H, s).
47	δ 2.30 (6H, s), 3.01 (6H, s), 6.77 (2H, d, J =9.3Hz), 7.45 (2H, s), 7.50 (1H, t, J =7.8Hz), 7.69 (1H, d, J =7.8Hz), 7.91 (2H, d, J =9.3Hz), 8.06 (1H, d, J =7.8Hz), 8.33 (1H, s), 9.96 (1H, s), 10.09 (1H, s).
48	δ 2.31(6H, s), 7.45(2H, s), 7.53-7.60(3H, m), 7.77(1H, d, J 7.3Hz), 8.06(1H, d, J = 8.3Hz), 8.13(2H, d, J = 8.3Hz), 8.35(1H, s), 10.01(1H, s), 10.59(1H, s).
52	δ 2.21 (3H, s), 2.30 (6H, s), 7.27 (1H, d, J =8.3Hz), 7.39-7.44 (1H, m), 7.45 (2H, s), 7.50-7.62 (2H, m), 7.70-7.52 (2H, m), 7.92 (1H, d, J =7.8Hz), 8.29 (1H, s), 9.99 (1H, s), 10.57 (1H, s).
54	δ 2.30 (6H, s), 3.91 (3H, s), 7.45 (2H, s), 7.56 (1H, t, J =7.8Hz), 7.78 (1H, d, J =7.8Hz), 8.03-8.15 (5H, m), 8.36 (1 H, s), 10.01 (1H, s), 10.67 (1H, s).
56	δ 2.27 (6H, s), 2.30 (6H, s), 7.18-7.22 (1H, m), 7.26-7.30 (2H, m), 7.45 (2H, s), 7.52 (1H, t, J =7.8Hz), 7.72 (1H, d, J =7.8H), 7.95 (1H, d, J =7,8Hz), 8.36 (1H, s), 9.98 (1H, s), 10.52 (1H, s).
57	δ 2.30 (6H, s), 2.33 (3H, s), 2.38 (3H, s), 7.11-7.13 (2H, m), 7.40 (1H, d, J =7.8Hz), 7.44 (2H, s), 7.51 (1H, t, J =7.8Hz), 7.72 (1H, d, J =7.8Hz), 7.95 (1H, d. J =8.8Hz), 8.34 (1H, s), 9.98 (1H, s), 10.43 (1H, s).
58	δ 2.30 (12H, s), 7.12 (2H, d, J =7.8Hz), 7.23-7.27 (1H, m), 7.45 (2H, s), 7.52 (1H, t, J =8.3Hz), 7.75 (1H, d, J =8.3Hz), 7.94-7.99 (1H, m), 8.35 (1H, s), 10.00 (1H, s), 10.61 (1H, s).
59	δ 2.30 (6H, s), 7.34-7.40 (1H, m), 7.45 (2H, s), 7.50-7.58 (2H, m), 7.60-7.68 (1H, m), 7.77 (1H, d, J =7.8Hz), 7.96 (1H, d, J =8.3Hz), 8.31 (1H, s), 10.02 (1H, s), 10.78 (1H, s).
60	δ 2.30 (6H, s), 7.22-7.28 (1H, m), 7.42-7.48 (3H, m), 7.53-7.57 (1H, m), 7.75-7.82 (2H, m), 7.96 (1H, d, J =7.8Hz), 8.30 (1H, s), 10.01 (1H, s), 10.65 (1H, s).
61	δ 2.30 (6H, s), 7.45 (2H, s), 7.46-7.49 (2H, m), 7.53-7.59 (2H, m), 7.77 (1H, d, J =7.8Hz), 7.96 (1H, d, J =8.3Hz), 8.30 (1H, s), 10.02 (1H, broad), 10.72 (1H, broad).

(continued)

Comp. No.	^{1}H-NMR (DMSO-d_6, ppm)
62	δ 2.30 (6H, s), 7.25-7.30 (2H, m), 7.45 (2H, s), 7.54-7.65 (2H, m), 7.77 (1H, d, J =7.8Hz), 7.93 (1H, d, J =7.8Hz), 8.29 (1H, s), 10.03 (1H, s), 11.04 (1H, s).
66	δ 2.30(6H, s), 7.45(2H, s), 7.52-7.62(2H, m), 7.66(1H, d, J = 8.3Hz), 7.75-7.80 (2H, m), 7.94(1H, d, J = 7.8Hz), 8.30(1H, s), 10.02(1H, s), 10.77(1H, s).
68	δ 2.30 (6H, s), 7.45 (2H, s), 7.50-7.62 (4H, m), 7.78 (1H, d, J =7.8Hz), 7.94 (1H, d, J =7.8Hz), 8.28 (1H, s), 10.03 (1H, s), 10.99 (1 H, s).
69	δ 2.30(6H, s), 7.45(2H, s), 7.56(1H, t, J = 7.8Hz), 7.79(1H, d, J = 7.8Hz), 7.85(1H, d, J = 8.3Hz), 7.97-8.00(1H, m), 8.05-8.08(1H, m), 8.27(1H, d, J = 2.0Hz), 8.33(1H, s). 10.00(1H, s), 10.61(1H, s).
70	δ 2.74(6H, s), 7.34(2H, s), 7.52(1H, t, J = 7.8Hz), 7.81(1H, d, J = 7.8Hz), 7.93(1H, d, J = 8.3Hz), 8.13-8.15(2H, m), 8.58(1H, d, J = 8.3Hz), 8.94(1H, s), 9.27(1H, s), 10.67(1H, s).
71	($CDCl_3$) δ 1.6-2.4(6H, broad-s), 6.5-7.7(3H, broad), 7.8-8.0(4H, broad), 8.10(1H, broad-s), 8.28(1H, d, J = 8.8Hz).
72	δ 2.30 (6H, s), 3.78 (6H, s), 6.66-6.75 (2H, m), 7.34-7.50 (4H, m), 7.67 (1H, d, J = 7.8Hz), 7.91 (1H, d, J =7.8Hz), 8.34 (1H, s), 9.98 (1H, s), 10.44 (1H, s).
73	δ 2.30 (6H, s), 3.83 (6H, s), 6.73 (1H, t, J =2.4Hz), 7.15 (2H, d, J =2.4Hz), 7.45 (2H, s), 7.54 (1H, t, J =8.3Hz), 7.75 (1H, d, J =8.3Hz), 8.06 (1H, d, J =8.3Hz), 8.33 (1H, s), 9.99 (1H, s), 10.39 (1H, s).
74	($CDCl_3$) δ 2.34(6H, s), 2.68(3H, s), 7.36(2H, s), 7.55(1H, t, J = 7.8Hz), 7.62(1H, s), 7.72(1H, d, J = 7.8Hz), 7.81(1H, d, J = 8.3Hz), 7.88(1H, s), 7.92(1H, d, J = 7.8Hz), 8.05(1H, d, J =8.3Hz), 8.17(1H, s), 8.26(1H, s).
75	δ 2.30 (6H, s), 5.22 (2H, broad-s), 6.67-6.72 (1H, m), 6.78-6.81 (1H, m), 6.97-7.02 (1H, m), 7.45 (2H, s), 7.52 (1H, t, J =7.8Hz), 7.72 (1H, d, J =7.8Hz), 7.94 (1H, d, J =7.8Hz), 8.32 (1H, s), 9.98 (1H, s), 10.46 (1H, s).
77	δ 2.30 (6H, s), 7.45 (2H, s), 7.58 (1H, t, J =7.8Hz), 7.70 (1H, t, J =8.8Hz), 7.80 (1H, d, J =7.8Hz), 7.99 (1H, d, J =7.8Hz), 8.29 (1H, s), 8.45-8.50 (1H, m), 8.57-8.60 (1H, m), 10.03 (1H, s), 10.91 (1H, s).
81	δ 2.30 (6H, s), 7.56 (1H, t), 7.73-7.80 (6H, m), 7.92 (1H, d, J =7.81Hz), 8.22 (1H, s), 10.03 (1H, s), 11.05 (1H, s).
82	δ 2.30 (6H, s), 7.45 (2H, s), 7.57 (1H, t, J =7.8Hz), 7.80 (1 H, d, J =7.8Hz), 7.92-7.96 (2H, m) 8.29-8.45 (2H, m), 8.45 (1H, m), 10.03 (1H, s), 10.98 (1H, s).
83	δ 2.28 (6H, s), 7.33-7.38 (1H, m), 7.43 (2H, s), 7.53 (1H, t, J =7.9Hz), 7.58 (1H, d, J =2.4Hz) 7.61-7.71 (1H, m), 7.75 (1H, d, J =7.9Hz), 7.93 (1H, d, J =7.9Hz), 8.28 (1H, s), 9.98 (1H, s), 10.71 (1H, s).
84	δ 2.30 (6H, s), 7.38-7.48 (4H, m), 7.54-7.60 (2H, m), 7.78 (1H, d, J =7.8Hz), 7.93 (1H, d. J =7.8Hz), 8.28 (1H, s), 10.03 (1H, s), 11.03 (1H, s).
86	δ 2.30 (6H, s), 7.42-7.47 (3H, m), 7.55 (1 H, t, J =8.0Hz), 7.64 (1H, d, J =2.0Hz), 7.66-7.77 (2H, m), 7.96 (1H, d, J =8.0Hz), 8.29 (1H, s), 10.01 (1H, s), 10.69 (1H, s).
87	δ 2.30 (6H, s), 7.45 (2H, s), 7.56 (1H, t, J =7.9Hz), 7.79 (1H, d, J =7.9Hz), 7.87 (1H, d, J =7.9Hz), 7.92 (1H, dd, J =8.2,1.6Hz), 8.00 (1H, dd, J =8.2,1.6Hz), 8.22 (1H, t, J =1.6Hz), 8.29(1H, d,J = 1.6Hz), 10.03 (1H, s), 10.94 (1H, s).
88	($CDCl_3$) δ 2.37(6H, s), 4.06(3H, s), 7.37(2H, s), 7.44(1H, d, J = 9.7Hz), 7.52(1H, s), 7.58(1H, t, J = 7.8Hz), 7.70(1H, s), 7.74(1H, d, J =7.8Hz), 7.93(1H, s), 7.95(1H, s), 8.02(1H, s), 8.26(1H, s).
89	($CDCl_3$) δ 2.37(6H, s), 4.22(3H, s), 7.37(2H, s), 7.55(1H, t, J = 7.8Hz), 7.56(1H, s), 7.72(1H, d, J = 7.8Hz), 7.94-7.97(2H, m), 8.00(1H, d, J = 7.8Hz), 8.28(1H, s), 8.47(1H, d, J = 8.8Hz), 9.83(1H, s).
91	δ 2.25 (6H, s), 2.27 (3H, s), 2.29 (6H, s), 6.94 (2H, s), 7.45 (2H, s), 7.51 (1H, t, J =7.8Hz), 7.73 (1H, d, J =7.8Hz), 7.94 (1H, d, J =7.8Hz), 8.34 (1H, s), 9.97 (1H, s), 10.53 (1H, s).
92	δ 2.33 (6H, s), 7.32-7.40 (1H, m), 7.45 (2H, s), 7.58 (1H, t, J =8.06Hz), 7.67-7.75 (1H, m), 7.80 (1H, d, J =7.81Hz), 7.92 (1 H, d, J =8.29Hz), 8.27 (1 H, s), 10.04 (1 H, s), 11.14 (1 H, s).

(continued)

Comp. No.	^{1}H-NMR (DMSO-d_6, ppm)
95	δ 2.30 (6H, s), 7.45 (2H, s), 7.59 (1H, t, J =7.8Hz), 7.83 (1H, d, J =7.8Hz), 7.91-7.94 (1H, dd, J =1.5,7.8Hz), 8.25 (1H, d, J =1.5Hz), 10.06 (1H, s), 11.27 (1H, s).
96	δ 2.30 (6H, s), 7.28-7.55 (10H, m), 7.57-7.61 (2H, m), 7.69 (1H, d, J =7.8Hz), 7.74 (1H, d, J =7.8Hz), 8.13 (1H, s), 9.94 (1H, s), 10.47 (1H, s).
97	δ 2.32 (6H, s), 7.41-7.57 (6H, m), 7.72-7.82 (3H, m), 7.85-7.88 (2H, m), 8.09-8.13 (3H, m), 8.40 (1H, s), 10.01 (1H, s), 10.53 (1H, s).
98	δ 2.31(6H, s), 7.45(2H, s), 7.54-7.65(4H, m), 7.76-7.80(2H, m), 8.01-8.06(2H, m), 8.10(1H, d, J=8.3Hz), 8.21-8.23(1H, m), 8.43(1H, s), 10.01(1H, s), 10.80(1H, s).
99	δ 2.32(6H, s), 7.46(2H, s), 7.57(1H, t, J =7.8Hz), 7.61-7.72(2H, m), 7.78(1H, d, J = 7.8Hz), 7.99-8.17(5H, m), 8.41(1H, t, J = 2.0Hz), 8.65(1H, s), 10.01(1H, s), 10.66(1H, s).
100	δ 2.31 (6H, s), 7.45 (2H, s), 7.55 (1H, t, J =7.8Hz), 7.69-7.76 (2H, m), 8.07-8.14 (2H, m), 8.19 (1H, d, J =7.8Hz), 8.54 (1H, s), 8.77 (1H, d, J =4.9Hz), 9.99 (1 H, s), 10.86 (1H, s).
101	δ 2.30 (6H, s), 7.45 (2H, s), 7.54-7.61 (2H, m), 7.78 (1H, d, J =8.3Hz), 8.06 (1 H, d, J =7.3Hz), 8.32-8.35 (2H, m), 8.77-8.79 (1H, m), 9.14 (1H, d, J =1.5Hz), 10.00 (1H, s), 10.66 (1H, s).
102	δ 2.30 (6H, s), 7.45 (2H, s), 7.57 (1H, t, J =7.8Hz), 7.80 (1H, d, J =7.8Hz), 7.91 (2H, d, =5.6H), 8.06 (1H, d, J =7.8Hz), 8.35 (1H, s), 8.81 (2H, d, J =5.6Hz), 10.01 (1H, s), 10.72 (1H, s).
103	δ 2.27 (3H, s), 2.30 (6H, s), 7.45 (2H, s), 7.54-8.07 (6H, m), 8.35 (1H, s), 10.02 (1H, s), 10.77 (1H, s).
105	δ 2.30 (6H, s), 7.45 (2H, s), 7.52-7.58 (2H, m), 7.78 (1H, d, J =8.30Hz), 7.97 (1H, d, J =8.29Hz), 8.26-8.31 (2H, m), 8.42 (1H, d, J =4.39Hz), 10.02 (1H, s), 10.80 (1H, s).
106	δ 2.30 (6H, s), 7.45 (2H, s), 7.54-7.60 (2H, m), 7.77-7.81 (1H, m), 7.95 (1H, d, J =7.8Hz), 8.10-8.13 (1H, m), 8.30 (1H, s), 8.54-8.59 (1H, m), 10.03 (1H, s), 10.88 (1H, s).
108	δ 2.31 (6H, s), 7.45 (2H, s), 7.56 (1H, t, J =7.8Hz), 7.78 (1H, d, J =7.8Hz), 7.82 (1H, dd, J =6.3,2.4Hz), 8.11-8.16 (3H, m), 8.47 (1H, s), 10.01 (1H, s), 10.69 (1H, s).
109	δ 2.31 (6H, s), 7.46 (2H, s), 7.57 (1H, t, J =8.3Hz), 7.74 (1H, d, J =8.3Hz), 7.80 (1H, d, J =8.3Hz), 8.06 (1H, dd, J =8.3,1.7Hz), 8.34 (1H, t, J =1.7Hz), 8.40(1H, dd, J = 8.3,1.7Hz), 9.00 (1H, d, J =1.7Hz), 10.02 (1H, s), 10.71 (1H, s).
110	δ 2.31 (6H, s), 7.45 (2H, s), 7.56 (1H, d, J =8.1 Hz), 7.78 (1H, d, J =8.1 Hz), 7.86 (1H, d, J =2.1 Hz), 8.11 (1H, dd, J =8.1,2.1Hz), 8.19 (1H, d, J =2.1 Hz), 8.53 (1H, t, J =2.1Hz), 8.75 (1H, d, J =5.4Hz), 10.01 (1H, s), 10.96 (1H, s).
111	($CDCl_3$) δ 2.36 (6H, s,), 7.34 (2H, s,), 7.47-8.94 (7H, m,), 9.63 (1H, s.), 10.73 (1H, s,).
113	($CDCl_3$) δ 2.36 (6H, s,), 7.34-8.73 (15H, m, Ar,), 10.01 (1H, s,)
114	δ 2.30 (6H, s), 2.42 (3H, s), 7.25-7.28(1H, m), 7.44 (2H, s), 7.55 (1H, t, J =7.8Hz), 7.77 (1H, d, J =7.8Hz), 7.94-7.97(2H, m), 8.30 (1H, s), 8.61 (1H, dd, J =4.9,1.5Hz), 10.00 (1H, s), 10.67 (1H, s).
115	δ 2.29 (6H, s), 3.94 (3H, s), 4.06 (3H, s), 6.53 (1H, d, J =8.3Hz), 7.44 (2H, s), 7.51 (1H, t, J =7.9Hz), 7.72 (1 H, d, J =7.9Hz), 7.95 (1H, d, J =7.9Hz), 8.12 (1H, d, J =8.3Hz), 8.28 (1H, s), 9.96 (1H, s), 10.07 (1H, s).
116	δ 2.29 (6H, s), 7.44 (2H, s), 7.57 (1H, t, J =7.9Hz), 7.80 (1H, d, J =7.9Hz), 8.05 (1H, d, J =7.9Hz), 8.30 (1H, s), 8.67 (1H, d, J =2.2Hz), 8.93 (1H, d, J =2.2Hz), 10.01 (1H, s), 10.73 (1H, s).
117	($CDCl_3$) δ 2.36 (6H, s), 7.37-8.50 (9H, m,), 8.97 (1H, s).
118	δ 2.28 (6H, s), 7.43 (2H, s), 7.56 (1H, t, J =8.0Hz), 7.74-7.79 (2H, m), 7.92 (1H, d, J =8.0Hz), 8.20 (1H, d, J =8.3Hz), 8.25 (1H, s), 10.01 (1H, s), 10.88 (1H, s).
119	($CDCl_3$) δ 2.36 (6H, s), 7.36-8.60 (10H, m,).
120	δ 2.31 (6H, s), 7.46 (2H, s), 7.57 (1H, t, J =7.8Hz), 7.80 (1H, d, J =7.8Hz), 8.02 (1H, d, J =7.8Hz), 8.08 (2H, d, J =1.2Hz), 8.33 (1H, t, =2.0Hz), 8.40 (2H, d, J =7.3Hz), 10.02 (1H, s), 10.63 (1H, s).

(continued)

Comp. No.	^{1}H-NMR (DMSO-d_6, ppm)
121	δ 2.30 (6H, s), 3.89 (3H, s), 6.11 (1H, dd, J =2.0,3.9Hz), 7.03 (1H, t, J =2.0Hz), 7.10 (1H, dd, J =2.0,3.9Hz), 7.45 (2H, s), 7.49 (1H, t, J =7.8Hz), 7.69 (1H, d, J =7.8Hz), 7.99 (1H, d, J =7.8Hz), 8.28 (1H, s), 9.95 (2H, s).
122	δ 2.31 (6H, s), 7.45 (2H, s), 7.57 (1H, t, J =7.8Hz), 7.78 (1H, d, J =7.8Hz), 8.11 (1H, d, J =7.8Hz), 8.53 (1H, s), 8.84 (1H, dd, J =1.5,2.4Hz), 8.95 (1H, d, J =2.4Hz), 9.33 (1H, d, J =1.5Hz), 10.00 (1H, s), 10.97 (1H, s).
124	δ 2.28 (6H, s), 7.44 (2H, s), 7.58 (1H, t, J =7.9Hz), 7.81 (1H, d, J =7.9Hz), 7.92 (1H, d, J =7.9Hz), 8.20 (1H, s), 9.43 (1H, s), 9.59 (1H, s), 10.03 (1H, s), 11.06 (1H, s).
125	6 2.30 (6H, s), 7.45 (2H, s), 7.50-7.62 (4H, m), 7.78 (1H, d, J =7.8Hz), 7.94 (1H, d, J =7.8Hz), 8.28 (1H, s), 10.03 (1H, s), 10.99 (1H, s).
126	5 2.30 (6H, s), 7.04 (1H, t, J =1.5Hz), 7.45 (2H, s), 7.53 (1H, t, J =8.0Hz), 7.74-7.82 (2H, m), 8.04 (1H, d, J =1.5Hz), 8.25 (1H, d, J =1.5Hz), 8.43 (1H, t, J =1.5Hz), 9.98 (1H, s), 10.14 (1H, s).
127	δ 1.86-1.91 (2H, m), 2.00-2.02 (1H, m), 2.19-2.29 (7H, m), 3.81-3.87 (1H, m), 3.98-4.03 (1H, m), 4.40-4.43 (1H, m), 7.44-7.50 (3H, m), 7.77 (1H, d, J =7.8Hz), 7.94 (1H, d, J =7.8Hz), 8.26 (1H, s), 9.89 (1H, s), 9.94 (1H, s).
128	($CDCl_3$) δ 2.02-2.10 (2H, m), 2.28 (6H, s), 3.15-3.22 (1H, m), 3.80-3.98 (4H, m), 7.44 (2H, s), 7.48 (1H, t, J=7.8 Hz), 7.68 (1H, t, J=7.8 Hz), 7.87 (1H, d, J=7.8 Hz), 8.16 (1H, s), 9.96 (1H, s), 10.3 (1H, s).
129	($CDCl_3$) δ 2.22(6H, s), 7.17-7.28(3H, m), 7.33-7.39(2H, m), 7.42-7.48(2H, m), 7.58-7.65(2H, m), 7.79(1H, dd, J = 1.5,8.3Hz), 7.91(1H, s), 8.27(1H, s), 8.51(1H, s).
130	($CDCl_3$) δ 1.48-2.17(6H, m), 2.34(6H, s), 3.52-3.60(1H, m), 3.92(1H, dd, J = 2.5,11.2Hz), 4.11-4.18(1H, m), 7.35(2H, s), 7.47(1H, t, J = 7.8Hz), 7.60(1H, broad), 7.69(1H, d, J = 7.8Hz), 7.77(1H, dd, J = 1.0,7.8Hz), 8.26(1H, s), 8.54(1H, s).
131	δ 1.97-2.07 (2H, m), 2.15-2.31 (9H, m), 2.97-3.07 (2H, m), 3.99-3.98 (2H, m), 7.46 (2H, s), 7.55 (1H, t, J =8.0Hz), 7.65 (1H, d, J =8.0Hz), 7.87 (1H, d, J =8.0Hz), 8.20 (1H, s), 9.60 (1H, s), 9.91 (1H, s).
132	($CDCl_3$) δ 2.35(6H, s), 7.16(1H, dd, J = 3.9,4.9Hz), 7.36(2H, s), 7.51(1H, t, J = 7.8Hz), 7.59(1H, dd, J = 1.0,4.9Hz), 7.67(1H, dd, J = 1.0,3.9Hz), 7.70-7.74(2H, m), 7.80-7.83(1H, m), 7.95(1H, s), 8.27(1H, s).
133	δ 2.30 (6H, s), 7.45 (2H, s), 7.54 (1H, t, J =8.0Hz), 7.67 (2H, d, J =2.4Hz), 7.75 (1H, d, J =7.8Hz), 8.07 (1H, d, J =7.8Hz), 8.31 (1H, s), 8.41 (1H, t, J =2.2Hz), 9.99 (1H, s), 10.28 (1H, s).
134	δ 2.30 (6H, s), 2.47 (3H, s), 7.04 (1H, d, J =4.2Hz), 7.45 (2H, s), 7.52 (1H, t, J =7.8Hz), 7.69 (1H, d, J =4.2Hz), 7.74 (1H, d, J =7.8Hz), 7.93 (1H, d, J =7.8Hz), 8.27 (1H, s), 9.97 (1H, s), 10.17 (1H, s).
135	δ 2.30 (6H, s), 7.45 (2H, s), 7.56 (1H, t, J =7.8Hz), 7.79 (1H, d, J =7.8Hz), 8.08 (1H, d, J =7.8Hz), 8.30 (1H, s), 8.71 (1H, d, J =2.0Hz), 8.74 (1H, d, J =2.0Hz), 10.01 (1H, s), 10.54 (1H, s).
136	δ 2.30 (6H, s), 2.50 (3H, s), 6.94 (1H, d, J =3.4Hz), 7.45 (2H, s), 7.52 (1H, t, J =7.9Hz), 7.74 (1H, d, J =7.9Hz), 7.88 (1H, d, J =3.4Hz), 8.02 (1H, d, J =7.9Hz), 8.27 (1H, s), 9.97 (1H, s), 10.32 (1H, s).
137	δ 2.29 (6H, s), 7.22 (1H, d, J =5.1Hz), 7.43 (2H, s), 7.53 (1H, t, J =8.0Hz), 7.76 (1H, d, J =8.0Hz), 7.91-7.93 (2H, m), 8.26 (1H, s), 9.98 (1H, s), 10.42 (1H, s).
138	δ 2.30 (6H, s), 7.45 (2H, s), 7.57 (1H, t, J =8.1Hz), 7.79 (1H, d, J =8.1Hz), 8.05 (1H, d, J =8.1Hz), 8.52 (1H, s), 9.97 (1H, s), 11.11 (1H, s).
139	δ 2.30 (6H, s), 7.26 (1H, d, J =5.4Hz), 7.45 (2H, s), 7.54 (1H, t, J =8.0Hz), 7.77 (1H, d, J =8.0Hz), 7.90-7.94 (2H, m), 8.27 (1H, s), 9.99 (1H, s), 10.50 (1H, s).
140	δ 2.30 (6H, s), 7.39 (1H, d, J =4.6Hz), 7.45 (2H, s), 7.54 (1H, t, J =8.1Hz), 7.77 (1H, d, J =8.1Hz), 7.92 (1H, d, J =4.6Hz), 8.02 (1H, d, J =8.1Hz), 8.26 (1H, s), 9.99 (1H, s), 10.50 (1H, s).
141	δ 2.30 (6H, s), 7.29 (1H, d, J =4.9Hz), 7.45 (2H, s), 7.55 (1H, t, J =7.9Hz), 7.77 (1H, d, J =7.9Hz), 7.81 (1H, d, J =4.9Hz), 7.92 (1H, d, J =7.9Hz), 8.29 (1H, s), 10.00 (1H, s), 10.50 (1H, s).

(continued)

Comp. No.	^{1}H-NMR (DMSO-d_6, ppm)
142	δ 2.27 (6H, s), 7.25-7.52 (10H, m), 7.70-7.73 (1H, m), 7.81-7.20 (1H, m), 8.12 (1H, s), 9.94 (1H, s), 10.27 (1H, s).
143	δ 2.28 (6H, s), 2.40 (3H, s), 2.45 (3H, s), 6.74 (1H, s), 7.43 (2H, s), 7.49 (1H, t, J =8.1 Hz), 7.71 (1H, d, J =8.1Hz), 7.90 (1H, d, J =8.1Hz), 8.24 (1H, s), 9.94 (1H, s), 9.98 (1H, s).
144	δ 2.31(6H, s), 7.41-7.59(5H, m), 7.78(1H, d, J = 7.8Hz), 8.00-8.09(3H, m), 8.34(1H, d, J = 2.0Hz), 8.43(1H, s), 10.02(1H, s), 10.75(1H, s).
146	δ 0.86 (3H, 7.2), 2.30 (6H, s), 4.34 (2H, q, J =7.2Hz), 7.45 (2H, s), 7.77-7.79 (3H, m), 7.84 (1H, s), 8.24 (1H, s), 8.37 (1H, s), 10.05 (1H, s), 11.11 (1H, s).
147	δ 2.30 (6H, s), 3.89 (3H, s), 7.45 (2H, s), 7.52 (1H, t, J =7.9Hz), 7.73 (1H, d, J =7.9Hz), 7.97 (1H, d, J =7.9Hz), 8.23 (1H, s), 8.45 (1H, s), 9.98 (1H, s), 10.08 (1H, s).
148	δ 2.35 (6H, s), 3.92 (3H, s). 7.26 (1H, s), 7.36 (2H, s), 7.48-7.55(2H, m), 7.70 (1H, d, J =7.7Hz), 7.83 (1H, d, J =7.7Hz), 8.26 (1H, s), 8.47 (1H, s).
149	δ 2.36 (6H, s), 3.95 (3H, s), 7.26 (1H, s), 7.36 (2H, s), 7.50 (1H, t, J =7.7Hz), 7.70 (1H, d, J =7.7Hz), 7.83 (1H, d, J =7.7Hz), 8.00 (1H, s), 8.26 (1H, s), 8.58 (1H, s).
150	($CDCl_3$) δ 2.35(6H, s), 4.01(3H, s), 7.36(2H, s), 7.51(1H, t, J = 7.8Hz), 7.68-7.73 (3H, m), 7.92(1H, s), 8.05(1H, s), 8.25(1H, s).
151	δ 2.29 (6H, s), 4.06 (3H, s), 7.44 (2H, s), 7.53 (1H, t, J =7.9Hz), 7.77 (1H, d, J =7.9Hz), 7.96 (1H, d, J. =7.9Hz), 8.11 (1H, s), 8.26 (1H, s), 10.02 (1H, s), 10.58 (1H, s).
152	δ 2.30 (6H, s), 7.32 (1H, d, J =2.0Hz), 7.45 (2H, s), 7.58 (1H, t, J =7.8Hz), 7.81 (1H, d, J =7.8Hz), 8.04 (1H, d, J =7.8Hz), 8.35 (1H, s), 8.84 (1H, d, J =2.0Hz), 10.03 (1H, s), 10.97 (1H, s).
153	δ 2.29 (6H, s), 7.46 (2H, s), 7.64 (1H, t), 7.72 (1H, d, J =1.0Hz), 7.81 (1H, **s),** 7.97 (1H, d, J =8.0Hz), 8.17 (1H, s), 8.34 (1H, s), 10.04 (1H, s).
154	δ 2.29 (6H, s), 2.51 (3H, s), 2.56 (3H, s), 7.46 (2H, s), 7.53 (1H, t, J =8.03Hz), 7.75 (1H, d, J =8.03Hz), 7.92 (1H, d, J =8.03Hz), 8.24 (1H, s), 9.79 (1H, s), 10.30 (1H, s).
155	δ 1.36 (3H, t J =7.3Hz), 2.30 (6H, s), 2.73(3H, s), 3.05 (2H, q, J =7.3Hz), 7.45 (2H, s), 7.55 (1H, t, J =8.3Hz), 7.78 (1H, d, J =8.3Hz), 7.98 (1H, d, J =8.3Hz), 8.29 (1H, s), 10.01(1H, s), 10.69 (1H, s).
156	δ 2.28 (6H, s), 2.57 (3H, s), 7.43 (2H, s), 7.53 (1H, t, J =7.8Hz), 7.77 (1H, d, J =7.8Hz), 7.91 (1H, d, J =7.8Hz), 8.21 (1H, s), 9.98 (1H, s), 10.47 (1H, s).
157	δ 2.31 (6H, s), 7.45 (2H, s), 7.57 (1H, t, J =7.8Hz), 7.79 (1H, d, J =7.8Hz), 8.06 (1H, d, J =7.8Hz), 8.53 (1H, s), 10.00 (1H, s), 11.12 (1H, s).
158	δ 2.36 (6H, s), 7.45 (2H, s), 7.57 (1H, t, J =8.1Hz), 7.79 (1H, d, J =8.1Hz), 8.06 (1H, d, J =8.1Hz), 8.53 (1H, s), 10.01 (1H, s), 11.11 (1H, s).
159	δ 2.30(6H, s), 7.45(2H, s), 7.56-7.66(3H, m). 7.80(1H, d, J = 8.3Hz), 7.94-7.98(2H, m), 8.16-8.20(1H, m), 8.32(1H, s), 10.04(1H, s), 10.79(1H, s).
160	δ 2.31(6H, s), 7.45(2H, s), 7.53-7.61(2H, m), 7.78(1H, d, J = 7.8Hz), 7.92-7.95(1H, m), 8.02-8.07(2H, m), 8.34(1H, s), 9.99(1H, s), 10.50(1H, s).
161	δ 2.30(6H, s), 7.37(1H, t, J = 7.8Hz), 7.45(2H, s), 7.57(1H, t, J = 7.8Hz). 7.62-7.65(2H, m), 7.79(1H, d, J = 7.8Hz), 7.99(1H, d, J = 7.8Hz), 8.30(1H, s), 10.01(1H, s), 10.65(1H, s).
163	δ 2.38 (3H, s), 7.53-7.63 (4H, m), 7.70 (1H, s), 7.77 (1H, d, J =7.8Hz), 7.81 (1H, s), 7.99-8.01 (2H, m), 8.08 (1H, d, J =7.8Hz), 8.37 (1H, s), 10.28 (1H, s), 10.50 (1H, s).
164	($CDCl_3$) δ 1.20 (3H, t, J =7.3Hz). 2.32 (3H, s), 2.67 (2H, q, J =7.3Hz), 7.36 (2H, s), 7.46-7.51 (3H, m), 7.55-7.59 (1H, m), 7.67-7.72 (2H, m), 7.85-7.88 (3H, m), 8.15 (1H, s), 8.28 (1H, s).
165	δ 1.13(3H, t, J = 7.3Hz), 2.29(3H, s), 2.67(2H, q, J = 7.3Hz), 7.33-7.41(3H, m), 7.47(1H, s), 7.52-7.63(2H, m), 7.67-7.76(2H, m), 7.97(1H, d, J =7.8Hz), 8.32(1H, s), 10.01(1H, s), 10.65(1H, s).

(continued)

Comp. No.	^{1}H-NMR (DMSO-d_6, ppm)
166	δ 2.36 (3H, s), 7.53-7.63 (4H, m), 7.68 (1H, s), 7.79 (1H, d, J =7.8Hz), 7.96 (1H, s), 7.99-8.01 (2H, m), 8.08 (1H, dd, J =1.5,7.8Hz), 8.38 (1H, d, J =1.5Hz), 10.27 (1H, s), 10.50 (1H, s).
167	($CDCl_3$) δ 2.48(3H, s), 7.05(1H, s), 7.23(1H, s), 7.50-7.62(4H, m), 7.69(1H, d, J = 7.8Hz). 7.84(1H, dd, J = 2.0,7.8Hz), 7.89(2H, d, J = 6.8Hz), 8.13(1H, s), 8.16(1H, d, J = 6.8Hz), 8.39(1H, t, J = 1.9Hz), 8.89(1H, s).
168	δ 1.15(3H, t, J = 7.3Hz), 2.73(2H, q, J = 7.3Hz), 7.50-7.63(5H, m), 7.71-7.77(2H, m), 7.94-8.01(2H, m), 8.08(1H, d, J =7.8Hz), 8.37(1H, s), 10.28(1H, s), 10.50(1H, s).
169	δ 1.14(3H, t, J = 7.3Hz), 2.73(2H, q, J = 7.3Hz), 7.52-7.64(5H, m), 7.76(1H, d, J = 7.8Hz), 7.83(1H, d, J = 2.0Hz), 7.98-8.01(2H, m), 8.06-8.09(1H, m), 8.37(1H, s), 10.29(1H, s), 10.48(1H, s).
170	δ 1.14(3H, t, J = 7.3Hz), 2.72(2H, q, J = 7.3Hz), 7.33-7.39(2H, m), 7.53-7.64(3H, m), 7.67-7.72(1H, m), 7.76(1H, d, J = 7.8Hz), 7.82(1H, s), 7.98(1H, d, J = 8.8Hz), 8.32(1H, s), 10.30(1H, s), 10.65(1H, s).
171	δ 1.13(3H, t, J = 7.3Hz), 2.71(2H, q, J = 7.3Hz), 7.52-7.63(5H, m), 7.78(1H, d, J = 7.8Hz), 7.97-8.01(3H, m), 8.07-8.09(1H, m), 8.37(1H, d, J = 2.0Hz), 10.28(1H, s), 10.48(1H, s).
172	δ 1.13(3H, t, J = 7.3Hz), 2.71(2H, q, J = 7.3Hz), 7.33-7.39(2H, m), 7.54-7.63(3H, m), 7.67-7.72(1H, m), 7.78(1H, d, J = 7.8Hz), 7.97-8.00(2H, m), 8.33(1H, s), 10.30(1H, s), 10.66(1H, s).
173	δ 1.13(3H, t, J = 7.3Hz), 2.72(2H, q, J = 7.3Hz), 7.57-7.64(2H, m), 7.83(1H, d, J = 7.8Hz), 7.98(1H, s), 8.10(1H, d, J = 7.8Hz), 8.24(2H, d, J = 8.8Hz), 8.37(1H, s), 8.40(2H, d, J = 8.8Hz), 10.32(1H, s), 10.81(1H, s).
174	δ 1.13(3H, t, J=7.3Hz), 2.71(2H, q, J = 7.3Hz), 7.56-7.63(2H, m), 7.82(1H, d, J = 7.8Hz), 7.98(1H, s), 8.04-8.10(3H, m), 8.15(2H, d, J = 8.3Hz), 8.36(1H, s), 10.31(1H, s), 10.72(1H, s).
175	δ 0.85(3H, t, J = 7.3Hz), 1.49-1.59(2H, m), 2.30(3H, s), 2.65(2H, t, J = 6.8Hz), 7.40(1H, s), 7.47(1H, s), 7.58(1H, t, J = 7.8H, 7.79(1H, d, J = 7.8Hz), 8.08(1H, s). 8.22-8.25(2H, m), 8.36-8.41(3H, m), 10.03(1H, s), 10.79(1H, s).
176	δ 1.18(6H, d, J = 6.8Hz), 2.29(3H, s), 3.23(1H, septet J = 6.8Hz), 7.41(1H, s), 7.47(1H, s), 7.52-7.63(4H, m), 7.75(1H, d, J = 7.8Hz), 7.99-8.01(2H, m), 8.06-8.09(1H, m), 8.36(1H, t, J = 2.0Hz), 10.00(1H, s), 10.48(1H, s).
177	δ 1.17(6H, d, J = 6.8Hz), 2.30(3H, s), 3.24(1H, septet, J = 6.8Hz), 7.28-7.41(3H, m), 7.47(1H, s), 7.55-7.63(2H, m), 7.65-7.78(2H, m), 7.99(1H, d, J = 7.8Hz), 8.33(1H, s), 10.02(1H, s), 10.66(1H, s).
178	δ 0.85(3H, t, J = 7.3Hz), 1.47-1.60(2H, m), 2.70(2H, t, J = 7.3Hz). 7.53-7.63(5H, m), 7.75(1H, d, J = 7.8Hz), 7.83(1H, d, J = 2.0Hz), 7.98-8.01(2H, m), 8.08(1H, d, J = 7.8Hz), 8.36(1H, s), 10.29(1H, s), 10.49(1H, s).
179	δ 0.85(3H, t, J = 7.3Hz), 1.50-1.60(2H, m), 2.69(2H, t, J = 6.8Hz), 7.29-7.40(2H, m), 7.53-7.62(3H, m), 7.67-7.76(2H, m), 7.83(1H, d, J = 2.0Hz), 7.98(1H, d, J = 7.8Hz), 8.32(1H, s), 10.31(1H, s), 10.66(1H, s).
180	δ 0.85(3H, t, J = 7.3Hz), 1.50-1.58(2H, m), 2.70(2H, t, J = 7.8Hz), 7.57-7.63(2H, m), 7.78-7.84(2H, m), 8.09(1H, d, J = 7.8Hz), 8.18-8.24(2H, m), 8.35-8.41(3H, m), 10.32(1H, s), 10.80(1H, s).
181	δ 0.85(3H, t, J = 7.3Hz), 1.50-1.60(2H, m), 2.69(2H, t, J = 7.3Hz), 7.56-7.62(2H, m), 7.79(1H, d, J = 7.8Hz), 7.83(1H, d, J = 2.0Hz), 8.04-8.09(3H, m), 8.15(2H, d, J = 8.8Hz), 8.35(1H, s), 10.31(1H, s), 10.72(1H, s).
182	δ 0.84(3H, t, J = 7.3Hz), 1.49-1.59(2H, m), 2.68(2H, t, J = 7.3Hz), 7.53-7.63(5H, m), 7.77(1H, d, J = 7.8Hz), 7.97-8.01(3H, m), 8.08(1H, d, J = 7.8Hz), 8.37(1H, s), 10.29(1H, s), 10.49(1H, s).
183	δ 0.84(3H, t, J = 7.3Hz), 1.49-1.59(2H, m), 2.67(2H, t, J = 7.3Hz), 7.28-7.40(2H, m), 7.51-7.63(3H, m), 7.68-7.72(1H, m), 7.77(1H, d, J = 8.3Hz), 7.97-8.00(2H, m), 8.33(1H, s), 10.31(1H, s), 10.67(1H, s).
184	δ 0.84(3H, t, J = 7.3Hz), 1.49-1.59(2H, m), 2.68(2H, t, J = 6.8Hz), 7.57-7.62(2H, m), 7.82(1H, d, J = 7.8Hz), 7.98(1H, d. J = 2.0Hz), 8.08-8.10(1H, m), 8.15-8.41(5H, m), 10.32(1H, s), 10.80(1H, s).
185	δ 0.84(3H, t, J = 7.3Hz), 1.49-1.57(2H, m), 2.68(2H, broad), 7.56-7.61(2H, m), 7.81(1H, d, J = 7.8Hz), 7.98(1H, s), 8.05(2H, d, J = 8.3Hz), 8.09(1H, s), 8.15(2H, d, J = 8.3Hz), 8.35(1H, s), 10.31(1H, s), 10.72(1H, s).

(continued)

Comp. No.	^{1}H-NMR (DMSO-d_6, ppm)
186	δ 0.84(3H, t, J = 7.3Hz), 1.49-1.57(2H, m), 2.68(2H, t, J = 6.8Hz), 7.56-7.61(2H, m), 7.80(1H, d, J = 7.8Hz), 7.94(2H, d, J = 8.3Hz), 7.98(1H, s), 8.09(1H, d, J = 7.8Hz), 8.20(2H, d, J = 8.3Hz), 8.36(1H, s), 10.31(1H, s), 10.71(1H, s).
187	δ 0.83(3H, t, J = 7.3Hz), 1.21-1.31 (2H, m), 1.47-1.55(2H, m), 2.72(2H, t, J = 7.8Hz), 7.53-7.63(5H, m), 7.70-7.75(2H, m), 7.99-8.01(2H, m), 8.06-8.09(1H, m), 8.37(1H, t, J = 2.0Hz), 10.27(1H, s); 10.49(1H, s).
188	δ 0.83(3H, t, J = 7.3Hz), 1.21-1.31(2H, m), 1.47-1.55(2H, m), 2.72(2H, t, J=7.8Hz), 7.33-7.40(2H, m), 7.53-7.63(3H, m), 7.67-7.75(3H, m), 7.98(1H, d, J = 7.8Hz), 8.32(1H, s), 10.29(1H, s), 10.66(1H, s).
189	δ 0.83(3H, t, J = 7.3Hz), 1.21-1.31(2H, m), 1.47-1.55(2H, m), 2.72(2H, t, J=7.3Hz), 7.52-7.63(5H, m), 7.75(1H, d, J = 7.8Hz), 7.82(1H, d, J = 1.5Hz), 7.99-8.01(2H, m), 8.08(1H, dd, J = 1.5,7.8Hz), 8.37(1H, t, J = 1.5Hz), 10.29(1H, s), 10.49(1H, s).
190	δ 0.83(3H, t, J = 7.3Hz), 1.21-1.31(2H, m), 1.47-1.55(2H, m), 2.71(2H, t, J = 7.3Hz), 7.28-7.37(2H, m), 7.53-7.62(3H, m), 7.72(1H, t, J = 7.3Hz), 7.75(1H, d, J = 7.8Hz), 7.82(1H, s), 7.98(1H, d, J = 7.8Hz), 8.62(1H, s), 10.31(1H, s), 10.66(1H, s).
191	δ 0.82(3H, t, J = 7.3Hz), 1.22-1.30(2H, m), 1.46-1.54(2H, m), 2.70(2H, t, J = 7.8Hz), 7.53-7.63(5H, m), 7.78(1H, d, J = 7.8Hz), 7.93-8.02(3H, m), 8.07-8.09(1H, m), 8.37(1H, s), 10.29(1H, s), 10.49(1H, s).
192	δ 0.83(3H, t, J = 7.3Hz), 1.21-1.31(2H, m), 1.47-1.55(2H, m), 2.71 (2H, t, J = 7.8Hz), 7.28-7.40(2H, m), 7.55-7.65(3H, m), 7.69-7.73(1H, m), 7.79(1H, d, J = 7.8Hz), 7.98-8.02(2H, m), 8.35(1H, s), 10.33(1H, s), 10.68(1H, s).
193	δ 0.75(3H, t, J = 7.3Hz), 1.18(3H, d, J = 6.8Hz), 1.55-1.60(2H, m), 3.00-3.05(1H, m), 7.49-7.67(5H, m), 7.72-7.77(2H, m), 7.99-8.02(2H, m), 8.09(1H, d, J =7.8Hz), 8.36(1H, s), 10.29(1H, s), 10.49(1H, s).
194	δ 0.75(3H, t, J = 7.3Hz), 1.17(3H, d, J = 6.8Hz), 1.55-1.60(2H, m), 2.98-3.04(1H, m), 7.52-7.63(5H, m), 7.77(1H, d, J = 8.3Hz), 7.84(1H, s), 7.99-8.10(3H, m), 8.36(1H, s), 10.30(1H, s), 10.49(1H, s).
195	δ 0.74(3H, t, J = 7.3Hz), 1.17(3H, d, J = 6.8Hz), 1.55-1.63(2H, m), 2.98-3.04(1H, m), 7.33-7.40(2H, m), 7.52-7.63(3H, m), 7.67-7.77(2H, m), 7.83(1H, d, J = 1.5Hz), 7.99(1H, d, J = 8.3Hz), 8.32(1H, s), 10.32(1H, s), 10.66(1H, s).
196	δ 0.74(3H, t, J = 6.8Hz), 1.15(3H, d, J = 6.8Hz), 1.53-1.64(2H, m), 2.94-3.04(1H, m), 7.51-7.63(5H, m), 7.79(1H, d, J = 7.3Hz), 7.98-8.02(3H, m), 8.09(1H, dd, J = 1.5,7.8Hz), 8.37(1H, s), 10.30(1H, s), 10.50(1H, s).
197	δ 7.33-7.41 (2H, m), 7.56-7.64(2H, m), 7.68-7.73(2H, m), 7.93-8.03(2H, m), 8.38-8.40(1H, m), 8.45(1H, d, J =2.0Hz), 10.72(1H, s), 10.98(1H, s).
198	δ 2.50(3H, s), 7.39(1H, s), 7.48-7.63(4H, m), 7.73(1H, s), 7.77(1H, d, J = 7.8Hz), 7.99-8.01(2H, m), 8.08(1H, d, J =7.8Hz), 8.35(1H, s), 10.36(1H, s), 10.50(1H, s).
199	δ 2.50(3H, s), 7.33-7.39(3H, m), 7.53-7.63(2H, m), 7.67-7.77(3H, m), 7.98(1H, d, J = 7.8Hz), 8.30(1H, s), 10.38(1H, s), 10.67(1H, s).
200	δ 2.81(3H, s), 7.53-7.64(4H, m), 7.75(1H, d, J = 8.3Hz), 7.99-8.01(2H, m), 8.08-8.11(2H, m), 8.25(1H, d, J = 2.0Hz), 8.40(1H, t, J =2.0Hz), 10.52(1H, s), 10.61(1H, s).
201	δ3.40(3H, s), 7.33-7.40(2H, m), 7.56-7.63(2H, m), 7.67-7.78(2H, m), 7.99(1H, d, J = 8.3Hz), 8.17(1H, d, J = 1.5Hz), 8.35(1H, s), 8.39(1H, d, J = 1.5Hz), 10.63(1H, s), 10.69(1H, s).
202	δ 3.40(3H, s), 7.57-7.62(2H, m), 7.79(1H, d, J = 7.8Hz), 7.96(1H, dd, J = 1.5,8.3Hz),8.12(1H, dd, J = 1.5,8.3Hz), 8.17(1H, d, J = 2.0Hz), 8.32(1H, d, J = 2.0Hz), 8.40(1H, d, J = 2.0Hz), 8.54-8.56(1H, m), 10.65(1H, s), 10.92(1H, s).
203	δ 3.40(3H, s), 7.53-7.63(4H, m), 7.78(1H, d, J = 7.8Hz), 7.98-8.01(2H, m), 8.07-8.10(1H, m), 8.21(1H, s), 8.39(1H, s), 8.48(1H, d, J = 1.5H), 10.51(1H, s), 10.63(1H, s).
204	δ 3.39(3H, s), 7.33-7.40(2H, m), 7.56-7.63(2H, m), 7.68-7.72(1H, m), 7.78(1H, d, J = 7.8Hz), 8.00(1H, d, J = 7.8Hz), 8.21(1H, d, J = 1.5Hz), 8.35(1H, s), 8.48(1H, d, J = 1.5Hz), 10.66(1H, s), 10.69(1H, s).

(continued)

Comp. No.	^{1}H-NMR (DMSO-d_6, ppm)
205	δ 3.39(3H, s), 7.36-7.42(2H, m), 7.58(1H, t, J = 7.8Hz), 7.78(1H, d, J = 7.8Hz), 8.06-8.10(3H, m), 8.21(1H, s), 8.36(1H, s), 8.48(1H, s), 10.52(1H, s), 10.63(1H, s).
206	δ 3.39(3H, s), 7.61(1H, t, J = 7.8Hz), 7.82(1H, d, J = 7.8Hz), 8.09(1H, d, J = 7.8Hz), 8.20-8.24(3H, m), 8.37-8.41(3H, m), 8.48(1H, s), 10.67(1H, s), 10.83(1H, s).
207	δ 3.39(3H, s), 7.60(1H, t, J = 7.8Hz), 7.81(1H, d, J = 7.8Hz), 7.97-8.10(3H, m), 8.14-8.21(3H, m), 8.37(1H, t, J 2.0Hz), 8.48(1H, d, J = 2.0Hz), 10.65(1H, s), 10.74(1H, s).
208	δ 3.39(3H, s), 7.57-7.62(2H, m), 7.80(1H, d, J = 7.8Hz), 7.96(1H, dd, J = 1.5,7.8Hz), 8.11(1H, dd, J = 1.5,7.8Hz), 8.20(1H, s), 8.31(1H, s), 8.51(1H, s), 8.55(1H, dd, J = 1.5,4.9Hz), 10.68(1H, s), 10.92(1H, s).
209	δ 1.96(3H, s), 3.84(2H, broad), 7.53-7.63(4H, m), 7.73(1H, d, J = 7.8Hz), 7.89(1H, s), 7.99-8.01(2H, m), 8.07(1H, dd, J = 1.5,7.8Hz), 8.19(1H, s), 8.33(1H, t, J = 2.0Hz), 10.43(1H, s), 10.49(1H, s).
210	δ 7.53-7.64(4H, m), 7.81(1H, d, J = 7.8Hz), 8.00-8.05(3H, m), 8.11(1H, d, J = 7.8Hz), 8.31(1H, d, J = 1.5Hz), 8.41(1H, s), 10.52(1H, s), 10.93(1H, s).
211	δ 2.29(6H, s), 7.47(2H, s), 7.50-7.62(4H, m), 7.75(1H, d, J = 7.8Hz), 7.97-8.00(2H, m), 8.05(1H, dd, J = 1.5,7.8Hz), 8.36(1H, s), 10.01(1H, s), 10.46(1H, s).
212	δ 2.30 (6H, s), 7.45 (2H, s), 7.51-7.63 (4H, m), 7.76 (1H, d, J =7.8Hz), 7.98-8.07 (3H, m), 8.37 (1H, d, J =2.0Hz), 9.99 (1H, s), 10.48 (1H, s).
255	δ 7.25-7.29(2H, m), 7.54-7.65(2H, m), 7.78(1H, d, J = 7.8Hz), 7.92-7.95(1H, m), 8.03(2H, s), 8.30(1H, s), 10.58(1H, s), 11.05(1H, s).
256	δ 7.53-7.63(4H, m), 7.78(1H, d, J = 7.3Hz), 7.99-8.01 (2H, m), 8.06-8.09(1H, m), 8.17(2H, s), 8.38(1H, s), 10.50(1H, s), 10.55(1H, s).
257	δ 7.25-7.29(2H, m), 7.55-7.63(2H, m), 7.79(1H, d, J = 7.3Hz), 7.94(1H, d, J = 8.3Hz), 8.17(2H, s), 8.30(1H, s), 10.60(1H, s), 11.05(1H, s).
258	($CDCl_3$) δ 7.45-7.61(4H, m), 7.76(1H, d, J=7.8Hz), 7.84-7.91(3H, m), 7.93(2H, s), 8.02(1H, s), 8.08(1H, d. J=6.8Hz), 8.31(1H, s).
259	($CDCl_3$) δ 7.22(1H, dd, J=7.8, 12.2Hz), 7.35(1H, t, J=7.8Hz), 7.52-7.60(2H, m), 7.77(1H, d. J=7.8Hz), 7.88(1H, s), 7.92(1H, s), 7.93(2H, d), 8.19(1H, dt, J=1.9, 7.8Hz), 8.33(1H, s), 8.64(1H, d, J=15.6Hz).
260	($CDCl_3$,) δ 2.31(6H, s), 7.41(2H, s), 7.50-7.67(5H, m), 7.71(1H, d, J=7.8Hz), 7.87-7.90(3H, m), 8.07(1H, s), 8.31(1H, s).
261	($CDCl_3$) δ 2.33(6H, s), 7.20-7.25(1H, m), 7.35(1H, t, J=7.3Hz), 7.44(2H, s), 7.52-7.60(3H, m), 7.73(1H, d, J=7.8Hz), 7.88(1H, dd, J=1.0, 7.8Hz), 8.18(1H, dt, J=2.0, 7.8Hz), 8.33(1H, s), 8.63(1H, d, J=7.3Hz).
262	($CDCl_3$,) 87.44-7.57(5H, m), 7.72(2H, s), 7.78(1H, d, J=7.8Hz). 8.00(1H, d, J=6.8Hz), 8.18(1H, d, J=8.3Hz), 8.34(1H, t,J=2.0Hz), 9.46(1H, s), 9.83(1H, s).
263	($CDCl_3$) 87.47-7.57(4H, m). 7.78(1H, d. J=7.8Hz), 7.93(2H, s), 7.99-8.01(2H, m). 8.18(1H, d, J=7.8Hz), 8.33(1H, t, J=2.0Hz), 9.27(1H, s), 9.65(1H, s).
266	δ 7.20-7.25(1H, m), 7.35(1H, t, J=7.8H_z), 7.53-7.60(2H, m), 7.76-7.79(2H, m), 7.95(2H, s), 7.96(1H, s), 8.19(1H, dt, J=2.0, 7.8Hz), 8.32(1H, s), 8.63(1H, d, J=15.7Hz).
276	($CDCl_3$,) δ 7.56(1H, t, J = 7.8Hz), 7.71(1H, d, J = 7.8Hz). 7.75(1H, d, J = 7.8Hz), 7.87-7.90(3H, m), 8.04(1H, d, J = 7.8Hz), 8.28(2H, s), 8.42(1H, dd, J = 1.0, 7.3Hz), 8.46(1H, s), 8.76(1H, t, J = 2.0Hz).
284	($CDCl_3$) δ 7.03(2H, t, J=7.8Hz), 7.42-7.49(1H, m), 7.54(1H, t, J=7.8Hz), 7.78(1H, d, J=7.8Hz), 7.81(1H, s), 7.87-7.92(2H, m), 7.93(2H, s), 8.28(1H, t, J=2.0Hz).
285	δ 6.86(1H, d, J = 8.8Hz), 7.24(1H, t, J = 7.8Hz), 7.30-7.32(2H, m). 7.47(1H, t, J = 7.8Hz), 7.77(1H, d, J=7.8Hz), 7.93(2H, s), 8.14(1H, d, J = 7.3Hz), 8.31(1H, s), 9.32(1H, s), 9.46(1H, s).
286	δ 2.17(3H, s), 7.40(1H, t, J =7.8Hz), 7.49(1H, t, J = 7.8Hz), 7.80(1H, d, J = 7.8Hz), 7.78(1H, d, J = 7.8Hz), 7.94-7.95(3H, m), 8.06(1H, s), 8.16(1H, d, J = 7.8Hz), 8.31(1H, s), 9.50(1H, s), 9.58(1H, s), 9.79(1H, s).

(continued)

Comp. No.	^{1}H-NMR (DMSO-d_6, ppm)
287	δ 3.00(3H, s), 7.42(1H, t, J = 7.8Hz). 7.50(1H, t, J = 7.8Hz), 7.48(1H, s), 7.74(1H, d, J = 7.8Hz), 7.79(1H, d, J = 7.8Hz), 7.88(1H, t, J = 2.0Hz), 7.93(2H, s), 8.17(1H, d, J = 7.8Hz), 8.29(1H, t, J = 2.0Hz), 9.37(1H, s), 9.49(1H, s), 9.72(1H, s).
288	($CDCl_3$) δ 7.51(1H, t, J = 7.8Hz), 7.69(1H, d, J = 7.8Hz), 7.86-7.91(3H, m), 7.95(2H, s), 8.07(1H, s), 8.39(1H, s), 8.53-8.55(1H, m), 8.90(1H, s).
289	($CDCl_3$) δ 7.54(1H, t, J = 8.3Hz). 7.80(1H, d, J = 7.8Hz), 7.94(2H, s), 8.02(1H, d, J = 8.3Hz), 8.26-8.27(2H, m), 8.52(1H, d, J=8.3Hz), 8.74(1H, s), 8.87(1H, s), 10.56(1H, s).
290	δ 2.68(3H, s), 7.52(1H, t, J = 7.8Hz), 7.81(1H, d, J = 7.8Hz), 7.93(2H, s), 8.03(2H, s), 8.07(1H, s), 8.24(1H, d, J = 7.8Hz), 8.29(1H, s), 9.34(1H, s), 10.13(1H, s).
291	($CDCl_3$) δ 4.17(2H, s), 6.80-6.84(1 H, m), 6.98(1 H, dd, J = 7.8, 11.2Hz), 7.33(1 H, dd, J = 2.9, 6.4Hz), 7.51(1H, t, J = 7.8Hz), 7.82(1H, d, J = 7.BHz), 7.94(2H, s), 8.10(1H, d, J = 8.2Hz), 8.22(1H, s). 9.06(1H, d, J = 13.2Hz), 9.48(1H, s).
292	($CDCl_3$) δ 7.44(1H, dd, J = 8.8, 10.7Hz), 7.58(1H, t, J = 7.8Hz), 7.80(1H, d, J = 7.8Hz), 7.85(1 H, s), 7.95(2H, s), 7.98(1H, d, J = 7.8Hz), 8.27(1H, s), 8.43-8.47(1H, m), 8.55(1H, d, J = 14.2Hz), 9.09(1H, dd, J = 3.0, 6.4Hz).
293	δ 2.97(3H, s), 7.16(1H, dd, J = 8.8, 10.8Hz), 7.49(1H, t, J = 7.8Hz), 7.5K1H, s), 7.83(1H, d, J = 7.8Hz), 7.90-7.93(1H, m), 7.94(2H, s), 8.10(1H, d, J = 7.8Hz), 8.24(1H, s), 9.15(1H, d, J = 11.2Hz), 9.38(1H, s), 9.58(1H,s).
294	($CDCl_3$) δ 4.22(3H, s), 7.56(1H, t, J = 7.8Hz), 7.75(1H, t, J = 7.8Hz), 7.83(1H, s), 7.94(1H, s), 7.95(2H, s), 7.99-8.05(2H, m), 8.25(1H, s), 8.47(1H, d, J = 7.8Hz), 9.83(1H, s).
295	δ 4.06(3H, s), 7.52(1H, t, J = 7.3Hz), 7.73(1H, d, J = 8.3Hz), 7.82-7.88(2H, m), 7.89(1H, d, J = 8.3Hz), 7.93(2H, s), 8.25-8.29(2H, m), 9.48(1 H, s), 10.23(1 H, s).
296	($CDCl_3$) δ 2.16(3H, s), 7.14(1H, dd, J = 9.3, 11.2Hz), 7.52(1H, t, J = 7.8Hz), 7.80(1H, d, J = 7.8Hz), 7.94(2H, s), 7.96(1H, d, J = 2.9Hz), 8.01(1H, d, J = 7.8Hz), 8.13-8.16(1H, m), 8.27(1H, s), 8.86(1H, s), 8.90(1H, d, J = 14.2Hz), 9.00(1H, s).
306	($CDCl_3$) δ 7.52-7.58(2H, m), 7.77(1H, d, J = 7.8Hz), 7.90(1H, s), 7.94(2H, s), 7.95(1H, d, J = 7.8Hz), 8.01-8.03(1H, m), 8.31(1H, d, J = 7.8Hz), 8.47(1H, s), 8.65(1H, dd, J = 1.0, 4.9Hz), 10.25(1H, s).
307	($CDCl_3$) δ 7.57(1H, t, J = 7.8Hz), 7.73-7.77(3H, m), 7.84(1H, s), 7.89(2H, s), 8.05(1H, d, J = 7.8Hz), 8.26(1H, s), 8.32(1H, s), 8.81(1H, s), 8.83(1H, s).
309	($CDCl_3$) 87.44(1H, dd, J=4.8, 7.8Hz), 7.56(1H, J=7.8Hz). 7.80(1H, d, J=7.8Hz), 7.86(1H, s), 7.92(1H, d, J=7.3Hz), 7.95(2H, s), 8.23(1H, dd, J=20., 7.9Hz), 8.30(1H, s), 8.41(1H, s), 8.55(1H, dd, J=2.0, 4.5Hz).
310	($CDCl_3$) δ 7.46(1H, d, J = 8.3Hz), 7.55(1H, t, J = 8.3Hz), 7.74(1H, d, J = 8.3Hz), 7.88(3H, s), 8.03(1H, d, J = 7.8Hz), 8.18(1H, dd, J = 3.0, 8.2Hz), 8.24(1H, s), 8.41(1H, s), 8.90(1H, d, J = 2.4Hz).
312	($CDCl_3$) δ 7.57(1H, t, J = 7.8Hz), 7.70(2H, s), 7.75(1H, d, J = 7.8Hz), 7.83(1H, s), 7.88(2H, s), 8.04(1H, d, J=7.8Hz), 8.21(1H, s), 8.47(1H, s).
313	($CDCl_3$) δ 7.33(1H, t, J = 7.8Hz), 7.46(1H, d, J = 8.3Hz), 7.60(1H, s), 7.76(1H, s), 7.80(1H, d, J = 7.8Hz), 7.95(2H, s), 8.18-8.23(2H, m), 8.40(1H, s).
314	($CDCl_3$) δ 2.62(3H, s), 7.29(1H, s), 7.56(1H, t, J =7.8Hz), 7.77-7.79(2H, m), 7.9K1H, s), 7.94(2H, s), 8.16(1H, d, J=7.8Hz), 8.29(1H, s), 8.48(1H, s).
315	($CDCl_3$) δ 7.47-7.59(3H, m), 7.80(1H, d, J =7.8Hz), 7.93(1H, s), 7.94(2H, s), 8.26(1H, s), 8.34(1H, d, J = 6.5Hz), 8.47(1H, t, J = 2.0Hz), 8.52-8.55(1H, m), 13.91(1H, s).
316	($CDCl_3$,) δ 7.59(1H, t, J = 7.8Hz), 7.79(1H, d, J = 7.8Hz), 7.84(1H, s), 7.95(2H, s), 8.04(1H, d, J = 7.8Hz), 8.41(1H, t, J = 2.0Hz), 8.63(1H, t, J = 2.5Hz), 8.86(1H, d, J = 2.4Hz), 9.54(1H, d, J = 1.5Hz), 9.87(1H,s).
317	($CDCl_3$) δ 3.93(3H, s), 7.53(1H, t, J = 7.8Hz), 7.74(1H, d, J = 7.8Hz), 7.84(1H, s), 7.87(1H, d, J = 7.BHz), 7.94(2H, s), 8.03(1H, s), 8.26(1H, t, J = 2.0Hz), 8.48(1H, s).

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Comp. No.	^{1}H-NMR (DMSO-d_6, ppm)
318	($CDCl_3$) δ 4.02(3H, s), 7.53(1H, t, J = 7.8Hz), 7.45(1H, d, J = 7.8Hz), 7.80(1H, d, J = 7.8Hz), 7.85(1H, s), 7.89(1H, s), 7.94(2H, s), 8.05(1H, s), 8.24(1H, s).
319	($CDCl_3$) δ 4.10(3H, s), 7.53(1H, t, J = 7.8Hz), 7.67(1H, s), 7.76(1H, d, J = 7.8Hz), 7.70-7.86(3H, m), 7.94(2H, s), 8.21(1H, s).
320	($CDCl_3$) δ 1.94-2.04(2H, m), 2.17-2.22(1H, m), 2.37-2.42(1H, m), 3.95-4.00(1H, m), 4.05-4.09(1H, m), 4.49(1H, dd, J = 5.9, 8.3Hz), 7.50(1H, t, J = 7.8Hz), 7.72(1H, d, J = 7.8Hz), 7.83(1H, dd, J = 2.0, 7.8Hz), 7.87(1H, s), 7.94(2H, s), 8.23(1H, t, J = 2.0Hz), 8.67(1H, s).
321	($CDCl_3$) δ 7.51-7.53(3H, m), 7.57(1H, t, J = 8.3Hz), 7.76(1H, d, J = 7.3Hz), 7.83(1H, s), 7.95(2H, s), 8.01-8.07(3H, m), 8.23(1H, s), 8.38(1H, s), 9.51(1H, s).
327	($CDCl_3$) δ 7.45-7.61(4H, m), 7.77(1H, d, J = 7.8Hz), 7.84-7.91(3H, m), 7.97-8.18(4H. m), 8.31(1H, s).
328	($CDCl_3$) δ 7.24(1H, d, J = 7.8Hz), 7.35(1H, t, J = 7.8Hz), 7.54-7.60(2H, m), 7.78(1H, d, J = 7.8Hz), 7.89(1H, s), 7.96(1H, d, J 7.8Hz), 8.15-8.19(3H, m), 8.33(1H, s), 8.64(1H, d, J = 15.6Hz).
329	($CDCl_3$) δ 7.44-7.57(4H, m), 7.70(2H, s), 7.78(1H, d, J=7.8Hz), 8.01(2H, d, J=6.8Hz), 8.17(1H, dd, J=1.0, 7.8Hz), 8.34(1H, t, J=2.0Hz), 9.45(1H, s), 9.81(1H, s).
330	($CDCl_3$) δ 7.22(1H, dd, J=8.3, 12.2Hz), 7.34(1H, t, J=7.3Hz), 7.52-7.67(2H, m), 7.72(2H, s), 7.76(1H, d, J=7.9Hz), 7.90(1H, s), 7.92(1H, s), 8.18(1H, dt, J=1.4, 7.8Hz), 8.33(1H, t, J=2.0Hz), 8.64(1H, d, J=16.6Hz).
331	($CDCl_3$) 87.44(1H, dd, J=4.4, 7.8Hz), 7.57(1H, J=7.8Hz), 7.73(2H, s), 7.78(1H, d, J=7.8Hz), 7.84(1H, s), 7.90(1H, d, J=7.8Hz), 8.23(1H, dd, J=2.0, 7.8Hz), 8.29(1H, s). 8.41(1H, s), 8.55(1H, dd, J=2.0, 4.9Hz).
332	δ7.43-7.57(4H, m), 7.79(1H, d, J=7.8Hz), 7.92(2H, s), 8.00(2H, d, J=6.9Hz), 8.18(1H, d, J=8.3Hz), 8.35(1H, t, J=2.0Hz), 8.59(1H, s), 9.86(1H, s).
333	($CDCl_3$) δ 7.30-7.62(4H, m), 7.75(1H, d, J=7.8Hz), 7.84(1H, d, J=7.8Hz), 7.89-7.92(3H, m), 7.93(2H, s), 8.03(1H, s), 8.31(1H, s).
334	($CDCl_3$) δ 7.20-7.25(1H, m), 7.35(1H, t, J=6.3Hz), 7.54-7.58(2H, m), 7.79(1H, d, J=6.3Hz), 7.90-7.94(2H, m), 7.95(2H, s), 8.19(1H, t, J=8.3Hz), 8.33(1H, t, J=2.0Hz), 8.64(1H, d, J=16.1Hz),
335	($CDCl_3$) δ 7.51-7.62(4H, m), 7.77(1H, d, J = 7.3Hz), 7.89-7.93(3H, m), 8.02(2H, s), 8.08(1H, s), 8.26(1H, s), 8.37(1H, d, J = 14.6Hz).
338	($CDCl_3$) δ 7.22(1H, t, J = 7.8H$_z$), 7.36(1H, t, J =7.8Hz), 7.54-7.60(2H, m), 7.78(1H, d, J = 7.8Hz), 7.90(1H, d, J = 7.8Hz), 8.03-8.04(2H, m), 8.19(1H, t, J = 7.BHz), 8.26(1H, s), 8.41(1H, s), 8.65(1H, d, J = 16.6Hz).
369	($CDCl_3$) δ 7.46(1H, dd, J = 4.4, 7.8Hz), 7.59(1H, t, J = 8.3Hz), 7.81(1H, d, J = 8.3Hz), 7.89-7.92(1H, m), 8.04(2H, s), 8.24(1H, dd, J = 2.0, 7.8Hz), 8.27(1H, s), 8.35(1H, d, J = 13.7Hz), 8.42(1H, s), 8.56(1H, dd, J = 1.4, 4.4Hz).
375	δ 7.25(1H, d, J = 8.3Hz), 7.27(1H, d, J = 7.8Hz), 7.56-7.64(2H, m), 7.79(1H, d, J = 7.8Hz), 7.94(1H, d, J = 8-3Hz), 8.32(1H, s), 8.42(2H, s), 10.87(1H, s), 11.05(1H, s).
376	δ 7.53-7.64(4H, m), 7.80(1H, d, J = 7.8Hz), 7.99-8.01(2H, m), 8.09(1H, dd, J = 1.5,7.8Hz), 8.41(1H, d, J = 1.5Hz), 8.54(2H, s), 10.52(1H, s), 10.83(1H, s).
377	δ 7.19-7.30(2H, m), 7.57-7.66(2H, m), 7.81(1H, d, J =7.8Hz), 7.95(1H, dd, J = 1.5,7.8Hz), 8.33(1H, t, J = 1.5Hz), 8.53(2H, s), 10.89(1H, s), 11.08(1H, s).
378	($CDCl_3$) δ 7.21-7.23(1H, m), 7.36(1H, t, J=6.9Hz), 7.55-7.59(2H, m), 7.79(1H, d, J=8.3Hz), 7.84(1H, d, J=8.0Hz), 8:05(2H, s), 8.17-8.21(2H, m), 8.43(1H, t, J=2.0Hz), 8.65(1H, d, J=6.9Hz).
379	($CDCl_3$) δ 7.46-7.63(4H, m), 7.77(1H, d, J=7.8Hz), 7.84-7.91(3H, m), 8.00(1H, s), 8.07(2H, s), 8.14(1H, s), 8.40(1H, t, J=2.0Hz).
380	($CDCl_3$,) δ 7.52-7.63(4H, m), 7.77(1H, d, J = 7.8Hz), 7.89(1H, s), 7.90(2H, d, J = 7.8Hz), 7.99(1H, s), 8.03(1H, s), 8.26(2H, s), 8.39(1H, t, J = 2.0Hz).

(continued)

Comp. No.	^{1}H-NMR (DMSO-d_6, ppm)
383	($CDCl_3$) δ 7.21(1H, d, J = 8.3Hz), 7.36(1H, t, J =7.8Hz), 7.55-7.61(2H, m), 7.78(1H, d, J = 7.8Hz), 7.90(1H, d, J = 8.3Hz), 8.02(1H, s), 8.19(1H, dt, J = 1.9, 8.3Hz), 8.27(2H, s), 8.41(1H, s), 8.65(1H, d, J = 16.6Hz).
414	($CDCl_3$) δ 7.44(1H, dd, J = 4.9,7.8Hz), 7.59(1H; t, J = 8.3Hz), 7.81(1H, d, J=7,8Hz), 7.89(1 H, d, J = 8.3Hz), 8.04(1H, s), 8.23(1H, dd, J = 1.9, 7.8Hz), 8.27(2H, s), 8.37(1H, s), 8.43(1H, s), 8.55(1H, dd, J = 1.9, 4.3Hz).
460	δ 7.25(1H, d, J = 8.3Hz), 7.27(1H, d, J = 7.8Hz), 7.56-7.64(2H, m), 7.79(1H, d, J = 7.8Hz), 7.94(1H, d, J = 8.3Hz), 8.32(1H, s), 8.42(2H, s), 10.87(1H, s), 11.05(1H, s).
461	($CDCl_3$) δ 2.47 (3H, s), 7.51-7.62 (5H, m), 7.75 (1H, d, J =7.8Hz), 7.89-7.93 (4H, m), 8.00 (1H, broad-s), 8.35 (1H, t, J =2.0Hz).
462	($CDCl_3$) δ 2.47 (3H. s), 7.20-7.23 (1H, m), 7.36 (1H, t, J =7.8Hz), 7.55-7.60 (3H, m), 7.76 (1H, d, J =7.8Hz), 7.89 (1H, s), 7.92 (1H, s), 8.18-8.22 (1H, m), 8.39 (1H, s), 8.62 (1H, broad-s).
463	($CDCl_3$) δ 2.27 (3H, s), 2.41 (3H, s), 6.59 (1H, septet, J =6.4Hz), 6.72 (1H, s), 7.49-7.61 (5H, m), 7.70 (1H, d, J =7.8Hz), 7.83-7.89 (3H, m), 8.05 (1H, broad-s), 8.33 (1H, t, J =1.5Hz).
464	($CDCl_3$) δ2.38 (3H, s), 6.34 (1H, septet, J =6.4Hz), 6.87 (1H, s), 7.50-7.63 (5H, m), 7.72 (1H, d, J =7.8Hz), 7.88-7.90 (3H, m), 7.99 (1H, brs), 8.31 (1H, broad-s).
465	($CDCl_3$) δ2.37 (3H, s), 6.36 (1H, septet, J =5.9Hz), 6.87 (1H, s), 7.50-7.61 (4H, m), 7.72-7.73 (2H, m), 7.88-7.90 (3H, m), 8.06 (1H, broad-s), 8.32 (1H, s).
466	($CDCl_3$) δ2.39 (3H, s), 6.36 (1H, septet, J =5.9Hz), 6.89 (1H, s), 7.20-7.25 (1H, m), 7.35 (1H, t, J =6.8Hz), 7.52-7.60 (2H, m), 7.70 (1H, broad-s), 7.75 (1H, d, J =7.8Hz), 7.89 (1H, d, J =7.8Hz), 8.17-8.21 (1H, m), 8.36 (1H, s). 8.64 (1H, broad-d, J =16.1Hz).
467	($CDCl_3$) δ2.53 (3H, s), 6.35 (1H, septet, J =5.9Hz), 6.83 (1H, s), 7.49-7.61 (4H, m), 7.66 (1H, s), 7.74 (1H, d, J =8.3Hz), 7.88-7.92 (3H, m), 8.32 (1H, broad-s), 8.33 (1H, t, J =1.9Hz).
601	δ 2.34(6H, s), 7.37(1H, t, J = 7.8Hz), 7.45(2H, s), 7.53-7.65(4H, m), 7.77-7.82 (1H, m), 8.00-8.02(2H, m), 10.10(1H, s), 10.29(1H, s).
602	δ 2.36 (6H, s), 2.56 (3H, s), 7.29-7.43 (7H, m), 7.55-7.57 (1H, m), 7.75-7.78 (1H, m), 7.84-7.88 (1H, m), 8.64-8.66 (1H, m).
603	δ 2.37 (6H, s), 2.46 (3H, s), 7.34-7.42 (5H, m), 7.69-7.85 (4H, m), 8.11 (1H, s), 8.59-8.63 (1H, s).
604	δ 2.38 (6H, s), 2.45 (3H, s), 7.33-7.38 (5H, m), 7.78-7.85 (4H, m), 8.10 (1H, s), 8.61-8.65 (1H, m).
605	δ 2.34 (6H, s), 7.39 (1H, t, J =7.4Hz). 7.44 (2H, s). 7.50-7.54 (1H, m), 7.76-7.80 (2H, m), 7.88 (1H, t, J =7.4Hz), 8.12 (1H, t, J =7.4Hz), 8.20 (1H, d, J =1.0Hz), 10.12 (1H, s), 10.73 (1H, s).
606	δ 2.35 (6H, s), 7.40 (1H, t J =7.8Hz), 7.45 (2H, s). 7.59-7.62 (1H, m), 7.82-7.90 (2H, m), 8.44-8.50 (2H, m), 8.86 (1H, d, J =2.0Hz), 10.12 (1H, s), 10.72 (1H, s).
607	δ 2.34 (6H, s), 7.40 (1H, t, J =7.8Hz), 7.45 (2H, s), 7.57-7.62 (1H, m), 7.81-7.85 (1H, m), 8.22-8.25 (2H, m), 8.39-8.42 (2H, m), 10.12 (1H, s), 10.66 (1H, s).
609	δ 2.34 (6H, s), 7.39 (1H, t, J =6.9Hz), 7.45 (2H, s), 7.58 (1H, t, J =6.9Hz), 7.82 (1 H, t, J =6.9Hz), 8.06 (2H, d, J =8.8Hz), 8.15 (2H, d, J =8.8Hz), 10.12 (1H, s), 10.58 (1H, s).
610	δ 2.34(6H, s). 7.33-7.40(3H, m), 7.45(2H, s). 7.52-7.56(1H, m), 7.59-7.65(1H, m), 7.72-7.77(1H, m). 8.00(1H, t J =7.8Hz), 10.12(1H, s), 10.35(1H, s).
611	δ 2.34 (6H, s), 7.38 (1H, t J=7.6Hz), 7.45-7.65 (5H, m), 7.78-7.83 (2H, m), 7.87 (1H, d, J =7.6Hz), 10.10 (1 H, s), 10.39 (1H, s).
612	δ 2.34 (6H, s), 7.35-7.45 (5H, m), 7.55-7.59 (1H, m), 7.77-7.81 (1H, m), 8.07-8.12 (2H, m), 10.09 (1H, s), 10.32 (1H, s).
616	δ 2.34(6H, s). 7.22-7.27(1H, m), 7.38(1H, t, J = 7.8Hz), 7.46(2H, s), 7.50-7.55(3H, m), 7.95(1H, d, J = 7.8Hz), 7.99-8.03(1H, m), 10.12(1H, s), 10.50(1H, s).

(continued)

Comp. No.	^{1}H-NMR (DMSO-d_6, ppm)
618	δ 2.34 (6H, s), 7.39 (1H, t, J =7.7Hz), 7.45 (2H, s), 7.60 (1H, t, J =7.7Hz), 7.83 (1H, t, J =7.7Hz), 7.95 (2H, d, J =8.3Hz). 8.20 (2H, d, J =8.3Hz), 10.12 (1H, s), 10.56 (1H, s).
619	δ 2.34 (6H, s), 7.38 (1H, t, J =7.4Hz), 7.45 (2H, s), 7.55-7.60 (3H, m), 7.81 (1H, t, J =7.4Hz), 8.14 (2H, d, J =8.8Hz), 10.11 (1H, s), 10.40 (1H, s).
620	δ 2.34 (6H, s), 3.01 (6H, s), 6.77 (2H, d, J =9.0Hz), 7.33 (1H, t, J =7.0Hz), 7.45 (2H, s), 7.52 (1H, t, J =7·0Hz), 7.78 (1H, t, J =7.0Hz). 7.90 (2H, d, J =9.0Hz), 9.86 (1H, s), 10.07 (1H, s).
624	δ 2.34(6H, s), 7.23-7.28(2H, m), 7.38(1H, t, J = 7.8Hz), 7.45(2H, s), 7.52-7.64(2H, m), 8.05-8.10(1H, m), 10.13(1H, s), 10.88(1H, s).
628	δ 2.34 (6H, s), 7.37-7.42(1H, m), 7.40 (2H, s), 7.55-7.58 (1H, m), 7.95-8.07 (2H, m), 8.21 (1H, dd, J =8.9,2.1Hz), 8.30 (1H, dd, J =8.9,2.1Hz), 10.13 (1H, s), 10.75 (1H, s).
629	δ 2.34 (6H, s), 7.39 (1H, t, J =7.4Hz), 7.45 (2H, s), 7.52 (1H, 7.4), 7.81 (1H, dd, J =8.3,2.7Hz), 7.88 (1H, dd, J =8.3,5.6Hz), 8.10-8.16 (2H, m), 10.13 (1H, s), 10.75 (1H, s).
630	δ 2.33 (6H, s), 7.34-7.38 (2H, m), 7.43 (2H, s), 7.51-7.54 (1H, m), 7.58-7.60 (1H, m), 7.67-7.71 (1H, m), 8.00-8.04 (1H, m), 10.10 (1H, s), 10.54 (1H, s).
631	δ 2.34 (6H, s), 7.37 (1H, t, J =7.9Hz), 7.45-7.47 (3H, m), 7.52-7.56 (1H, m), 7.65 (1H, dd, J =10.2,2.0Hz), 7.77 (1H, t. J =7.9Hz), 7.99-8.02 (1H, m), 10.11 (1H, s), 10.41 (1H, s).
633	δ 2.34 (6H, s), 7.40 (1H, t, J =8.1Hz), 7.45 (2H, s), 7.55 (1H, t, J =6.5Hz), 7.92 (1 H, d, J =8.1Hz). 8.10 (1H, t, J =6.5Hz), 8.32 (1H, t, J =8.1Hz), 8.43 (1H, s), 10.13 (1H, s), 10.84 (1H, s).
634	δ 2.34 (6H, s), 7.39 (1H, t, J =8.0Hz), 7.45 (2H, s), 7.51-7.55 (1H, m), 7.83 (1H, d, J =8.0Hz), 7.99 (1H, dd, J =7.7,2.2Hz), 8.12 (1H, t, J =7.7Hz), 8.30 (1H, d, J =2.2Hz), 10.13 (1H, s), 10.78 (1H, s).
638	δ 2.33 (6H, s), 7.37 (1H, t, J =8.1 Hz), 7.44 (2H, s), 7.50-7.55 (2H, m), 8.03-8.07 (1H, m), 8.26-8.31 (1H, m), 8.41-8.42 (1H, m), 10.10 (1H, s), 10.54 (1H, s).
639	($CDCl_3$) δ 2.38 (6H, s), 7.38 (2H, s), 7.41-7.49 (2H, m), 7.80 (1H, broad-d, J =11.4Hz), 7.90-7.94 (1H, m), 8.32-8.35 (1H, m), 8.57-8.59 (1H, m), 8.62-8.65 (1H, m), 8.74 (1H, s).
648	δ 1.80-1.86 (2H, m), 2.05 (3H, s), 2,33-2.38 (8H, m), 3.99 (2H, t, J =5.1Hz), 7.29 (1H, t, J =7.4Hz), 7.44-7.48 (3H, m), 7.79 (1H, d, J =7.4Hz), 9.25 (1H, s), 10.04 (1H, s).
649	δ 2.29(6H, s), 7.45(2H, s), 7.54-7.66(3H, m), 7.77(1H, d, J =8.8Hz), 7.94(1H, dd, J =2.0.8.1Hz), 8.00-8.03(2H, m), 8.19(1H, d, J =2.0Hz), 10.10(1H, s), 10.29(1H, s).
650	δ 2.29(6H, s), 7.45(2H, s), 7.48-7.65(4H, m), 7.93-8.02(3H, m), 8.23(1H, dd, J =2.4, 7.3Hz), 10.03(1H, s), 10.32(1H, s).
651	δ 2.29(6H, s), 7.45(2H, s), 7.54(1H, dd, J = 8.8,9.8Hz), 7.96-8.01(1H, m), 8.23(2H, d, J = 8.8Hz), 8.26(1H, dd, J = 2.4,8.8Hz), 8.40(2H, d, J = 8.8Hz), 10.05(1H, s), 10.70(1H, s).
652	δ 2.29(6H, s), 7.45(2H, s), 7.51-7.56(1 H, m), 7.96-8.00(1 H, m), 8.06(2H, d, J = 8.3Hz), 8.15(2H, d, J = 8.3Hz), 8.25(1H, dd, J = 2.0,7.3Hz), 10.05(1H, s), 10.61(1H, s).
653	δ 2.29(6H, s), 7.33-7.40(2H, m), 7.45(2H, s), 7.49-7.54(1H, m), 7.59-7.65(1H, m), 7.73-7.77(1H, m), 7.91-7.95(1H, m), 8.42(1H, d, J = 6.3Hz), 10.05(1H, s), 10.35(1H, s).
654	δ 2.29(6H, s), 7.37-7.45(4H, m), 7.51(1H, dd, J =8.8,9.8Hz), 7.93-7.98(1H, m), 8.06-8.10(2H, m), 8.22(1H, dd, J = 2.0,7.3Hz), 10.03(1H, s), 10.37(1H, s).
655	δ 2.29(6H, s). 7.45(2H, s), 7.51-7.56(1 H, m), 7.94-8.00(3H, m), 8.20(2H, d, J = 8.3Hz), 8.25(1H, dd, J = 2.0,7.3Hz), 10.05(1H, s), 10.59(1H, s).
656	δ 2.29(6H, s), 7.23-7.28(1H, m), 7.42-7.54(4H, m), 7.80-7.87(1H, m), 7.91-7.95(1H, m), 8.41(1H, d, J = 5.9Hz), 10.05(1H, s), 10.36(1H, s).
657	δ 2.30(6H, s), 7.46(2H, s), 7.50-7.59(2H, m), 7.92-7.96(1H, m), 8.10(1H, dd, J = 2.0,7.3Hz), 8.52-8.56(2H, m), 10.07(1H, s), 10.73(1H, s).

(continued)

Comp. No.	^{1}H-NMR (DMSO-d_6, ppm)
658	δ 2.31(6H, s), 7.47(2H, s), 7.55-7.59(2H, m), 7.62-7.66(1H, m), 8.01-8.04(2H, m), 8.09(1H, s), 8.54(1H, s), 8.66(1H, s), 10.27(1H, s), 10.79(1H, s).
659	δ 2.34(6H, s), 7.40(1H, t, J =9.3Hz), 7.45(2H, s), 7.53-7.64(3H, m), 7.97-8.05(3H, m), 8.14(1H, dd, J =2.9,6.3Hz), 10.03(1H, s), 10.48(1H, s).
660	δ 2.40(6H, s), 7.45(2H, s), 7.54-7.65(4H, m), 7.97-8.03(3H, m), 8.09(1H, d, J =2-4Hz), 10.20(1H, s), 10.56(1H, s).
661	δ 2.41(6H s), 7.45(2H, s), 7.54-7.65(3H, m), 7.72(1H, d, J = 8.8Hz), 7.94-7.99(3H, m), 8.08(1H, d, J = 2.9Hz), 10.20(1H, s), 10.56(1H, s).
662	δ 2.44(6H, s), 7.45(2H, s), 7.53-7.65(3H, m), 7.79(1H, dd, J =2.4,8.3Hz), 7.90-7.98 (3H, m), 8.05(1H, d, J =2.4Hz), 10.15(1H, s), 10.53(1H, s).
663	δ 2.35(6H,s),7.32(1H,t,J=8.3),7.46(2H,s),7.54-7.77(4H,m),8.00(2H,dd,J=1.5,J=8.3), 10.3(1H,s),10.6(1H,s).
664	($CDCl_3$) 82.53(6H, s), 7.35(2H, s), 7.52-7.63(5H, m), 7.92(2H, d, J = 8.8Hz), 8.46(1H, d, J = 8.8Hz), 8.57(1H, s).
665	δ 2.34(6H, s), 7.37(1H, t, J = 7.8Hz), 7.44(2H, s), 7.53-7.65(4H, m), 7.77-7.81(1H, m), 7.99-8.02(2H, m), 10.09(1H, broad), 10.29(1H, broad).
668	δ 2.34(6H, s), 7.33-7.40(3H, m), 7.44(2H, s), 7.51-7.56(1H, m), 7.58-7.65(1H, m), 7.72-7.77(1H, m), 8.00(1H, t, J = 8.3Hz), 10.10(1H, s), 10.34(1H, s).
670	δ 2.28 (6H, s), 7.31-7.44 (5H, m), 7.57 (1H, t, J = 6.3Hz), 7.79 (1H, t, J = 7.3Hz), 8.07-8.09 (2H, m), 10.09 (1H, s), 10.32 (1H, s).
676	δ 7.34 (6H, s), 7.39 (1H, t, J =7.2Hz), 7.44 (2H, s), 7.59 (1H, t, J =7.2Hz), 7.83 (1H, t, J =7.2Hz), 7.99 (2H, d, J =8.8Hz), 8.15 (2H, d, J =8.8Hz), 10.1 (1H, s), 10.57 (1H, s).
679	δ 2.35 (6H, s), 7.4 (1H, t, J =7.3Hz), 7.44 (2H, s), 7.61 (1H, t, J =7.3Hz), 7.84 (1H, t, J =7.3Hz), 8.24 (2H, d, J =8.8Hz), 8.41 (2H, d, J =8.8Hz), 10.11 (1H, s), 10.66 (1H, s).
682	δ 2.35 (6H, s), 7.38 (1H, t, J =8.1Hz), 7.44 (2H, s), 7.49 (1H, d, J =8.1 Hz), 7.56 (1H, d, J =8.1 Hz), 8.07 (2H, d, J =8.8Hz), 8.14 (2H, d, J =8.8Hz), 10.1 (1H, s), 10.43 (1H, s).
686	δ 2.34(6H, s), 7.23-7.28(2H, m), 7.38(1H, t, J = 7.8Hz), 7.44(2H, s), 7.52-7.65(2H, m), 8.05-8.10(1H, m), 10.12(1H, s), 10.88(1H, s).
699	δ 2.34 (6H, s), 3.39 (3H, s), 7.39 (1H, t, J =7.8Hz), 7.44 (2H, s), 7.49-7.59 (2H, m), 8.08-8.13 (2H, m). 8.55 (1H, dd, J =4.9,2.0Hz), 10.12 (1H, s), 10.73 (1H, s).
708	($CDCl_3$) δ 7.39(1H, t, J = 7.8Hz), 7.48-7.64(3H, m), 7.88-7.96(4H, m), 8.09-8.13(2H, m), 8.69(1 H, t, J = 7.8.Hz), 8.75(1H, d, J = 7.8H).
711	($CDCl_3$) δ 7.22(1H, d, J = 8.3Hz). 7.35-7.40(2H, m), 7.56-7.62(1H, m), 7.91(1H, t, J = 7.3Hz), 7.96(2H, s), 8.15(1H, d, J = 13.3Hz), 8.22(1H, dt, J = 1.9, 8.3Hz), 8.73(1H, dt, J = 1.5, 8.3Hz), 8.92(1H, d, J = 17.1Hz).
719	($CDCl_3$) δ 7.41(1H, t, J 8.3Hz). 7.85(2H, d, J = 8.3Hz), 7.92(1H, d, J = 6.9Hz), 7.96(2H, s), 8.03(2H, d, J = 8.3Hz), 8.06(1H, s), 8.10(1H, s), 8.63(1H, dt, J = 1.5, 8.3Hz).
722	($CDCl_3$) δ 7.42(1H, t, J = 8.3Hz), 7.93(1H, d, J = 5.3Hz), 7.96(2H, s), 8.06(1H, d, J = 12.2Hz), 8.10(2H, d, J = 8.8Hz), 8.13(1H, s), 8.40(2H, d, J = 8.8Hz), 8.64(1H, dt, J = 1.5, 8.3Hz).
791	($CDCl_3$) δ 2.34(6H, s), 7.37(1H, t, J=7.8Hz), 7.45(2H, s), 7.54(2H, t, J=7.8Hz), 7.61(1H, d, J=7.8Hz), 7.80(1H, d, J=11.7Hz), 7.82-7.87(1H, m), 7.92(2H, d, J=7.8Hz), 8.12(1H, s), 8.62(1H, dt J=2.0, 7.8Hz).
831	($CDCl_3$) δ 7.46-7.64(6H, m), 7.93-7.96(4H, m), 8.61(1H, s), 7.75(1H, dd, J = 1.9, 8.3Hz).
832	($CDCl_3$) δ 7.24(1H, d, J = 8.3Hz), 7.36(1H, t, J =8.3Hz), 7.47(1H, t, J = 8.3Hz), 7.55-7.62(3H, m), 7.96(2H, s), 8.21(1H, dt, J = 2.0, 8.3Hz), 8.77(1H, dd, J = 2.0, 8.3Hz), 9.33(1H, d, J = 16.6Hz).

(continued)

Comp. No.	^{1}H-NMR (DMSO-d_6, ppm)
833	($CDCl_3$) δ 7.45-7.52(3H, m), 7.60(1H, d, J = 8.8Hz), 7.96(2H, s), 8.29(1H, d, J = 7.8Hz), 8.57(1H, dd, J = 2.0, 4.4Hz), 8.72(1H, d, J = 7.8Hz), 9.00(1H, s).
1001	δ 2.20 (6H, s), 3.45 (3H, s), 7.23-7.30 (5H, m), 7.43-7.45 (4H, m), 7.73-7.76 (2H, m), 9.88 (1H, s).
1013	δ 2.20(6H, s), 3.48(3H, s), 7.39-7.97(8H, m), 7.43(2H, s), 9.90(1H, s).
1016	δ 2.21 (6H, s), 3.46 (3H, s), 7.40-8.03 (10H, m), 9.91 (1H, s).
1032	δ 2.08(3H, s), 2.30(6H, s), 7.45(2H, s), 7.47(1H, d, J = 7.8Hz), 7.54(1H, t, J = 7.8Hz). 7.66(1H, d, J = 7.8Hz), 7.75(1H, d, J = 7.8Hz), 7.82(1H, d, J = 7.8Hz), 8.04(1H, dd, J = 2.0,7.8Hz), 8.13(1H, s), 8.35(1H, s), 9.99(1H, s), 10.16(1H, s), 10.48(1H, s).
1043	($CDCl_3$) δ 1.38(6H, m), 2.37(6H, s), 3.13(1H, broad), 3.33(3H, broad), 3.78(1H, broad), 3.89(1H, broad), 7.37(2H, s), 7.48(1H, d, J = 7.8Hz), 7.58(1H, t, J = 7.8Hz), 7.77(1H, s), 7.90(1H, s), 7.93(1H, broad).
1089	($CDCl_3$) δ 0.89(3H, t, J = 7.3Hz), 1.53-1.62(2H, m), 2.61(2H, t, J = 7.3Hz), 3.50(3H, broad), 6.80(1H, broad), 7.03(1H, broad), 7.22(1H, broad), 7.34(3H, broad), 7.47(1H, s), 7.67-7.76(3H, broad-m), 7.93(1H, s).
1091	($CDCl_3$) δ 0.88(3H, t, J = 7.3Hz), 1.53-1.63(2H, m), 2.62(2H, t, J = 7.8Hz), 3.52(3H, s), 6.83-6.89(2H, m), 7.26-7.32(3H, m), 7.41(1H, t, J = 7.8Hz), 7.48(1H, s), 7.66(1H, s), 7.76(2H, d, J = 8.8Hz), 7.93(1H, d, J = 1.5Hz).
1097	($CDCl_3$) δ 0.90(3H, t, J = 7.3Hz), 1.55-1.65(2H, m), 2.64(2H, t, J = 7.8Hz), 3.55(3H, s), 7.27(1 H, s), 7.40-7.44(3H, m), 7.49-7.51(3H, m), 7.59(1H, s), 7.69(1H, s), 7.76(1H, d, J = 7.8Hz), 7.95(1H, s).
1100	($CDCl_3$) δ 0.88(3H, t, J = 7.3Hz), 1.54-1.64(2H, m), 2.63(2H, t, J = 7.8Hz), 3.56(3H, s), 7.29(1 H, s). 7.40-7.50(4H, m), 7.59(1H, s), 7.71(1H, s), 7.76(1H, d, J = 7.3Hz), 7.94(1H, d, J = 1.5H), 8.06(2H, d, J = 8.8Hz).
1125	($CDCl_3$) 62.25(6H, s), 3.54(3H, s), 6.84(1H, broad-s), 7.00-7.10(2H, m), 7.20-7.40(6H, m), 7.50-7.60(1H, broad), 7.60-7.70(1H, broad).
1126	($CDCl_3$) 83.57(3H, s), 7.20-7.24(2H, m), 7.29-7.32(3H, m), 7.34(1H, t, J=7.8Hz), 7.40-7.44(2H, m), 7.57(1H, d, J=7.8Hz), 7.86-7.91(1H, m), 7.92(2H, s).
1206	δ 1.17 (3H, broad), 2.22 (6H, s), 3.94 (2H, broad), 7.01-7.08 (2H, m), 7.29-7.43 (6H, m), 7.72-7.77 (2H, m), 9.90 (1H, s).
1207	δ 1.26 (3H, t, J =6.8Hz), 2.04 (6H, s), 4.11 (2H, q, J =6.8Hz), 7.16-7.70 (12H, m).
1208	δ 2.28 (6H, s), 3.36 (3H, s), 7.27-7.32 (6H, m), 7.43 (2H, s), 7.55-7.57 (2H, broad), 9.96 (1H, s).
1209	δ 2.28 (6H, s), 3.47 (3H, s), 6.98 (1H, broad), 7.11 (2H, broad), 7.19 (1H, broad), 7.37 (1H, broad), 7.44 (2H, s), 7.51 (1H, broad), 7.74 (1H, broad), 9.94 (1H, s).
1210	δ 2.23 (3H, s), 2.29 (6H, s), 7.07-7.26 (5H, m), 7.44 (2H, s), 7.56-7.77 (2H, m), 9.98 (1H, s).
1211	δ 2.24 (3H, s), 2.28 (6H, s), 7.08-7.09 (2H, m), 7.22-7.28 (2H, m), 7.44 (2H, s), 7.51-7.58 (3H, m), 9.99 (1H, s).
1212	δ 2.29 (6H, s), 3.12 (3H, s), 7.17-8.02 (9H, m), 9.95 (1H, s).
1213	δ 2.26 (6H, s), 3.41 (3H, s), 7.12-8.34 (9H, m), 9.92 (1H, s).
1214	δ 2.26 (6H, s), 3.40 (3H, s), 7.29 (1H, broad), 7.44 (2H, s), 7.59-7.81 (4H, m), 8.12 (2H, broad), 9.91 (1H, s).
1215	δ 2.26 (6H, s), 3.40 (3H, s), 7.31-7.39 (7H, m), 7.50-7.56 (1H, m), 7.81-7.83 (1H, m), 9.94 (1H, s).
1216	δ 2.27 (6H, s), 3.39 (3H, s), 7.31 (1H, m), 7.47 (2H, s), 7.60-7.67 (3H, m), 7.72-7.80 (3H, m), 9.96 (1H, s).
1217	δ 2.27 (6H, s), 3.37 (3H, s), 7.29 (2H, broad), 7.44-7.48 (3H, m), 7.59-7.64 (2H, m), 7.76 (2H, broad), 9.94 (1H, s).
1218	δ 2.27 (6H, s), 3.39 (3H, s), 7.03-7.72 (9H, m), 9.94 (1H, s).
1219	δ 2.28 (6H, s), 3.36 (3H, s), 7.18-8.04 (9H, m), 9.98 (1H, m).
1220	δ 2.28 (6H, s), 3.34 (3H, s), 7.12-7.56 (9H, m), 9.97 (1H, s).

(continued)

Comp. No.	^{1}H-NMR (DMSO-d_6, ppm)
1229	δ 2.28 (6H, s), 3.39 (3H, s), 7.02-7.28 (2H, m), 7.35-7.43 (2H, m), 7.55-7.70 (2H, m), 7.93-7.99 (2H, m), 9.95 (1H, m).
1235	δ 2.26(6H, s), 3.43(3H, s), 7.27(1H, t, J = 7.8Hz), 7.44(2H, s), 7.58-7.65(2H, m), 7.71(1H, t, J = 7.8), 8.00(1H, dd, J = 8.3,2.0Hz), 8.04(1H, dd, J = 9.3,2.0Hz), 9.91(1H, s).
1236	δ 2.29 (6H, s), 3.41 (3H, s), 7.44-7.46 (3H, m), 7.59-7.61 (2H, m), 7.72-7.77 (1H, m), 7.88 (1H, d, J =6.8Hz), 7.95-7.99 (1H, m), 9.95 (1H, s).
1237	δ 2.29 (6H, s), 3.40 (3H, s), 7.08-7.91 (8H, m), 9.94 (1 H, s).
1238	δ 2.28 (6H, s), 3.39 (3H, s), 7.21-7.28 (1H, m), 7.34-7.44 (3H, m), 7.54-7.60 (2H, m), 7.79-7.91 (2H, m), 9.95 (1 H, m).
1245	δ 2.28 (6H, s), 3.41 (3H, s), 7.25 (1H, t, J =7.6Hz), 7.36 (1H, d, J =4.7Hz), 7.44 (2H, s), 7.57-7.64 (2H, m), 7.92 (1H, d, J =7.6Hz), 8.32 (1H, dd, J =4.7,1.9Hz), 9.97 (1H, s).
1246	δ 2.31 (6H, s), 3.60 (3H, s), 7.25-7.31 (2H, m), 7.44 (2H, s), 7.57-7.59 (2H, m), 7.97-8.01 (1H, m), 8.17-8.18 (1H, m), 9.97 (1H, s).
1247	δ 2.28 (6H, s), 3.39 (3H, s), 7.33 (1H, d, J =7.6Hz), 7.44 (2H, s), 7.61-7.69 (3H, m), 7.80 (1H, broad), 8.30 (1H, broad), 10.01(1H, s).
1255	δ 2.29 (6H, s), 3.35 (3H, s), 7.19-7.70 (10H, m), 9.98 (1H, s).
1256	δ 2.28 (6H, s), 2.30 (3H, s), 3.32 (3H, s), 6.98-7.72 (9H, m), 9.93 (1H, s).
1257	δ 2.23 (3H, s), 2.29 (6H, s), 3.34 (3H, s), 7.07-7.38 (5H, m), 7.53-7.76 (2H, m), 7.43 (2H, s), 9.98 (1H, s).
1258	δ 2.27 (6H, s), 2.33 (3H, s), 3.31(3H, s), 6.98-7.51 (9H, s), 9.93 (1H, s).
1259	δ 2.29 (6H, s), 3.41 (3H, s), 7.18 (1H, J = 7.3Hz), 7.44(2H, s), 7.46-7.57 (2H, m), 7.67 (1H, t, J =7.3Hz), 7.73-7.82 (2H, m), 8.01 (1H, d, J =7.8Hz), 9.95 (1H, s).
1260	δ 2.26 (6H, s), 3.36 (3H, s), 7.42 (2H, s), 7.59 (1H, broad), 7.7 (1H, broad), 7.82 (1H, t, J =7.9Hz), 8.2 (1H, broad), 8.34-8.37 (1H, m), 8.48 (1H, dd, J =7.9,1.7Hz), 8.62 (1H, t, J =2.0Hz), 9.92 (1H, s).
1261	δ 2.27 (6H, s), 3.37 (3H, s), 7.43 (2H, s), 7.59-7.65 (2H, m), 8.11 (1H, broad), 8.18 (2H, d, J =8.8Hz), 8.29 (2H, d, J =8.8 Hz), 9.91 (1H, s).
1262	δ 2.33 (6H, s), 3.35 (3H, s), 7.30-7.83 (9H, m), 9.93 (1H, s).
1263	δ 2.27 (6H, s), 3.37 (3H, s), 7.18-7.80 (9H, m), 9.96 (1H, s).
1264	δ 2.27 (6H, s), 3.35 (3H, s), 7.43 (2H, s), 7.48 (1H, broad), 7.58 (1H, broad), 7.75 (1H, broad), 7.99 (2H, d, J =8.5Hz), 8.08 (2H, d, J =8.5Hz), 9.95 (1H, s).
1265	δ 2.27 (6H, s), 3.36 (3H, s), 7.03-7.73 (9H, m), 9.93 (1H, s).
1266	δ 2.28 (6H, s), 3.35 (2H, s), 7.18-7.61 (9H, m), 9.99 (1H, s).
1267	δ 2.28 (6H, s), 3.39 (3H, s), 7.11-7.18 (3H, m), 7.26-7.30 (1H, t, J =7.8Hz), 7.40-7.47 (3H, m), 7.58 (2H, t, J =7.6Hz), 9.96 (1H, s).
1274	δ 2.27 (6H, s), 3.37 (3H, s), 7.29 (3H, broad), 7.41-7.47 (4H, m), 7.59-7.61 (2H, m), 9.95 (1H, s).
1293	δ 2.28 (6H, s), 3.41 (3H, s), 7.25 (1H, t, J =7.6Hz), 7.35 (1H, dd, J =7.3,4.9Hz), 7.43 (2H, s), 7.57-7.63 (2H, m), 7.91 (1H, d, J =7.6Hz), 8.32 (1H, dd, J =4.9,2.0Hz), 9.96 (1H, s).
1294	δ 2.28 (6H, s), 3.39 (3H, s), 7.31-7.35 (1H, m), 7.42 (2H, s), 7.43-7.48 (1H, m), 7.61-7.75 (2H, m), 7.80 (1H, s), 8.32 (1H, broad), 10.01 (1H, s).
1463	δ 2.25(6H, s), 3.38(3H, s), 7.27-7.41(6H, m), 7.45(2H, s), 7.90(1H, broad), 8.05(1H, d, J = 6.8Hz), 9.96(1H, s).
1464	δ 2.23(6H, s), 3.42(3H, s), 7.41 (1H, broad), 7.45(2H, s), 7.60(2H, broad), 7.90(1H, broad), 8.08-8.13(3H, broad), 9.93(1H, s).

(continued)

Comp. No.	^{1}H-NMR (DMSO-d_6, ppm)
1465	δ 2.25(6H, s), 3.40(3H, s), 7.39-7.42(1H, m), 7.45(2H, s), 7.50(1H, broad), 7.78(1H, broad), 7.91(1H, broad), 7.97-8.10(3H, m), 9.94(1H, s).
1478	δ 2.29(6H, s), 3.24(3H, s), 6.84(1H, d, J = 7.8Hz), 7.12(1H, t, J = 7.8Hz), 7.33(2H, s), 7.50-7.64(4H, m), 7.85-7.88(2H, m), 7.98-8.03(1H, m), 10.22(1H, s).
1479	δ 2.41(3H, s), 3.25(3H, s), 6.95(1H, dd, J = 1.5,7.8Hz), 7.16(1H, t, J = 7.8Hz), 7.50-7.64(4H, m), 7.68(1H, s), 7.86-7.88(2H, m), 7.93(1H, t, J = 1.5Hz), 7.98-8.00(1H, m), 10.24(1H, s).
1480	($CDCl_3$) δ 3.34(3H, s), 7.13-7.19(2H, m), 7.49-7.58(3H, m), 7.70-7.73(2H, m), 7.78-7.91(4H, m), 8.12(1H, s).
1481	($CDCl_3$) δ 3.35(3H, s), 7.15-7.20(3H, m), 7.32(1H, t, J = 7.8Hz), 7.51-7.55(1H, m), 7.71(1H, d, J = 2.9Hz), 7.72(1H, d, J = 2.0Hz), 7.80(2H, s), 8.14(1H, dt, J = 2.0, 7.8Hz), 8.37(1H, d, J = 16.1 Hz).
1482	δ 1.18(3H, t, J = 7.3Hz), 2.30(6H, s), 3.76(2H, q, J = 7.3Hz), 6.81(1H, d, J = 7.8Hz), 7.11(1H, t, J = 7.8Hz), 7.33(2H, s), 7.50-7.62(4H, m), 7.84-7.88(2H, m), 7.95-8.00 (1H, m), 10.20(1H, s).
1483	δ 1.44(6H, d, J = 6.3Hz), 2.07(6H, s), 5.35(1H, septet, J = 6.3Hz), 6.84(1H, d, J = 7.8Hz), 7.21(1H, t, J = 7.8Hz), 7.21(2H, s), 7.50-7.61(3H, m), 7.75(1H, dd, J = 1.5, 7.8Hz), 7.86-7.89(3H, m), 10.29(1H, s).
1484	δ 2.18 (3H, s), 2.32 (6H, s), 7.37-7.59 (11H, m), 10.42 (1H, s).
1485	δ 2.34 (3H, s), 2.35 (6H, s), 7.34-8.02 (10H, m), 10.33 (1H, s).
1486	δ 2.33 (3H, s), 2.36 (6H, s), 7.29-8.12 (9H, m), 10.37 (1H, s).
1487	δ 2.20 (6H, s), 3.08 (3H, s), 3.20 (3H, s), 6.93-7.39 (10H, m), 7.45-7.51 (1H, m).
1607	($CDCl_3$) δ 3.31(3H, s), 3.35(3H, s), 6.81(1H, dt, J = 6.8,1.0Hz), 6.94(1H, t, J = 7.8Hz), 7.10-7.24(5H, m), 7.35-7.40(1H, m), 7.41(1H, s), 7.78(2H, s).
1617	($CDCl_3$) δ 3.30(3H, s), 3.33(3H, s), 6.76-7.00(4H, m), 7.19-7.23(3H, m), 7.37(1H, s), 7.77(2H, s).
1645	($CDCl_3$) δ 3.30(3H, s), 3.36(3H, s), 6.96-7.06(3H, m), 7.12-7.16(1H, m), 7.39-7.42(2H, m), 7.95(2H, s), 8.24(1H, s).
1654	($CDCl_3$) δ 3.30(3H, s), 3.42(3H, s), 7.01(1H, d, J = 7.3Hz), 7.10(1H, t, J = 7.8Hz), 7.16(1H, dd, J = 1.4, 7.8Hz), 7.41(1H, t, J = 1.4Hz), 7.54(1H, dd, J = 1.9Hz), 7.56(1H, d, J = 1.9Hz), 7.80(1H, s), 7.81(2H, s).
1655	($CDCl_3$) δ 3.29(3H, s), 3.38(3H, s), 3.78(3H, s), 6.73(1H, d, J = 8.3Hz), 6.96(1H, d, J = 8.3Hz), 7.04(1H t, J = 7.8Hz), 7.08(1H, d, J = 1.5Hz), 7.14(1H, d, J = 7.8Hz), 7.40(1H, s), 7.54(1H, d, J = 8.3Hz), 7.81(2H, s).
1697	δ 2.23 (6H, s), 3.32 (3H, s), 3.39 (3H, s), 7.15-7.43 (10H, m).
2001	($CDCl_3$) δ 2.36 (6H, s), 7.36 (2H, s), 7.53-7.57 (2H, m), 7.61-7.65 (1H, m), 7.95-8.03 (3H, m), 8.08 (1H, dd, J =7.3,1.0Hz), 8.52 (1H, broad-s), 8.62 (1H, dd, J =8.3,1.0Hz), 9.19 (1H, broad-s).
2004	δ 2.30 (6H, s), 7.37-7.43 (2H, m), 7.46 (2H, s), 7.65 (1H, d, J =8.1Hz), 7.83 (1H, dd, J =7.5,5.6Hz), 7.88 (1H, d, J =7.5Hz), 8.13 (1H, t, J =8.1Hz), 8.40 (1H, d, J =8.1H), 10.08 (1H, s), 10.62 (1H, s).
2032	δ 2.30 (6H, s), 7.46 (2H, s), 7.75-7.78 (1H, m), 7.91 (1H, dd, J=7.3,1.0Hz), 8.13-8.18 (2H, m), 8.27 (1H, d, J =8.0Hz), 8.56 (1H, d, J =8.0Hz), 8.77 (1H, d, J =1.0Hz), 10.62 (1H, s), 10.75 (1H, s).
2033	δ 2.27(6H, s), 6.16(2H, s), 6.71(1H, d, J = 7.6Hz), 7.01(2H, d, J = 1.0Hz), 7.24(1H, d, J = 6.9Hz), 7.42(2H, s), 7.59(1H, dd, J = 7.6,6.9Hz), 7.65(1H, s), 9.94(1H, s).
2034	δ 2.32 (6H, s), 7.47 (2H, s), 7.90-7.93 (3H, m), 8.15 (1H, t, J =8.0Hz), 8.37 (1 H, d, J =8.0Hz), 8.83 (2H, dd, J =4.6,1.7Hz), 10.12 (1H, s), 10.92 (1H, s).
2035	δ 2.30 (6H, s), 7.46 (2H, s), 7.55-7.56 (1H, m), 7.89 (1H, d, J =7.4Hz), 8.14 (1H, t, J =7.8Hz), 8.34-8.41 (2H, m), 8.45 (1H, dd, J=5.4,1.2Hz), 10.03 (1H, s), 10.90 (1H, s).
2036	δ 2.29 (6H, s), 7.45 (2H, s), 7.59 (1H, t, J =6.3Hz), 7.88 (1H, d, J =6.3Hz), 8.12-8.16 (2H, m), 8.39 (1H, m), 8.55 (1H, m), 9.93 (1H, s), 11.25 (1H, s).

(continued)

Comp. No.	^{1}H-NMR (DMSO-d_6, ppm)
2037	δ 2.32 (6H, s), 7.47 (2H, s), 7.67 (1H, d, J =7.6Hz), 7.75 (1H, d, J =8.3Hz), 7.90 (1H, d, J =7.6Hz), 8.14 (1H, t, J =7.6Hz), 8.29 (1H, dd, J =8.3Hz, 2.0Hz), 8.89 (1H, d, J =2.0Hz), 10.07 (1H, s), 10.97 (1H, s).
2082	δ 2.20 (6H, s), 3.58 (3H, s), 7.29-7.39 (5H, m), 7.43 (2H, s), 7.50 (1H, d, J =7.4Hz), 7.83 (1H, t, J =7.4Hz), 7.94 (1H, t, J =7.4Hz), 9.91 (1H, s).
2085	δ 2.22 (6H, s), 3.57 (3H, s), 7.12 (1H, t, J =9.2Hz), 7.20 (1H, t, J =7.3Hz), 7.28-7.30 (1H, m), 7.44 (2H, s), 7.55 (1H, t, J =7.2Hz), 7.63 (1H, broad), 7.87 (1H, d, J =7.2Hz), 7.98 (1H, t, J =7.2Hz), 9.90 (1H, s).
2093	δ 2.14(6H, s), 3.57(3H, s), 7.42(2H, s), 7.66-7.87(3H, m), 7.96-8.09(4H, m), 9.77(1H, s).
2116	δ 2.23 (6H, s), 3.55 (3H, s), 7.45 (3H, s), 7.89-9.91 (2H, m), 8.03-8.10 (3H, m), 9.82 (1H, s).
2117	δ 2.13 (6H, s), 3.58 (3H, s), 7.42 (2H, s), 7.46 (1 H, d, J =8.2Hz), 7.72-7.75 (2H, m), 7.90 (1H, d, J =8.2Hz), 8.08 (1H, t, J =8.2Hz), 8.35 (1H, d, J =2.0Hz), 9.83 (1H, s).
2162	($CDCl_3$) δ 2.38 (6H, s), 7.38 (2H, s). 7.53-7.57 (2H, m), 7.62 (1H, d, J =7.8Hz), 7.68 (1H, dd, J =4.9,1.5Hz), 7.85 (1H, broad-s), 7.95 (2H, d, J =7.8Hz), 8.52 (1H, d, J =4.9Hz), 8.22 (1H, broad-s), 8.88 (1H, s).
2163	($CDCl_3$) δ 2.36 (6H, s), 7.38 (2H, s), 7.55-7.59 (2H, m), 7.64-7.72 (2H, m), 7.75 (1H, broad-s), 8.01 (2H, d, J =7.3Hz), 8.41 (1H, d, J =6.8Hz), 9.14 (1H, d, J =2.4Hz), 10.9 (1H, broad-s).
2164	($CDCl_3$) δ 2.34 (6H, s), 7.47 (2H, s), 7.62-7.65 (2H, m), 7.70-7.81 (2H, m), 8.04-8.04 (3H, m), 8.64 (1H, dd, J =8.3,1.5Hz), 10.9 (1H, broad-s), 12.3 (1H, broad-s).
2165	δ 2.35 (6H, s), 7.29-8.03 (10H, m), 8.75 (1H, d, J =2.0Hz).
2168	δ 2.25 (6H, s), 3.32 (3H, s), 7.26 (1H, d, J =7.7Hz), 7.38 (1H, d, J =7.7Hz), 7.44 (2H, s), 7.55 (1H, t, J =7.7Hz), 7.90 (3H, m), 8.11 (2H, m), 12.40 (1H, s).
2201	($CDCl_3$) δ 2.38(6H,s), 7.25-8.00(11H,m),8.34(1H,s),8.85(1H,broad.).
2202	($CDCl_3$) δ 2.36 (6H, s), 7.37 (2H, s), 7.47-7.61(5H,m), 7.85-8.03 (4H,m), 8.57 (1H,s),9.18(1H,s).
2203	($CDCl_3$) δ 2.38 (6H,s), 7.41(2H, s), 7.45-7.55 (4H, m), 7.90-7.96 (4H,m),8.57 (1H, broad),8.74 (1H,broad), 9.18(1H,broad).
I-1	δ 2.34(6H, s), 3.87(2H, broad-s), 6.86-6.89(1H, m), 7.21-7.30(3H, m), 7.33(2H, s), 7.39(1H, s)
I-2	δ 2.34(6H, s), 3.87(2H, broad), 6.86-6.89(1H, m), 7.20-7.35(6H, m)
I-4	δ 2.60 (3H, s), 3.92 (2H, broad-s), 6.89-6.92 (1H, m), 7.24-7.32 (3H, m), 7.46 (1H, s), 7.76 (1H, broad-s)
I-5	δ 2.27(6H, s), 3.31(3H, s), 6.40-6.43(1H, m), 6.54-6.58(1H, m), 6.71(1H, t, J=2.0Hz), 6.76-6.86(1H, m), 7.22(2H, s)
I-6	δ 1.45(6H, d, J=6.3Hz), 2.07(6H, s), 3.53(2H, broad), 5.37(1H, septet, J=6.3Hz), 6.56-6.63(3H, m), 6.96(1H, t, J=7.8Hz), 7.16(2H, s)
I-7	δ 1.17(3H, t, J=7.6Hz), 2.28(3H, s), 2.65(2H, q. J=7.6Hz), 3.85(2H, broad-s), 6.82-6.85(1H, m), 7.21-7.23(3H, m), 7.34(2H, s), 7.64(1H, s)
I-8	δ 1.22(6H, t, J=7.6Hz), 2.69(4H, q. J=7.6Hz), 3.86(2H, broad-s), 6.86-6.89(1H, m), 7.15-7.36(4H, m), 7.38(2H, s)
I-9	δ 1.23(3H, t, J=7.3Hz), 2.76(2H, q. J=7.3Hz), 3.88(2H, broad-s), 6.88-6.91(1H, m), 7.26-7.32(3H, m), 7.50(1H, s), 7.53(1H, s), 7.95(1H, d, J=1.5Hz)
I-10	δ 1.22 (6H, d, J=6.8Hz), 2.32 (3H, s), 3.17 (1H, septet, J=6.8Hz), 3.87 (2H, broad-s), 6.85-6.93 (1H, m), 7.20-7.29 (3H, m), 7.35 (1H, s), 7.40-7.45 (2H, m).
I-11	δ 2.35(3H, s), 3.85(5H, s), 6.85-6.89(1H, m), 6.95(1H, s), 7.13(1H, s), 7.23-7.30(3H, m), 7.62(1H, s)
I-12	δ 1.25(3H, t, J=7.6Hz), 2.76(2H, q, J=7.6Hz), 3.88(2H, broad-s), 6.87-6.91(1H, m), 7.24-7.31(3H, m), 7.47(1H, s), 7.55(1H, s), 7.57(1H, s)
I-13	δ 2.35 (3H, s), 2.57 (3H, d, J=6.8Hz), 3.88 (2H, broad-s), 6.88-6.91 (1H, m), 7.25-7.34 (4H, m), 7.67 (1H, s)

(continued)

Comp. No.	^{1}H-NMR (DMSO-d_6, ppm)
I-14	δ 2.41(3H, s), 3.88(2H, broad-s), 6.87-6.91(1H, m), 7.25-7.31(3H, m), 7.47(1H, s), 7.65(1H, s), 7.72(1H, s)
I-15	δ 1.23(3H, t, J=7.3Hz), 2.74(2H, q, J=7.3Hz), 3.87(2H, broad-s), 6.86-6.91(1H, m), 7.25-7.31(3H, m), 7.50(1H, s), 7.59(1H, s), 7.73(1H, d, J=1.5Hz)
I-16	(DMSO-d_6) δ 0.84(3H, t, J=7.3Hz), 1.48-1.58(2H, m), 2.66(2H, t, J=7.3Hz), 5.36(2H, broad-s), 6.77(1H, dd, J=1.0Hz, 7.8Hz), 7.10-7.19(3H, m), 7.59(1H, s), 7.80(1H, s), 10.03(1H, s)
I-17	δ 0.90(3H, t, J=7.3Hz), 1.25-1.37(2H, m), 1.55-1.63(2H, m), 2.72(2H, t, J=7.8Hz), 3.89(2H, broad), 6.87-6.91(1H, m), 7.24-7.31(3H, m), 7.48(1H, s), 7.55(1H, s), 7.73(1H, d, J=1.5Hz)
I-18	δ 2.39(3H,s), 2.66(3H,d,J=6.9Hz), 7.43(1H,s), 7.75-7.79(2H,m), 8.33(1H,d,J=8.3Hz), 8.48(1H,d,J=8.3Hz), 8.80(1H,s)
I-19	δ 2.41(3H, s), 3.88(2H, s), 6.86-6.91(1H, m), 7.28-7.32(3H, m), 7.49(1H, s), 7.58(1H, s), 7.93(1H, d, J=1.2Hz)
I-20	δ 0.91(3H, t, J=7.3Hz), 1.58-1.67(2H, m), 2.69(2H, t, J=7.8Hz), 3.88(2H, broad-s), 6.87-6.90(1H, m), 7.26-7.31(3H, m), 7.50(1H, s), 7.54(1H, s), 7.95(1H, d, J=2.0Hz)
I-21	δ 2.33(6H, s), 3.87(2H, broad-s), 6.86-6.89(1H, m), 7.21-7.29(3H, m), 7.34(2H, s), 7.52(1H, s)
I-22	δ 2.32(6H, s), 3.86(2H, broad-s), 6.85-6.88(1H, m), 7.20-7.28(3H, m), 7.33(2H, s), 7.60(1H, s)
I-23	δ 3.99(2H, broad-s), 6.85-6.88(1H, m), 7.23-7.34(3H, m), 7.91(2H, s), 8.69(1H, s)
I-24	(DMSO-d_6) δ 5.39(2H, broad-s), 6.77-6.80(1H, m), 7.12-7.19(3H, m), 8.49(2H, s), 10.53(1H, s)
I-26	δ 3.88(2H, s), 6.90(1H, d. J=6.8Hz), 7.23-7.32(3H, m), 7.60(1H, s), 7.92(2H, s)
I-27	δ 3.89(2H, broad-s), 6.90(1H, dt, J=2.5Hz, 6.3Hz), 7.25-7.32(3H, m), 7.59(1H, s), 7.72(2H, s)
I-28	δ 3.89(2H, broad-s), 6.90(1H, dt, J=2.5Hz, 6.4Hz), 7.28-7.30(3H, m), 7.60(1H, s), 7.93(2H, s)
I-29	δ 3.92(2H, s), 6.92(1H, dt, J=1.5Hz, 7.3Hz), 7.23-7.30(3H, m), 7.79(1H, s), 8.04(2H, s)
I-30	δ 3.89(2H, broad-s), 6.90(1H, dd, J=2.4Hz, 4.9Hz), 7.23-7.32(3H, m), 7.61(1H, s), 7.93(2H, s)
I-31	δ 3.88(2H, broad-s), 6.90(1H, d, J=6.3Hz), 7.23-7.32(3H, m), 7.62(1H, s), 7.92(2H, s)
I-32	δ 6.90-6.94(1H, m), 7.28-7.33(3H, m), 7.73(1H, s), 8.02(1H, s), 8.25(1H, s)
I-33	δ 2.31(6H, s), 2.90(3H, s), 6.81(1H, dd, J=1.9Hz, 7.8Hz), 7.15-7.18(2H, m), 7.30(1H, t, J=7.8Hz), 7.42(1H, s), 7.52(2H, s)
I-35	δ 0.89(3H, t, J = 7.3Hz), 1.23-1.37(2H, m), 1.54-1.62(2H, m), 2.70(2H, t, J = 7.8Hz), 3.88(2H, broad), 6.86-6.90(1H; m), 7.22-7.30(3H, m), 7.44(1H, s), 7.56-7.59(2H, m).
I-36	(DMSO-d_6) δ 0.82(3H, t, J = 7.3Hz), 1.19-1.29(2H, m), 1.44-1.52(2H, m), 2.66(2H, t, J = 7.8Hz). 5.36(2H, broad-s), 6.75-6.81(1H, m), 7.12-7.19(3H, m), 7.58(1H, s), 7.95(1H, d, J = 1.5Hz), 10.02(1H, s).
I-37	(DMSO-d_6) δ 5.37(2H, s), 6.76-6.80(1H, m), 7.13-7.19(3H, m), 8.13(2H, s), 10.35(1H, s).
I-38	δ 0.79(3H, t, J = 7.3Hz), 1.23(3H, d, J = 6.8Hz), 1.53-1.63(2H, m), 2.90-2.99(1H, m), 3.87(2H, broad-s), 6.85-6.89(1H, m), 7.25-7.29(3H, m), 7.44(1H, s), 7.55-7.57(2H, m).
I-39	δ 0.79(3H, t, J = 7.3Hz), 1.21(3H, d, J = 6.8Hz), 1.50-1.61(2H, m), 2.91-3.00(1H, m), 3.88(2H, broad-s), 6.86-6.91(1H, m), 7.26-7.31(3H, m), 7.51(2H, s), 7.94(1H, d, J = 2.0Hz).
I-40	(DMSO-d_6) δ 5.39(2H, broad-s), 6.77-6.80(1H, m), 7.13-7.20(3H, m), 8.02(2H, s), 10.35(1H, s).
I-41	(DMSO-d_6) δ 5.38(2H, broad-s), 6.75-6.80(1H, m), 7.12-7.19(3H, m), 8.01(2H, s), 10.34(1H, s).
I-42	(DMSO-d_6) δ 3.34(3H, s), 5.40(2H, broad-s), 6.80(1H, d, J = 7.8Hz), 7.14-7.21(3H, m), 8.19(1H, s), 8.45(1H, s), 10.36(1H, s).
I-48	(DMSO-d_6) δ 2.48(3H, s), 5.36(2H, broad-s), 6.77(1H, d, J = 7.3Hz), 7.11-7.18(3H, m), 7.36(1H, s), 7.70(1H, s), 10.09(1H, s).

(continued)

Comp. No.	^{1}H-NMR (DMSO-d_6, ppm)
I-53	δ 0.91 (3H, t, J = 7.3Hz), 1.57-1.66(2H, m), 2.69(2H, t, J = 7.8Hz), 2.88(3H, s), 3.97(1H, s), 6.80(1H, dd, J = 2.4,7.8Hz), 7.19-7.32(3H, m), 7.49(1H, s), 7.60(1H, s), 7.94(1H, d, J = 2.0Hz).
I-55	δ 2.73(3H, s), 3.32(3H, s), 6.54(1H, d, J = 8.3Hz), 6.73(1H, s), 6.74(1H, d, J = 8.3Hz), 6.96(1H, t, J = 8.3Hz), 7.77(2H, s).
I-56	δ 2.91(3H, s), 6.82-6.85(1H, m), 7.21-7.23(2H, m), 7.32(1H, t, J=7.8Hz), 7.64(1H, s), 7.93(2H, s)
I-83	δ 2.38(6H, s), 2.42(3H, s), 3.70(2H, broad), 6.72(1H, dd, J=2.4Hz, 8.1Hz), 6.89(1H, d, J=2.4Hz), 7.05(1H, s), 7.07(1H, d, J=8.1Hz), 7.36(2H, s)
I-84	δ 2.37 (6H, s), 3.90 (2H, broad-s), 6.96-7.01 (1H, m), 7.10 (1H, t, J=7.8Hz), 7.36 (2H, s), 7.43-7.47 (1H, m), 7.86 (1H, d, J=13.2Hz)
I-85	δ 2.33(6H, s), 6.99(1H, dt, J=1.5Hz, 7.8Hz), 7.10(1H, t, J=7.8Hz), 7.43(2H, s), 7.46(1H, d, J=7.8Hz), 7.84(1H, d, J=13.2Hz)
I-86	δ 2.33(6H, s), 3.93(2H, s), 7.05-7.14(1H, m), 7.17-7.21(1H, m), 7.31(1H, s), 7.35(2H, s), 7.37-7.40(1H, m)
I-87	δ 2.35(6H, s), 3.74(2H, broad-s), 6.77-6.83(1H, m), 7.01(1H, dd, J=8.8Hz, 11.7Hz), 7.35(2H, s), 7.42(1H, dd, J=2.9Hz, 6.6Hz), 8.01(1H, d, J=15.6Hz)
I-88	δ 2.40(6H, s), 4.27(2H, broad-s), 6.88(1H, dd, J=1.5Hz, 7.8Hz), 7.03(1H, dd, J=1.5Hz, 7.8Hz), 7.16(1H, t, J=7.8Hz), 7.29(1H, s), 7.36(2H, s)
I-89	δ 2.33(6H, s), 4.27(2H, broad-s), 7.15(1H, d, J=8.1Hz), 7.35-7.38(5H, m)
I-90	δ 2.39(6H, s), 3.85(2H, broad-s), 6.72(1H, dd, J=2.7Hz. 8.5Hz), 7.15(1H, d, J=2.7Hz), 7.22(1H, d, J=8.5Hz). 7.36(2H, s), 7.66(1H, s)
I-91	δ 2.43(6H, s), 4.34(2H, broad), 6.86(1H, dd, J=1.5Hz, 8.3Hz), 6.96(1H, dd, J=1.5Hz, 8.3Hz), 7.13(1H, s), 7.19(1H, t, J=8.3Hz), 7.36(2H, s)
I-92	δ 2.44(6H, s), 3.86(2H, broad-s), 6.52(1H, dd, J=2.9Hz, 8.5Hz), 6.91(1H, d, J=2.9Hz), 7.12(1H, s), 7.35(2H, s), 7.62(1H, d, J=8.5Hz)
I-93	δ 2.27(6H, s), 4.09(2H, broad-s), 7.08(1H, s), 7.33(2H, s), 7.37(1H, s), 7.43(1H, s), 7.83(1H, s)
I-94	(DMSO-d_6) δ 2.29 (3H, s), 2.33 (6H, s), 5.43 (2H, s), 6.57-6.59 (1H, m), 6.85-6.90 (1H, m), 7.01 (1H, t, J =7.8Hz), 7.49 (2H, s).
I-95	(DMSO-d_6) δ 2.32(6H, s), 2.76(3H, d, J = 4.9Hz), 5.84(1H, broad), 6.77-6.81(2H, m), 7.10(1H, t, J = 7.8Hz), 7.43(2H, s), 9.90(1H, s).
I-96	(OMSO-d_6) δ 2.33(6H, s), 2.76(3H, d, J = 4.9Hz), 4.55(3H, s), 6.58-6.62(1H, m), 6.70-6.78(1H, m), 7.13(1H, t, J = 7.8Hz), 7.31(1H, s), 7.50(2H, s).
I-98	(OMSO-d_6) δ 2.32(6H, s), 2.77(3H, d, J = 4.9Hz), 5.82(1H, broad), 6.79(1H, t, J = 7.BHz), 7.08-7.21(2H, m), 7.42(2H, s), 9.88(1H, s).
I-124	(DMSO-d_6) δ 2.26(6H, s), 7.46(2H, s), 7.88(1H, t, J = 7.8Hz), 8.43-8.48(2H, m), 8.73(1H, s), 8.81(1H, s), 10.27(1H, s).
I-125	δ 2.16(6H, s), 7.23(1H, s), 7.53(2H, s), 7.73(1H, t, J = 7.8Hz), 8.45(1H, d, J = 7.8Hz), 8.55(1H, d, J = 7.BHz), 9.05(1 H, t, J = 2.OHz).
I-204	CDMSO-d_6) 82.35(6H, s), 4.31(2H, broad), 6.84-6.87(1H, m), 7.21-7.25(1H, m), 7.29-7.31(2H, m). 7.47-7.49(2H, m), 7.83(1H, s), 8.94(1H, s).
I-351	(DMSO-d_6) 82.26(6H, s), 7.44(2H, s), 7.51-7.63(4H, m), 7.74(1H, d, J = 7.8Hz), 7.98-8.07(3H, m), 8.35(1H, s), 8.71(1H, s), 9.90(1H, s), 10.47(1H, s).
I-358	(DMSO-d_6) δ 2.34(6H, s), 7.21(1H, dd, J = 8.2,11.2Hz), 7.32(1H, t, J = 7.8Hz), 7.49-7.56(4H, m), 7.78(1H, d, J = 7.8Hz), 8.04-8.08(2H, m), 8.23(1H, s), 8.71(1H, s), 9.08(1H, d, J = 11.2Hz).

(continued)

Comp. No.	^{1}H-NMR (DMSO-d_6, ppm)
I-419	(DMSO-d_6) δ 2.34(6H, s), 7.49-7.63(6H, m), 7.76(1H, d, J = 7.8Hz), 7.99-8.08(3H, m), 8.37(1H, s), 9.99(1H, s), 10.48(1H, s).

[Table 12]

Comp. No.	LC-MS Molecular Ion Peak
I-384	573.80
I-385	573.73
I-401	579.67
I-406	516.73
I-414	654.73
I-918	499.87

[0169] The insecticide containing the compound represented by Formula (1) of the invention as an active ingredient is suitable for controlling various pests which give damage to paddy rices, fruit trees, vegetables, other crops and flowers and ornamental plants in agricultural, horticultural or stored grain products, or sanitary pests, or for controlling and it may include vermin such as eelworm, for example, those having strong insecticidal effect against Lepidoptera such as cotton caterpillar (Diaphania indica), oriental tea tortrix (Homona magnanima), cabbage webworm (Hellulla undalis), summer fruit tortrix (Adoxophyes orana fasciata), smaller tea tortrix (Adoxophyes sp.), apple tortrix (Archips fuscocupreanus), peach fruit moth (Carposina niponensis), Manchurian fruit moth (Grapholita inopinata), oriental fruit moth (Grapholita molesta), soybean pod borer (Leguminivora glycinivorella), mulberry leafroller (Olethreutes mori), citrus leafminer (Phyllocnistis citrella), persimmon fruit moth (Stathmopoda masinissa), tea leafroller (Caloptilia theivora), (Caloptilia zachrysa), apple-leafminer (Phyllonorycter ringoniella), pear barkminer (Spulerrina astaurota), small citrus dog (Papilio xuthus), common cabbage worm (Pieris rapae crucivora), tobacco budworm (Heliothis armigera), codling moth (Cydia pomonella), diamondback moth (Plutella xylostella), apple fruit moth (Argyresthia conjugella), peach fruit moth (Carposina niponensis), rice stem borer (Chilo suppressalis), rice leafroller (Cnaphalocrocis medinalis), tobacco moth (Ephestia elutella), mulberry pyralid (Glyphodes pyloalis), paddy borer (Scirpophaga incertulas), rice skipper (Parnara guttata), rice armyworm (Pseudaletia separata), pink borer (Sesamia inferens), cabbage armyworm (Mamestra brassicae), common cutworm (Spodoptera litura), beet armyworm (Spodoptera exigua), black cutworm (Agrotis ipsilon), turnip moth (Agrotis segetum), beet semi-looper (Autographa nigrisigna), cabbage looper (Trichoplusia ni); Hemiptera such as aster leafhopper (Macrosteles fascifrons), green rice leafhopper (Nephotettix cincticeps), brown rice planthopper (Nilaparvata lugens), small brown planthopper (Laodelphax striatellus), whitebacked rice planthopper (Sogatella furcifera), citrus psylla (Diaphorina citri), grape whitefly (Aleurolobus taonabae), silverleaf whitefly (Bermisia argentifolii), sweetpotato whitefly (Bemisia tabaci), greenhouse whitefly (Trialeurodes vaporariorum), turnip aphid (Lipaphis erysimi), cotton aphid (Aphis gossypii), apple aphid (Aphis Citricola), green peach aphid (Myzus persicae), Indian wax scale (Ceroplastes ceriferus), Comstock mealybug (Pseudococcus Comstocki), Japanease mealybug (Planococcus kraunhiae), cottony citrus scale (Pulvinaria aurantii), camphor scale (Pseudaonidia duplex), san Jose scale (Comstockaspis perniciosa), arrowhead scale (Unaspis yanonensis), brownwinged green bug (Plautia Stali), brown marmorated stink bug (Halyomorpha mista) ; Coleoptera such as soybean beetle (Anomala rufocuprea), Japanese beetle (Popillia japonica), cigarette beetle (Lasioderma serricorne), powderpost beetle (Lyctusbrunneus), twenty-eight-spotted ladybird (Epilachna vigintioctopunctata), adzuki bean weevil (Callosobruchus chinensis), vegetable weevil (Listroderes costirostris), maize weevil (Sitophilus zeamais), boll weevil (Anthonomus grandis), rice water weevil (Lissorhoptrus oryzophilus), cucurbit leaf beetle (Aulacophora femoralis), rice leaf beetle (Oulema oryzae), striped flea beetle (Phyllotreta striolata), pine shoot beetle (Tomicus piniperda), Colorado potato beetle (Leptinotarsa decemlineata), Mexican bean beetle (Epilachna varivestis), corn rootworm (Diabrotica sp.), yellowspotted longicorn beetle (Psacothea hilaris), whitespotted longicorn beetle (Anoplophora malasiaca); Diptera such as melon fly (Dacus(Bactrocera) dorsalis), rice leafminer (Agromyza oryzae), onion maggot (Delia antiqua), seedcorn maggot (Delia platura), soybean pod gall midge (Asphondylia sp.), house fly (Musca domestica), garden pea leafminer (Chromatomyia horticola), legume leafminer (Liriomyza trifolii), bryony leafminer (Liriomyza bryoniae), common house mosquito (Culex pipiens); Nematoda such as coffee root-lesion

nematode (Pratylenchus coffeae), root-lesion nematode (Pratylenchus sp.), potato cyst nematode (Globodera rostochiensis), root-knot nematode (Meloidogyne sp.), citrus nematode (Tylemchulus semipenetrans), nematode (Aphelenchus avenae), chrysanthemum foliar nematode (Aphelenchoides ritzemabosi); Thysanoptera such as melon thrips (Thrips palmi), western flower thrips (Frankliniella occidentalis), yellow tea thrips (Scirtothrips dorsalis), honeysuckle thrips (Thrips flavus), onion thrips (Thrips tabaci); Orthoptera such as German cockroach (Blattella germanica), American cockroach (Periplaneta americana), rice grasshopper (Oxya yezoensis) and the like.

[0170] The insecticides containing the compound represented by Formula (1) of the invention as an active ingredient have notable insecticidal effect against the above-described pests that damage various lowland crops, upland crops, fruit trees, vegetables, other crops and horticultural products. Thus, the insecticidal effect of the invention can be obtained by treating the paddy field water, plant stems and leaves, or soil of the crops of lowland, upland, fruit trees, vegetables, other crops, and flowers and ornamental plants, during the seasons expected of the appearance of such pests, or before or at the point of pest appearance.

[0171] The insecticides of the invention are in general used in appropriate formulation forms according to the use, prepared by conventional methods for preparation of agricultural and horticultural chemicals. That is, the compounds represented by Formula (1) may be used in suitable formulations, such as a suspension, an emulsion, a liquid formulation, a water-dispersible powder, a granule, a dust formulation, tablets and the like, prepared by blending the compounds with suitable inert carriers, or with auxiliary agents if necessary, in appropriate proportions, followed by dissolution, separation, suspension, mixing, impregnation, adsorption or adhesion of the ingredients.

[0172] The inert carrier that can be used in the invention may be solids or liquids and include, in particular, soybean powders, grain powders, wood powders, bark powders, coarse powders, tobacco powders, walnut shell powders, brans, cellulose powders, residues from plant extraction, synthetic polymers such as pulverized synthetic resins, clays (for example, kaolin, bentonite, acidic white clay), talc (for examples, talc, pyrophyllite, etc.), silica (for examples, diatomite, sand, mica, white carbon (hydrous silica powders, hydrous silica powders called synthetic high dispersity silicic acids, there are also products containing calcium silicate as main component)), activated carbon, sulfur powder, pumice, calcined diatomaceous powders, pulverized bricks, fly ash, sand, inorganic mineral powders such as calcium carbonate and calcium phosphate, chemical fertilizers such as ammonium sulfate, ammonium phosphate, ammonium nitrate, urea and ammonium chloride, a compost and the like, which are used alone or as mixtures of two or more.

[0173] Materials that can be used as the inert carrier for liquids are selected from those having the function as solvent, as well as those capable of dispersing the active ingredient compound under an aid of an auxiliary agent even if the inert carrier has not the function as solvent, and they can be exemplified by, for example, the carriers listed below: water, alcohols (e.g., methanol, ethanol, isopropanol, butanol, ethylene glycol, etc.), ketones (e.g., acetone, methyl ethyl ketone, methyl isobutyl ketone, diisobutylketone, cyclohexanone, etc.), ethers (e.g., diethyl ether, dioxane, cellosolve, diisopropyl ether, tetrahydrofuran, etc.), aliphatic hydrocarbons (e.g., kerosene, mineral oil, etc.), aromatic hydrocarbons (e.g., benzene, toluene, xylene, solvent naphta, alkyl naphthalene, etc.), halogenated hydrocarbons (e.g., dichloromethane, chloroform, tetrachlorocarbon, chlorobenzene, etc.), esters (e.g., ethyl acetate, butyl acetate, ethyl propionate, diisobutyl phthalate, dibutyl phthalate, dioctyl phthalate, etc.), amides (e.g., dimethyl formamide, diethyl formamide, dimethyl acetamide, etc.), and nitriles (e.g., acetonitrile, etc.), which are used alone or as mixtures of two or more.

[0174] The auxiliary agent may include the following representative auxiliary agents, which are used alone or in combination of two or more of them depending on the purpose; however, it is also possible not to use any auxiliary agent.

[0175] For the purpose of emulsification, dispersion, solubilization and/or wetting of the active ingredient compound, surfactants can be used, for example, polyoxyethylene alkyl ethers, polyoxyethylene alkyl aryl ethers, polyoxyethylene higher fatty acid esters, polyoxyethylene resin acid esters, polyoxyethylene sorbitan monolaurate, polyoxyethylene sorbitan monooleates, alkyl aryl sulfonate, naphthalene sulfonate, lignin sulfonate, higher alcohol sulfonate esters and the like.

[0176] For the purpose of dispersion stabilization, adhesion and/or binding of the active ingredient compound, the following auxiliary agent can be use, for example, casein, gelatin, starch, methyl cellulose, carboxymethyl cellulose, gum Arabic, polyvinyl alcohol, pine root oil, corn oil, bentonite, xanthan gum, lignin sulfonate salts and the like.

[0177] For the purpose of improving the flowability of solid products, the auxiliary agents can be used, for example, wax, stearic acid salts, phosphoric alkyl esters and the like. An auxiliary agent such as a naphthalene sulfonate condensation product, or a condensed phosphate salt can be used as a suspending agent in suspensions. An antifoaming agent such as silicone oils can be also used as an auxiliary agent.

[0178] In addition, the compound represented by Formula (1) of the invention is stable against light, heat, oxidation and the like, but if desired, more stable compositions may obtained by adding a stabilizer. The stabilizer may include, for example, antioxidants or UV absorbents, phenol derivatives such as BHT (2,6-di-t-butyl-4-methyl phenol), BHA (butyl hydroxy anisole), bisphenol derivatives, and aryl amines such as phenyl-α-naphthyl amine, phenyl-β-naphthyl amine, condensation product of phenetidine and acetone, or benzophenone compounds.

[0179] The effective amount of the compound represented by Formula (1) of the invention is typically 0.5 to 20% by weight in a dust formulation,, 5 to 50% by weight in an emulsion, 10 to 90% by weight in a water-dispersible powder, 0.1 to 20% by weight in a granule, and 10 to 90% by weight in a flowable formulation. Meanwhile, the amount of carrier

in the respective formulations is typically 60 to 99% by weight in a dust formulation, 40 to 95% by weight in an emulsion, 10 to 90% by weight in a water-dispersible powder, 80 to 99% by weight in a granule, and 10 to 90% by weight in a flowable formulation. The amount of such auxiliary agent is typically 0.1 to 20% by weight in a dust formulation, 1 to 20% by weight in an emulsion, 0.1 to 20% by weight in a water-dispersible powder, 0.1 to 20% by weight in a granule, and 0.1 to 20% by weight in a flowable formulation.

[0180] In order to control various pests, an amount effective for blight control can be applied, just as it is, or as an adequate dilution with water, or as a suspension, to the crops expected of the appearance of the corresponding pests or to the places where such occurrence is not preferable. The amount of use depends on various factors such as, for example, the purpose, the pest to be controlled, the state of plant growth, trend of pest appearance, climate, environmental conditions, formulation, method of use, place of use, timing of use and the like, but it is preferable to use the active ingredient in the concentration of 0.0001 to 5000 ppm, and preferably 0.01 to 1000 ppm. The dose that can be used in approximately 10 a is generally in the range of 1 to 300 g of the active ingredient.

[0181] The insecticide of the invention containing the compound represented by Formula (1) as an active ingredient may be used alone in control of various pests in agricultural, horticultural and stored grain products, which damage the rice plants, fruit trees, vegetables, other crops and flowers, or sanitary pests or eelworms, and further in order to obtain superior control effect with respect to various pests which occur at the same time, it may be used in combination with at least one other insecticide and/or fungicide.

[0182] Examples of other insecticides which can be combined with the compound represented by Formula (1) of the invention may include, for example, pyrethroid insecticides such as allethrin, tetramethrin, resmethrin, phenothrin, furamethrin, permethrin, cypermethrin, deltamethrin, cyhalothrin, cyfluthrin, fenpropathrin, tralomethrin, cycloprothrin, flucythrinate; fluvalinate, acrinathrin, tefluthrin, bifenthrin, empenthrin, beta-cyfluthrin, zeta-cypermethrin, fenvalerate and the like, and various isomers thereof; or Dalmatian pyrethrum extract; organophosphate insecticides such as DDVP, cyanophos, fenthion, fenitrothion, tetrachlorvinphos, dimethylvinphos, propaphos, methylparathion, temephos, phoxim, acephate, isofenphos, salithion, DEP, EPN, ethion, mecarbam, pyridafenthion, diazinon, pirimiphos-methyl, etrimfos, isoxathion, quinalphos, chlorpyrifos-methyl, chlorpyrifos, phosalone, phosmet, methidathion, oxydeprofos, vamidothion, malathion, phenthoate, dimethoate, formothion, thiometon, disulfoton, phorate, terbufos, profenofos, prothiofos, sulprofos, pyraclofos, monocrotofos, naled, fosthiazate, cadusafos; carbamate insecticides such as NAC, MTMC, MIPC, BPMC, XMC, PHC, MPMC, ethiofencarb, bendiocarb, pirimicarb, carbosulfan, benfuracarb, methomyl, oxamyl, aldicarb; arylpropylether insecticides such as etofenprox, halfenprox; silylether compounds such as silafluofen; insecticidal natural products such as nicotine-sulfate, polynactins, abamectin, milbemectin, BT; insecticides such as cartap, thiocyclam, bensultap, diflubenzuron, chlorfluazuron, teflubenzuron, triflumuron, flufenoxuron, flucycloxuron, hexaflumuron, fluazuron, imidacloprid, nitenpyram, acetamiprid, dinotefuran, pymetrozine, fipronil, buprofezin, fenoxycarb, pyriproxyfen, methoprene, hydroprene, kinoprene, endosulfan, diafenthiuron, triazamate, tebufenozide, benzoepin; acaricides such as dicofol, chlorobenzilate, phenisobromolate, tetradifon, CPCBS, BPPS, chinomethionate, amitraz, benzomate, hexythiazox, fenbutatin oxide, cyhexatin, dienochlor, clofentezine, pyridaben, fenpyroximate, fenazaquin, tebufenpyrad; novaluron, noviflumuron, emamectin benzoate, clothianidin, thiacloprid, thiamethoxam, flupyrazofos, acequinocyl, bifenazate, chromafenozide, etoxazole, fluacrypyrim, flufenzine, halofenozide, indoxacarb, methoxyfenozide, spirodiclofen, tolfenpyrad, gamma-cyhalothrin, ethiprole, amidoflumet, bistrifluron, flonicamid, flubrocythrinate, flufenerim, pyridalyl, pyrimidifen, spinosad, or spiromesifen.

[0183] Examples of the fungicides which can be combined with the compound represented by Formula (1) of the invention may include, for example, azole fungicides such as triadimefon, hexaconazole, propiconazole, ipconazole, prochloraz, triflumizole; pyrimidine fungicides such as pyrifenox, fenarimol; anilinopyrimidine fungicides such as mepanipyrim, cyprodinil; acylalanine fungicides such as metalaxyl, oxadixyl, benalaxyl; benzimidazole fungicides such as thiophanate-methyl, benomyl; dithiocarbamate fungicides such as mancozeb, propineb, zineb, metiram; organochlorine fungicides such as tetrachloroisophthalonitrile; carboxamide fungicides such as carpropamid, ethaboxam; morpholine fungicides such as dimethomorph; strobilurin fungicides such as azoxystrobin, kresoxim-methyl, metominostrobin, orysastrobin, fluoxastrobin, trifloxystrobin, dimoxystrobin, pyraclostrobin, picoxystrobin; dicarboximide fungicides such as iprodione, procymidone; soil-applied fungicides such as flusulfamide, dazomet, methyl isothiocyanate, chloropicrin; copper fungicides such as basic copper chloride, basic copper sulfate, copper nonylphenol sulfonate, oxine-copper; inorganic fungicides such as sulfur, zinc sulfate; organophosphate fungicides such as edifenphos, tolclofos-methyl, fosetyl; melanin biosynthesis inhibitors such as phthalide, tricyclazole, pyroquilon, diclocymet; antibiotics such as kasugamycin, validamycin, polyoxins; fungicidal natural products such as rape seed oil; fungicides such as benthiavalicarb-isopropyl, iprovalicarb, cyflufenamid, fenhexamid, quinoxyfen, spiroxamine, diflumetorim, metrafenone, picobenzamid, proquinazid, silthiofam, oxpoconazole, famoxadone, cyazofamid, fenamidone, furametpyr, zoxamide, boscalid, tiadinil, simeconazole, chlorothalonil, cymoxanil, captan, dithianon, fluazinam, folpet, dichlofluanid, (*RS*)-N-[2-(1,3-dimethylbutyl)thiophen-3-yl]-1-methyl-3-trifluoro methyl-1H-pyrazole-4-carboxamide (penthiopyrad: ISO proposed), oxycarboxin, mepronil, flutolanil, triforine, oxolinic acid, probenazole, acibenzolar-*S*-methyl, isoprothiolane, ferimzone, diclomezine, pencycuron, fluoroimide, chinomethionate, iminoctadine-triacetate, iminoctadine-albesilate and the like.

[0184] When the compound represented by Formula (1) of the invention is used in combination with at least one other insecticide and/or fungicide, a mixed composition of the compound represented by Formula (1) and other insecticide and/or fungicide may be used, or the compound represented by Formula (1) and other insecticide/fungicide may be mixed and used at the time of apply.

[0185] In addition to the above-mentioned insecticides and fungicides, the compound represented by Formula (1) can be mixed with plant protecting agents such as a herbicide, a fertilizer, a soil reformer, a plant growth controlling agent and a material, in order to form multi-purpose compositions of high efficacy, which are expected to provide an additive effect or a synergistic effect.

[0186] The following Examples illustrate representative Examples of the invention, but they are not intended to limit the invention.

Example 1-1

Preparation of N-(2,6-dimethyl-4-heptafluoroisopropyl)phenyl 3-nitrobenzamide

[0187] To a solution prepared by adding 20.0 g of 2,6-dimethyl-4-heptafluoroisopropylaniline and 11.0 g of pyridine to 100 ml of tetrahydrofuran at room temperature with stirring, 13.0 g of 3-nitrobenzoyl chloride dissolved in 20 ml of tetrahydrofuran was gradually added dropwise thereto. After the reaction solution was stirred at room temperature for 10 hours, ethyl acetate and water were added thereto. Phase separation was carried out, and then the organic layer was separated and dried over anhydrous magnesium sulfate. This solution was filtered, the filtrate was collected, and the solvent was distilled off under reduced pressure. Thus obtained residue was washed with a solvent mixture of hexane-diisopropyl ether to give 26.0 g (yield 85%) of the title compound as a white solid.
^{1}H-NMR ($CDCl_3$, ppm) δ 2.33 (6H, s), 7.37 (2H, s), 7.68 (1H, s), 7.72 (1H, t, J = 8.1 Hz), 8.28 (1H, d, J = 8.1 Hz), 8.44 (1H, dd, J = 1.2, 8.1 Hz), 8.75 (1H, t, J = 1.2 Hz).

Example 1-2

Preparation of N-(2,6-dimethyl-4-heptafluoroisopropyl)phenyl 3-aminobenzamide (Compound No. 1-2)

[0188] To a solution prepared by adding 0.90 g of N-(2,6-dimethyl-4-heptafluoroisopropyl)phenyl 3-nitrobenzamide and 1.56 g of anhydrous tin(II) chloride to 25 ml of ethanol at room temperature with stirring, 2 ml of concentrated hydrochloric acid was added and the mixture was stirred at 60°C for one hour. After brought back to room temperature, the reaction solution was poured onto water, and neutralization was carried out using potassium carbonate. Ethyl acetate was added, the insolubles were filtered off, and then the organic layer was separated and dried over anhydrous magnesium sulfate. This solution was filtered, the filtrate was collected, and the solvent was distilled off under reduced pressure. Thus obtained residue was washed with hexane to give 0.44 g (yield 53%) of the title compound as a white solid.
^{1}H-NMR ($CDCl_3$, ppm) δ 2.34 (6H, s), 3.87 (2H, broad), 6.86-6.89 (1H, m), 7.20-7.35 (6H, m)

Example 1-3

Preparation of N-(2,6-dimethyl-4-heptafluoroisopropyl)phenyl 3-(benzoylamino)benzamide (Compound No. 10)

[0189] To a solution prepared by adding 0.25 g of N-(2,6-dimethyl-4-heptafluoroisopropyl)phenyl 3-aminobenzamide and 0.06 g of pyridine to 5 ml of tetrahydrofuran at room temperature with stirring, 0.09 g of benzoyl chloride dissolved in 1 ml of tetrahydrofuran was added dropwise. After stirring at room temperature for 1 hour, ethyl acetate and 1N hydrochloric acid were added to the reaction solution, and the organic layer was separated. The organic layer was washed once with saturated aqueous sodium hydrogen carbonate solution and dried over anhydrous magnesium sulfate. This solution was filtered, the filtrate was collected, and the solvent was distilled off under reduced pressure. Thus obtained solid was washed with diisopropyl ether to give 0.29 g (yield 92%) of the title compound as a white solid.
^{1}H-NMR (DMSO-d_6, ppm) δ 2.37 (6H, s), 7.34 (2H, s), 7.46-7.57 (4H, m), 7.75 (1H, d, J = 7.8 Hz), 7.98-8.01 (2H, m), 8.12 (1H, d, J = 7.3 Hz), 8.34 (1H, s), 8.87 (1H, s), 9.66 (1H, s).

Example 2-1

Preparation of N-(2,6-dimethyl-4-heptafluoroisopropyl)phenyl-N-methyl 3-nitrobenzamide

[0190] To a suspension of 0.18 g of 60% sodium hydride in 15 ml of tetrahydrofuran, 2.0 g of N-(2,6-dimethyl-4-heptafluoroisopropyl)phenyl 3-nitrobenzamide dissolved in 5 ml of tetrahydrofuran was added dropwise at room tem-

perature. After the mixture was stirred at room temperature for 30 minutes, 0.65 g of methyl iodide dissolved in 5 ml of tetrahydrofuran was added dropwise. Then, after raising temperature to 50°C and stirred for 4 hours, the reaction solution was returned to room temperature, and ethyl acetate and water were added. The organic layer was separated, washed once with water and dried over anhydrous magnesium sulfate, and the solvent was distilled off under reduced pressure. Thus obtained residue was purified by silica gel column chromatography (eluent : hexane:ethyl acetate = 6:1) to give 1.73 g (yield 84%) of the title compound as a white solid. ^{1}H-NMR ($CDCl_3$, ppm) δ 2.31 (6H, s), 3.38 (3H, s), 7.27 (2H, s), 7.37 (1H, t, J = 7.8 Hz), 7.62-7.65 (1H, m), 8.05 (1H, t, J = 2.0 Hz), 8.11-8.14 (1H, m).

Example 2-2

Preparation of N-(2,6-dimethyl-4-heptafluoroisopropyl)phenyl-N-methyl 3-aminobenzamide (Compound No. I-5)

[0191] A solution prepared by adding 1.50 g of N-(2,6-dimethyl-4-heptafluoroisopropyl)phenyl-N-methyl 3-nitrobenzamide and 0.15 g of 10% palladium-carbon to 20 ml of methanol, was stirred under a hydrogen atmosphere at atmospheric pressure for 2 hours. After the catalyst was filtered off, the solvent was distilled off under reduced pressure. Then, thus obtained solid was washed with hexane to give 1.24 g of the title compound (yield 88%) as a white solid.
^{1}H-NMR ($CDCl_3$, ppm) δ 2.27 (6H, s), 3.31 (3H, s), 3.80 (2H, broad), 6.40-6.43 (1H, m), 6.54-6.58 (1H, m), 6.71 (1H, t, J = 2.0 Hz), 6.76-6.86 (1H, m), 7.22 (2H, s).

Example 2-3

[0192] Preparation of N-(2,6-dimethyl-4-heptafluoroisopropyl)phenyl-N-methyl 3-(benzoylamino)benzamide (Compound No. 1478)

[0193] The title compound was prepared as a white solid according to the conditions described in Example 1-3.
^{1}H-NMR (DMSO-d_6, ppm) δ 2.29 (6H, s), 3.24 (3H, s), 6.84 (1H, d, J = 7.8 Hz), 7.12 (1H, t, J = 7.8 Hz), 7.33 (2H, s), 7.50-7.64 (4H, m), 7.85-7.88 (2H, m), 7.98-8.03 (1H, m), 10.22 (1H, s).

Example 3

Preparation of N-(2,6-dimethyl-4-heptafluoroisopropyl)phenyl 3-[(2-chloropyridin-3-yl)carbonylamino]benzamide (Compound No. 106)

[0194] To a solution prepared by adding 0.6 g of N-(2,6-dimethyl-4-heptafluoroisopropyl)phenyl 3-aminobenzamide and 0.4 g of pyridine to 10 ml of tetrahydrofuran, 0.35 g of 2-chloronicotinoyl chloride hydrochloride was added and the mixture was stirred at room temperature for 4 hours. Ethyl acetate was added, the mixture was twice washed with saturated sodium hydrogen carbonate solution, and the solvent was distilled off under reduced pressure. Thus obtained solid was washed with a solvent mixture of hexane-diisopropyl ether and dried to give 0.64 g (yield 75%) of the title compound as a white solid.
^{1}H-NMR (DMSO-d_6, ppm) δ 2.30 (6H, s), 7.45 (2H, s), 7.54-7.60 (2H, m), 7.77-7.80 (1H, m), 7.95 (1H, d , J = 7.8 Hz), 8.10-8.12 (1H, m), 8.30 (1H, s), 8.54-8.59 (1H, m), 10.03 (1H, s), 10.88 (1H, s).

Example 4

Preparation of N-(2,6-dimethyl-4-heptafluoroisopropyl)phenyl 3-[(pyridin-3-yl)carbonylamino]benzamide (Compound No. 101)

[0195] A solution prepared by adding 99 mg of nicotinic acid and 153 mg of 1,1'-oxalyl diimidazole to 10 ml of acetonitrile was stirred at room temperature for 15 minutes and again at 40°C for 40 minutes. After returning back to room temperature, 300 mg of N-(2,6-dimethyl-4-heptafluoroisopropyl)phenyl 3-aminobenzamide was added, and the mixture was stirred at 60°C for 5 hours. Then, the solvent was distilled off under reduced pressure, and to the residue obtained therefrom, ethyl acetate was added. The organic layer was twice washed with saturated sodium hydrogen carbonate solution, and the solvent was again distilled off under reduced pressure. Thus obtained residue was purified by silica gel column chromatography (eluent: hexane:ethyl acetate = 1:3) to give 70 mg (yield 18%) of the title compound as a white solid.
^{1}H-NMR (DMSO-d_6, ppm) δ 2.30 (6H, s), 7.45 (2H, s), 7.54-7.61 (2H, m), 7.78 (1H, d, J = 8.3Hz), 8.06 (1H, d, J = 7.3 Hz), 8.32-8.35 (2H, m), 8.77-8.79 (1H, m), 9.15 (1H, d, J = 1.5 Hz), 10.00 (1H, s), 10.66 (1H, s).

Example 5-1

Preparation of N-methyl-2-bromo-4-heptafluoroisopropyl-6-methylaniline

[0196] To a solution prepared by adding 1.0 g of N-methyl-4-heptafluoroisopropyl-2-methylaniline to 5 ml of N,N-dimethyl formamide, 0.8 g of N-bromosuccinimide dissolved in 3 ml of N,N-dimethyl formamide was added dropwise. After the mixture was stirred at room temperature for 5 hours, ethyl acetate and water were added, and the organic layer was separated. The organic layer was twice washed with water and dried over anhydrous magnesium sulfate, and the solvent was distilled off under reduced pressure. Thus obtained residue was purified by silica gel column chromatography (eluent: hexane:ethyl acetate = 9:1) to give 0.86 g (yield 68%) of the title compound as a red oil.
^{1}H-NMR ($CDCl_3$, ppm) δ 2.41 (3H, s), 2.93 (3H, s), 3. 90 (1H, broad), 7.23 (1H, s), 7.54 (1H, s).

Example 5-2

Preparation of N-(2-bromo-4-heptafluoroisopropyl-6-methyl)phenyl-N-methyl 3-(benzoylamino)benzamide (Compound No. 1479)

[0197] The title compound was prepared as a white solid from N-methyl-2-bromo-4-heptafluoroisopropyl-6-methyl-aniline according to the conditions described in Examples 1-2 and 1-3.
^{1}H-NMR (DMSO-d_6, ppm) δ 2.41 (3H, s), 3.25 (3H, s), 6.95 (1H, dd, J = 1.5, 7.8 Hz), 7.16 (1H, t, J = 7.8 Hz), 7.50-7.64 (4H, m), 7.68 (1H, s), 7.86-7.88 (2H, m), 7.93 (1H, t, J = 1.5 Hz), 7.98-8.00 (1H, m), 10.24 (1H, s).

Example 6

Preparation of N-(2,6-dimethyl-4-heptafluoroisopropyl)phenyl-N-methyl 3-(N-methylbenzoylamino)benzamide (Compound No. 1487)

[0198] To a suspension of 40 mg of 60% sodium hydride in 10 ml of tetrahydrofuran, 0.3 g of N-(2,6-dimethyl-4-heptafluoroisopropyl)phenyl-N-methyl 3-(benzoylamino)benzamide dissolved in 5 ml of tetrahydrofuran was added dropwise at room temperature. After the mixture was stirred at room temperature for 1 hour, 0.16 g of methyl iodide dissolved in 5 ml of tetrahydrofuran was added dropwise. Then, after returning to a temperature to 50°C and stirred for 4 hours, the reaction solution was returned to room temperature, and ethyl acetate and water were added to the reaction solution. The organic layer was separated, washed once with water and dried over anhydrous magnesium sulfate, and the solvent was distilled off under reduced pressure. Thus obtained residue was washed with diisopropyl ether to give 1.73 g (yield 84%) of the title compound as a white solid.
^{1}H-NMR (DMSO-d_6, ppm) δ 2.20 (6H, s), 3.08 (3H, s), 3.20 (3H, s), 6.93-7.39 (10H, m), 7.45-7.51 (1H, m).

Example 7-1

Preparation of N-(2,6-dimethyl-4-heptafluoroisopropyl)phenyl 3-aminobenzthioamide

[0199] 0.35 g of N-(2,6-dimethyl-4-heptafluoroisopropyl)phenyl 3-aminobenzamide and 0.19 g of Lawesson's reagent was added to 10 ml of toluene, and the mixture was heated with stirring at reflux temperature for 6 hours. The reaction solution was concentrated under reduced pressure, the solvent was distilled off, and thus obtained residue was purified by silica gel column chromatography (eluent : hexane:ethyl acetate = 3:1) to give 0.07 g (yield 20%) of the title compound.
^{1}H-NMR ($CDCl_3$, ppm) δ 2.36 (6H, s), 3.87 (2H, broad-s), 6.84-6.87 (1H, m), 7.18-7.24 (2H, m), 7.33 (1H, s), 7.39 (2H, s), 8.56 (1H, broad-s).

Example 7-2.

Preparation of N-(2,6-dimethyl-4-heptafluoroisopropyl)phenyl 3-(benzoylamino)benzthioamide (Compound No. 2201)

[0200] The title compound was prepared from N-(2,6-dimethyl-4-heptafluoroisopropyl)phenyl 3-aminobenzthioamide according to the conditions described in Example 1-3.
^{1}H-NMR ($CDCl_3$, ppm) δ 2.38 (6H, s), 7.25-8.00 (11H, m), 8.34 (1H, s), 8.85 (1H, broad.).

Example 8

Preparation of N-(2,6-dimethyl-4-heptafluoroisopropyl)phenyl 3-(phenylthiocarbonylamino)benzamide (Compound No. 2202) and N-(2,6-dimethyl-4-heptafluoroisopropyl)phenyl 3-(phenylthiocarbonylamino)benzthioamide (Compound No. 2203)

[0201] A solution of 0.37 g of N-(2,6-dimethyl-4-heptafluoroisopropyl)phenyl 3-(benzoylamino)benzamide and 0.30 g of Lawesson's reagent in 10 ml of toluene was stirred at 70°C for 6 hours. The reaction solution was concentrated under reduced pressure, and thus obtained residue was purified by silica gel column chromatography (eluent : hexane:ethyl acetate = 3:1) to give 0.18 g (yield 47%) of N-(2,6-dimethyl-4-heptafluoroisopropyl)phenyl 3-(phenylthiocarbonylamino)benzamide and 0.05 g (yield 13%) of N-(2,6-dimethyl-4-heptafluoroisopropyl)phenyl 3-(phenylthiocarbonylamino)benzthioamide.

[0202] Characterization of Compound No. 2202

^{1}H-NMR ($CDCl_3$, ppm) δ 2.36 (6H, s), 7.37 (2H, s), 7.47-7.61 (5H, m), 7.85-8.03 (4H, m), 8.57 (1H, s), 9.18 (1H, s).

[0203] Characterization of Compound No. 2203 ^{1}H-NMR ($CDCl_3$, ppm) δ 2.38 (6H, s), 7.41 (2H, s), 7.45-7.55 (4H, m), 7.90-7.96 (4H, m), 8.57 (1H, broad), 8.74 (1H, broad), 9.18 (1H, broad).

Example 9-1

Preparation of N-benzyl-N-(2,6-dimethyl-4-heptrafluoroisopropyl)phenyl 3-nitrobenzamide

[0204] The title compound was prepared from N-(2,6-dimethyl-4-heptafluoroisopropyl)phenyl 3-nitrobenzamide and benzyl bromide according to the process described in Example 6.

Example 9-2

Preparation of N-benzyl-N-(2,6-dimethyl-4-heptafluoroisopropyl)phenyl 3-(2-fluorobenzoylamino)benzamide

[0205] The title compound was prepared from N-benzyl-N-(2,6-dimethyl-4-heptafluoroisopropyl)phenyl 3-nitrobenzamide and 2-fluorobenzoyl chloride according to the processes described in Examples 1-2 and 1-3.

Example 9-3

Preparation of N-benzyl-N-(2,6-dimethyl-4-heptafluoroisopropyl)phenyl 3-[N-ethyl-N-(2-fluorobenzoyl)amino]benzamide

[0206] The title compound was prepared from N-benzyl-N-(2,6-dimethyl-4-heptafluoroisopropyl)phenyl 3-(2-fluorobenzoylamino)benzamide and ethyl iodide according to the process described in Example 6.

Example 9-4

Preparation of N-(2,6-dimethyl-4-heptafluoroisopropyl)phenyl 3-[N-ethyl-N-(2-fluorobenzoyl)amino]benzamide (Compound No. 1206)

[0207] A solution of 1.07 g of N-benzyl-N-(2,6-dimethyl-4-heptafluoroisopropyl)phenyl 3-[N-ethyl-N-(2-fluorobenzoyl)amino]benzamide and 0.15 g of 10% palladium-carbon in 10 ml of methanol was stirred at 45°C for 6 hours under a hydrogen atmosphere. The catalyst was filtered off, and the solvent was distilled off under reduced pressure. Then, thus obtained residue was purified by silica gel (Fuji Silysia Chemical Ltd., NH silica) column chromatography (eluent : hexane: ethyl acetate = 1:1) to give 0.30 g (yield 32%) of the title compound as a white solid.

^{1}H-NMR (DMSO-d_6, ppm) δ 1.17 (3H, broad), 2.22 (6H, s), 3.99 (2H, broad), 7.01-7.08 (2H, m), 7.29-7.43 (6H, m), 7.72-7.77 (2H, m), 9.90 (1H, s).

Example 10-1

Preparation of N-(2,6-dimethyl-4-heptafluoroisopropyl)phenyl 2-fluoro-3-nitrobenzamide

[0208] 2.35 g of N-(2,6-dimethyl-4-heptafluoroisopropyl)phenyl 2-chloro-3-nitrobenzamide prepared according to the process described in Example 1-1 and 0.87 g of potassium fluoride (spray-dried product) were added to 25 ml of N,N-

dimethyl formamide dried by molecular sieves, and the mixture was heated with stirring at 150°C for 3 hours. After the reaction solution was brought back to room temperature, ethyl acetate and water were added thereto, and phase separation was carried out. The organic layer was separated, washed twice with water and dried over anhydrous magnesium sulfate. This solution was filtered, the filtrate was collected, and the solvent was distilled off under reduced pressure. Thus obtained residue was purified by silica gel chromatography (eluent : hexane: ethyl acetate - 4:1) to give 1.02 g (yield 45%) of the title compound as a solid.

^{1}H-NMR ($CDCl_3$, ppm) δ 2.37 (6H, s), 7.39 (2H, s), 7.48-7.53 (1H, m), 7.87 (1H, d, J = 11.5 Hz), 8.23-8.28 (1H, m), 8.42-8.46 (1H, m).

Example 10-2

Preparation of N-(2,6-dimethyl-4-heptafluoroisopropyl)phenyl 3-(benzoylamino)-2-fluorobenzamide (Compound No. 601)

[0209] The title compound was prepared according to the processes described in Examples 1-2 and 1-3.

^{1}H-NMR (DMSO-d_6, ppm) δ 2.34 (6H, s), 7.37 (1H, t, J = 7.8 Hz), 7.45 (2H, s), 7.53-7.65 (4H, m), 7.77-7.82 (1H, m), 8.00-8.02 (2H, m), 10.10 (1H, s), 10.29 (1H, s).

Example 11-1

Preparation of N-(2,6-dimethyl-4-heptafluoroisopropyl)phenyl 4-fluoro-3-nitrobenzamide

[0210] 5.22 g of 4-fluoro-3-nitrobenzoic acid and 0.1 g of N, N-dimethyl formamide were introduced to 30 ml of toluene, and 3.7 g of thionyl chloride was added. The reaction mixture was stirred at 80°C for 1 hour and again for 2 hours under reflux conditions. After cooling to room temperature, the solvent was distilled off under reduced pressure, thus obtained residue was dissolved in 10 ml of tetrahydrofuran, and this solution was added dropwise to a mixed solution of 8.1 g of 2,6-dimethyl-4-heptafluoroisopropylaniline, 4.4 g of pyridine and 20 ml of tetrahydrofuran. After the mixture was stirred for 2 hours, ethyl acetate was introduced, and the organic layer was washed with water and saturated sodium hydrogen carbonate solution sequentially. The organic layer was dried over anhydrous magnesium sulfate, the solvent was distilled off under reduced pressure, and thus obtained residue was purified by silica gel column chromatography (eluent : hexane:ethyl acetate = 4:1) to give 5.9 g (yield 46%) of the title compound as a white solid.

^{1}H-NMR ($CDCl_3$, ppm) δ 2.11 (6H, s), 7.26-7.31 (3H, m), 8.12-8.15 (1H, m), 8.60-8.62 (1H, m), 8.70 (1H, s).

Example 11-2

Preparation of N-(2,6-dimethyl-4-heptafluoroisopropyl)phenyl 3-amino-4-fluorobenzamide

[0211] The title compound was prepared according to the conditions described in Example 1-2. The compound was obtained as a white solid.

^{1}H-NMR (DMSO-d_6, ppm) δ 2.26 (6H, s), 5.42 (2H, broad-s), 7.10-7.19 (2H, m), 7.37 (1H, dd, J = 2.0, 8.8 Hz), 7.42 (2H, s), 9.78 (1H, s).

Example 11-3

Preparation of N-(2,6-dimethyl-4-heptafluoroisopropyl)phenyl 4-fluoro-3-(methylamino)benzamide

[0212] 18 ml of 98% sulfuric acid was cooled to a temperature of 0°C to 5°C and stirred, and 2.50 g of N-(2,6-dimethyl-4-heptafluoroisopropyl)phenyl 3-amino-4-fluorobenzamide was added thereto. After the reaction mixture was stirred for 15 minutes, 18 ml of an aqueous solution of 37% formaldehyde was added dropwise, and the mixture was stirred at 0°C for 1 hour and for further 3 hours at room temperature. To the reaction solution cooled again to 0°C, 28% ammonia solution in water was added to neutralize the solution, ethyl acetate was added, and the organic layer was separated. The organic layer was dried over anhydrous magnesium sulfate, the solvent was distilled off under reduced pressure, and thus obtained residue was purified by silica gel column chromatography (eluent : hexane:ethyl acetate = 4:1) to give 1.74 g (yield 67%) of the title compound in an amorphous form.

^{1}H-NMR ($CDCl_3$, ppm) δ 2.32 (6H, s), 2.94 (3H, d, J = 4.9 Hz), 4.14 (1H, broad), 7.03 (1H, dd, J= 8.3, 11.2 Hz), 7.10-7.13 (1H, m), 7.24 (1H, s), 7.34 (2H, s), 7.42 (1H, s).

[0213] The following compounds were prepared according to the process described in Example 11-3:

N-(2,6-dimethyl-4-heptafluoroisopropyl)phenyl 2-fluoro-3-(methylamino)benzamide
^{1}H-NMR (DMSO-d_6) δ 2.32 (6H, s), 2.76 (3H, d, J = 4.9 Hz), 5.84 (1H, broad), 6.77-6.81 (2H, m), 7.10 (1H, t, J = 7.8 Hz), 7.43 (2H, s), 9.90 (1H, s).
N-[2,6-dimethyl-4-(nonafluoro-2-butyl)]phenyl 2-fluoro-3-(methylamino) benzamide
^{1}H-NMR (DMSO-d_6) δ 2.32 (6H, s), 2.77 (3H, d, J = 4.9 Hz), 5.82 (1H, broad), 6.79 (1H, t, J = 7.8 Hz), 7.08-7.21 (2H, m), 7.42 (2H, s), 9.88 (1H, s).
N-(2,6-dimethyl-4-heptafluoroisopropyl)phenyl-N- methyl 2-fluoro-3-(methylamino)benzamide
^{1}H-NMR (DMSO-d_6) δ 2.33 (6H, s), 2.76(3H, d, J = 4.9 Hz), 4.55 (3H, s), 6.58-6.62 (1H, m), 6.70-6.78 (1H, m), 7.13 (1H, t, J = 7.8 Hz), 7.31 (1H, s), 7.50 (2H, s).

Example 11-4

Preparation of N-(2,6-dimethyl-4-heptafluoroisopropyl)phenyl 4-fluoro-3-[N-methyl-N-(4-nitrobenzoyl)amino]benzamide (Compound No. 1464)

[0214] The title compound was obtained as a white solid using 4-nitrobenzoyl chloride according to the conditions described in Example 1-3.
^{1}H-NMR (DMSO-d_6, ppm) δ 2.23 (6H, s), 3.42 (3H, s), 7.41 (1H, broad), 7.45 (2H, s), 7.60 (2H, broad), 7.90 (1H, broad), 8.08-8.13 (3H, broad), 9.93 (1H, s).

Example 12-1

Preparation of N-(2,6-dimethyl-4-heptafluoroisopropyl)phenyl 6-chloropyridine-2-carboxamide

[0215] A mixture of 2.2 g of 6-chloropyridine-2-carboxylic acid and 0.1 g of N,N-dimethyl formamide was introduced to 10 ml of toluene, and then 2.0 g of thionyl chloride was added thereto. After stirred at 80°C for 1 hour, the reaction mixture was stirred for another-2 hours under reflux conditions. The mixture was cooled to room temperature, the solvent was distilled off under reduced pressure, and thus obtained residue was added dropwise to a mixed solution of 3.67 g of 2,6-dimethyl-4-heptafluoroisopropylaniline, 1.22 g of pyridine and 20 ml of tetrahydrofuran. After the mixture was stirred at room temperature for 2 hours, ethyl acetate was added thereto, and the organic layer was washed with water and saturated aqueous sodium hydrogen carbonate solution sequentially. The organic layer was dried over anhydrous magnesium sulfate, the solvent was distilled off under reduced pressure, and thus obtained residue was washed with cooled hexane at 5°C to give 4.42 g (yield 77%) of the title compound as a white solid.
^{1}H-NMR ($CDCl_3$, ppm) δ 2.36 (6H, s), 7.36 (2H, s), 7.56 (1H, dd, J = 1.0,8.1 Hz), 7.88 (1H, dd, J = 7.6,8.1 Hz), 8.23 (1H, dd, J = 1.0,7.6 Hz), 9.27 (1H, broad-s).

Example 12-2

Preparation of N-(2,6-dimethyl-4-heptafluoroisopropyl)phenyl 6-aminopyridin-2-carboxamide

[0216] A mixture of 3.08 g of N-(2,6-dimethyl-4-heptafluoroisopropyl)phenyl 6-chloropyridin-2-carboxamide, 30 ml of 28% ammonia solution in water, 0.20 g of copper sulfate and 70 ml of methanol was introduced into a 200 ml autoclave and was heated with stirring at 150°C for 2 hours. After the mixture was cooled to room temperature, ammonia was distilled off at 60°C and atmospheric pressure, and methanol was distilled off under reduced pressure. Ethyl acetate and water were added to the reaction solution, phase separation was carried out, and the organic layer was separated and dried over anhydrous sodium sulfate. This solution was filtered, the filtrate was collected, and the solvent was distilled under reduced pressure. Thus obtained residue was purified by silica gel column chromatography (eluent : hexane:ethyl acetate = 3:2 to 2:3) to give 2.90 g (yield 98%) of the title compound as an oil.
^{1}H-NMR ($CDCl_3$, ppm) δ 2.35 (6H, s), 4.57 (2H, broad-s), 6.69-6.74 (1H, m), 7.34 (2H, s), 7.62-7.66 (2H, m), 9.39 (1H, broad-s).

Example 12-3

Preparation of N-(2,6-dimethyl-4-heptafluoroisopropyl)phenyl 6-(benzoylamino)pyridin-2-carboxamide (Compound No. 2001)

[0217] A mixture of 0.16 g of N-(2,6-dimethyl-4-heptafluoroisopropyl)phenyl 6-aminopyridin-2-carboxamide and 62 mg of pyridine was introduced to 3 ml of tetrahydrofuran, 63 mg of benzoyl chloride was added, and the mixture was

stirred at room temperature for 3 hours. Ethyl acetate was introduced, and the organic layer was washed with water and then with saturated aqueous sodium hydrogen carbonate solution. The organic layer was dried over anhydrous magnesium sulfate, and the solvent was distilled off under reduced pressure, and thus obtained residue was purified by silica gel column chromatography (eluent : hexane:ethyl acetate = 6:4) to give 0.13 g (yield 65%) of the title compound as a white solid.
^{1}H-NMR ($CDCl_3$, ppm) δ 2.36 (6H, s), 7.36 (2H, s), 7.53-7.57 (2H, m), 7.61-7.65 (1H, m), 7.95-8.03 (3H, m), 8.08 (1H, dd, J = 1.0,7.3 Hz), 8.52 (1H, broad-s), 8.62 (1H, dd, J = 1.0,8.3 Hz), 9.19 (1H, broad-s).

Example 12-4

Preparation of N-(2,6-dimethyl-4-heptafluoroisopropyl)phenyl 6-(benzoylamino)-1-oxopyridin-2-carboxamide (Compound No. 2164)

[0218] A mixture of 65 mg of N-(2,6-dimethyl-4-heptafluoroisopropyl)phenyl 6-(benzoylamino)pyridin-2-carboxamide and 0.11 g of m-chloroperbenzoic acid was introduced to 5 ml of benzene, and the mixture was stirred at 80°C for 4 hours. The mixture was cooled to room temperature, and the organic layer was washed with water and saturated aqueous sodium hydrogen carbonate solution sequentially and dried over anhydrous magnesium sulfate. The solvent was distilled off under reduced pressure, and thus obtained residue was purified by silica gel column chromatography (eluent : hexane:ethyl acetate = 4:1) to give 52 mg (yield 52%) of the title compound as a white solid.
^{1}H-NMR ($CDCl_3$, ppm) δ 2.34 (6H, s), 7.47 (2H, s), 7.62-7.65 (2H, m), 7.70-7.81 (2H, m), 8.00-8.04 (3H, m), 8.64 (1H, dd, J = 1.5, 8.3 Hz), 10.90 (1H, broad-s), 12.30 (1H, broad-s).

Example 13-1

Preparation of 2,6-dibromo-4-heptafluoroisopropylaniline

[0219] To a solution prepared by adding 2.0 g of 4-heptafluoroisopropylaniline in 5 ml of N,N-dimethyl formamide, 2.73 g of N-bromosuccinimide dissolved in 10 ml of N,N-dimethyl formamide was introduced at 5°C. After the reaction solution was returned to room temperature and stirred for 2 hours, ethyl acetate and water were added thereto, and the organic layer was separated and washed once with water. The solvent was distilled off under reduced pressure, and thus obtained residue was purified by silica gel column chromatography (eluent : hexane:ethyl acetate = 20:1) to give 2.20 g (yield 69%) of the title compound as an orange oil.
^{1}H-NMR ($CDCl_3$, ppm) δ 4.89 (2H, broad-s), 7.59 (2H, s).

Example 13-2

Preparation of N-(2,6-dibromo-4-heptafluoroisopropyl)phenyl 3-nitrobenzamide

[0220] A mixed solution of 2.20 g of 2,6-dibromo-4-heptafluoroisopropylaniline, 1.46 g of 3-nitrobenzoyl chloride and 10 ml of pyridine was stirred at 70°C for 20 hours. After the solution was returned to room temperature, ethyl acetate and 1N hydrochloric acid were added, and the organic layer was separated and washed with a saturated aqueous sodium hydrogen carbonate solution. The solvent was distilled off under reduced pressure, and thus obtained residue was dissolved in a solvent mixture of 8 ml of tetrahydrofuran and 2 ml of methanol. Then, the solution was cooled to 5°C, 0.30 g of sodium hydroxide was added, the solution was stirred for 2 hours, and ethyl acetate and water were added to the reaction solution. The organic layer was separated, washed with saturated brine and dried over anhydrous magnesium sulfate. The solvent was distilled off under reduced pressure, and thus obtained residue was washed with hexane to give 2.19 g (yield 73%) of the title compound as a pale brown solid.
^{1}H-NMR (DMSO-d_6, ppm) δ 7.92 (1H, t, J = 7.8 Hz), 8.08 (2H, s), 8.45 (1H, d, J = 7.8 Hz), 8.53 (1H, dd, J = 1.5, 7.8 Hz), 8.85 (1H, d, J = 1.5 Hz), 11.08 (1H, s).

Example 13-3

Preparation of N-(2,6-dibromo-4-heptafluoroisopropyl)phenyl 3-aminobenzamide

[0221] The title product was obtained as a white solid according to the conditions described in Example 1-2.
^{1}H-NMR (DMSO-d_6, ppm) δ 5.39 (2H, broad-s), 6.77-6.80 (1H, m), 7.13-7.20 (3H, m), 8.02 (2H, s), 10.35 (1H, s).

Example 13-4

Preparation of N-(2,6-dibromo-4-heptafluoroisopropyl)phenyl 3-(2-fluorobenzoyl)aminobenzamide (Compound No. 8)

[0222] The title compound was obtained as a white solid using 2-fluorobenzoyl chloride according to the conditions described in Example 1-3.
^{1}H-NMR (DMSO-d_6, ppm) δ 7.33-7.40 (2H, m), 7.55-7.63 (2H, m), 7.68-7.72 (1H, m), 7.78 (1H, d, J = 7.8 Hz), 7.99 (1H, d, J = 7.8 Hz), 8.05 (2H, s), 8.34 (1H, s), 10.65 (1H, s), 10.69 (1H, s).

Example 14-1

Preparation of 4-(heptafluoro-n-propylthio)aniline

[0223] To 20 ml of an acetonitrile solution of 1.25 g of 4-aminothiophenol and 1.11 g of triethylamine, 5.91 g of 1-iodoheptafluoro-n-propane was added, and the mixture was stirred at room temperature for 3 hours. The mixture was diluted with ether, washed with an aqueous solution of 1N sodium hydroxide and purified by silica gel column chromatography (eluent : hexane:ethyl acetate = 4:1) to give 1.85 g (yield 63%) of the title compound.
^{1}H-NMR ($CDCl_3$, ppm) δ 3.95 (2H, s), 6.66 (2H, d, J = 8.8 Hz), 7.40 (2H, d, J = 8.8 Hz).

Example 14-2

Preparation of 2,6-dibromo-4-(heptafluoro-n-propylthio)aniline

[0224] To a solution prepared by adding 0.77 g of 4-(heptafluoro-n-propylthio)aniline in 15 ml of N,N-dimethyl formamide, 0.98 g of N-bromosuccinimide was introduced. After the mixture was stirred at 60°C for 2 hours, ether and water were added, and the organic layer was separated. The organic layer was twice washed with water and dried over anhydrous magnesium sulfate, and the solvent was distilled off under reduced pressure. Thus obtained residue was purified by silica gel column chromatography (fluent : hexane: ethyl acetate = 9:1) to give 1.19 g (yield 100%) of the title compound as a red oil.
^{1}H-NMR ($CDCl_3$, ppm) δ 4.98 (2H, broad-s), 7.66 (2H, s).

Example 14-3

Preparation of N-(2,6-dibromo-4-heptafluoro-n-propylthio)phenyl 3-nitrobenzamide

[0225] To a solution prepared by adding 1.08 g of 2,6-dibromo-4-(heptafluoro-n-propylthio)aniline and 0.4 g of pyridine to 20 ml of tetrahydrofuran with stirring at room temperature, 0.55 g of 3-nitrobenzoyl chloride dissolved in 20 ml of tetrahydrofuran was gradually introduced dropwise. After the mixture was stirred at room temperature for 10 hours, ethyl acetate and water were added to the reaction solution. The organic layer was separated and dried over anhydrous magnesium sulfate. This solution was filtered, the filtrate was collected, and the solvent was distilled off under reduced pressure. Thus obtained residue was purified by silica gel column chromatography (eluent : hexane:ethyl acetate = 4:1) to give 0.86 g (yield 48%) of the title compound as a white solid.
^{1}H-NMR ($CDCl_3$, ppm) δ 7.73 (1H, s, J = 7.8 Hz), 7.77 (1H, t, J = 7.8 Hz), 7.96 (2H, s), 8.31 (1H, s), 8.47-8.50 (1H, m), 8.79 (1H, t, J = 2.0 Hz).

Example 14-4

Preparation of N-{2,6-dibromo-4-(heptafluoro-n-propylthio)}phenyl 3-aminobenzamide (Compound No. 1-28)

[0226] To a solution prepared by adding 0.97 g of N-{2,6-dibromo-4-(heptafluoro-n-propylthio)phenyl 3-nitrobenzamide and 0.95 g of anhydrous tin(II) chloride to 20 ml of ethanol with stirring at room temperature, 2 ml of concentrated hydrochloric acid was added, and the mixture was heated with stirring at 60°C for 1 hour. After the mixture was returned to room temperature, the reaction solution was poured onto water, and neutralization was carried out using potassium carbonate. Ethyl acetate was added, the insolubles were filtered off, and the organic layer was separated and dried over anhydrous magnesium sulfate. This solution was filtered, the filtrate was collected, and the solvent was distilled off under reduced pressure. Thus obtained residue was washed with hexane to give 0.75 g (yield 81%) of the title compound as a white solid.
^{1}H-NMR ($CDCl_3$, ppm) δ 3.89 (2H, broad-s), 6.90 (1H, dt, J = 2. 5, 6.4 Hz), 7.28-7.30 (3H, m), 7.60 (1H, s), 7.93 (2H, s).

Example 14-5

Preparation of N-(2,6-dibromo-4-heptafluoro-n-propylthio)phenyl 3-(benzoylamino)benzamide (Compound No. 263)

[0227] To a solution prepared by adding 0.10 g of N-(2,6-dibromo-4-heptafluoro-n-propylthio)phenyl 3-aminobenzamide and 0.02 g of pyridine to 5 ml of tetrahydrofuran with stirring at room temperature, 0.03 g of benzoyl chloride dissolved in 1 ml of tetrahydrofuran was introduced. After the mixture was stirred at room temperature for 1 hour, ethyl acetate and 1N hydrochloric acid were added, and the organic layer was separated. The organic layer was washed once with saturated aqueous sodium hydrogen carbonate solution and dried over anhydrous magnesium sulfate. This solution was filtered, the filtrate was collected, and the solvent was distilled off under reduced pressure. Thus obtained residue was purified by silica gel column chromatography (eluent : hexane:ethyl acetate = 3:1) to give 0.10 g (yield 67%) of the title compound as a white solid.
^{1}H-NMR (DMSO-d_6, ppm) δ 7.47-7.57 (4H, m), 7.78 (1H, d, J = 7.8 Hz), 7.93 (2H, s), 7.99-8.01 (2H, m), 8.18 (1H, d, J = 7.8 Hz), 8.33 (1H, t, J = 2.0 Hz), 9.27 (1H, s), 9.65 (1H, s).

Example 14-6

Preparation of N-(2,6-dibromo-4-heptafluoro-n-propylthio)phenyl 3-[(2-chloropyridin-3-yl)carbonylamino]benzamide (Compound No. 309)

[0228] To a solution prepared by adding 0.15 g of N-(2,6-dibromo-4-heptafluoro-n-propylthio)phenyl 3-aminobenzamide and 0.03 g of pyridine to 5 ml of tetrahydrofuran, 0.05 g of 2-chloronicotinoyl chloride hydrochloride was added, and the mixture was stirred at room temperature for 4 hours. Ethyl acetate was added, the mixture was twice washed with saturated sodium hydrogen carbonate solution, and the solvent was distilled off under reduced pressure. Thus obtained solid was purified by silica gel column chromatography (eluent : hexane:ethyl acetate = 3:1) to give 0.17 g (yield 92%) of the title compound in an amorphous form.
^{1}H-NMR ($CDCl_3$, ppm) δ 7.44 (1H, dd, J = 4.8, 7.8 Hz), 7.56 (1H, t, J = 7.8 Hz), 7.80 (1H, d, J = 7.8 Hz), 7.86 (1H, s), 7.92 (1H, d, J = 7.8 Hz), 7.95 (2H, s), 8.23 (1H, dd, J = 2.0., 7.8 Hz), 8.30 (1H, s), 8.41 (1H, s), 8.55 (1H, dd, J = 2.0, 4.8 Hz).

Example 14-7

Preparation of N-(2,6-dibromo-4-heptafluoro-n-propylsulfinyl)phenyl 3-nitrobenzamide

[0229] To a solution prepared by adding 0.5 g of N-(2,6-dibromo-4-heptafluoro-n-propylthio)phenyl 3-nitrobenzamide to 15 ml of chloroform and stirring at room temperature, 0.5 g of m-chloroperbenzoic acid was introduced. The mixture was stirred at room temperature for 2 days, and after addition of an aqueous solution of sodium sulfite, the mixture was stirred again. Phase separation was carried out, an obtained organic layer was washed with an aqueous solution of sodium hydroxide and saturated brine, and the solvent was distilled off under reduced pressure. Thus obtained solid was purified by silica gel column chromatography (eluent : hexane:ethyl acetate = 4:1) to give 0.36 g (yield 70%) of the title compound as a white solid.
^{1}H-NMR ($CDCl_3$, ppm) δ 7.76-7.82 (2H, m), 8.06 (1H, s), 8.29 (1H, s), 8.33-8.35 (1H, m), 8.49-8.53 (1H, m), 8.81 (1H, s).

Example 14-8

Preparation of N-(2,6-dibromo-4-heptafluoro-n-propylsulfinyl)phenyl 3-aminobenzamide (Compound No. I-57)

[0230] The title compound was obtained using N-(2,6-dibromo-4-heptafluoro-n-propylsulfinyl)phenyl 3-nitrobenzamide according to the conditions described in Example 1-2.
^{1}H-NMR ($CDCl_3$, ppm) δ 6.90-6.94 (1H, m), 7.28-7.33 (3H, m), 7.73 (1H, s), 8.02 (1H, s), 8.25 (1H, s).

Example 14-9

Preparation of N-(2,6-dibromo-4-heptafluoro-n-propylsulfinyl)phenyl 3-(benzoylamino)benzamide (Compound No. 335)

[0231] The title compound was obtained using N-(2,6-dibromo-4-heptafluoro-n-propylsulfinyl)phenyl 3-aminobenzamide according to the conditions described in Example 1-3.
^{1}H-NMR ($CDCl_3$, ppm) δ 7.45-7.61 (4H, m), 7.77-7.79 (1H, m), 7.87-7.91 (3H, m), 8.01 (1H, s), 8.07-8.10 (1H, m), 8.15 (1H, s), 8.25 (1H, s), 8.38 (1H, s).

Example 14-10

Preparation of 2,6-dimethyl-4-(heptafluoro-n-propylthio)aniline

[0232] A mixture of 3.0 g (1.3 mmol) of 2,6-dibromo-4-heptafluoro-n-propylthioaniline, 3.0 g (21.9 mmol) of potassium carbonate, 0.75 g (0.65 mmol) of tetrakis(triphenylphosphine)palladium and 0.17 g (1.3 mmol)of trimethylboroxine was added to 20 ml of DMF, and this was stirred at 135°C for 6 hours. The reaction solution was returned to room temperature, the insolubles were removed by celite filtration, and filtrate was concentrated under reduced pressure. Thus obtained residue was purified by silica gel column chromatography (eluent : hexane:ethyl acetate = 12:1 to 4:1) to give 1.17 g (yield 55%) of the title compound as an oil.
^{1}H-NMR ($CDCl_3$, ppm) δ 2.17 (6H, s), 3.86 (2H, broad-s), 7.22 (2H, s).

Example 15

Preparation of N-(2,6-dimethyl-4-heptafluoroisopropyl)phenyl 3-(methylamino)benzamide

[0233] A mixture of 20.0 g of N-(2,6-dimethyl-4-heptafluoroisopropyl)phenyl 3-aminobenzamide, 4.40 g of an aqueous solution of 37% formaldehyde, 2.0 g of 10% palladium-carbon and 200 ml of ethyl acetate was stirred under a hydrogen atmosphere at room temperature and ambient pressure. The insolubles in the reaction solution were separated by filtration, and the filtered residue was washed with ethyl acetated. The filtrate was collected, the solvent was distilled off under reduced pressure, and thus obtained residue was washed with diisopropyl ether to give 13.5 g (yield 65%) of the title compound as a white solid.
^{1}H-NMR ($CDCl_3$, ppm) δ 2.35 (6H, s), 2.91 (3H, s), 6.82 (1H, d, J = 7.3 Hz), 7.18-7.52 (7H, m).

Example 16-1

Preparation of 3-(benzoylamino)benzoic acid

[0234] To a solution of 1.37 g of 3-aminobenzoic acid and 0.4 g of sodium hydroxide in 50 ml of water, 1.41 g of benzoyl chloride and a solution containing 0.4 g of sodium hydroxide in 5 ml of water were simultaneously added dropwise, in an ice bath, and the mixture was stirred at room temperature for 6 hours. The reaction solution was adjusted to pH 1 by addition of 1N hydrochloric acid, and thus obtained solid was collected by filtration to give 1.92 g (yield 80%) of the title compound as a white solid.
^{1}H-NMR ($CDCl_3$, ppm) δ 7.40-7.56 (5H, m), 7.78 (1H, d, J=7.8 Hz), 8.00 (2H, d, J = 8.3 Hz), 8.15 (1H, d, J=7.8 Hz), 8.35 (1H, t, J=2.0 Hz), 9.89 (1H, s).

Example 16-2

Preparation of 3-(benzoylamino)benzoyl chloride

[0235] To a suspension of 1.5 g of 3-(benzoylamino)benzoic acid in 10 ml of toluene, 2 ml of thionyl chloride was added, and the mixture was stirred under reflux conditions for 2 hours. After the mixture was returned to room temperature, the solvent was distilled off under reduced pressure to give 1.53 g (yield 95%) of the title compound as a white solid.
^{1}H-NMR ($CDCl_3$, ppm) δ 7.51-7.62 (4H, m), 7.90 (2H, d, J = 7.3 Hz), 7.93 (1H, s), 7.97 (1H, s), 8.15 (1H, dt, J = 1.0, 5.9 Hz), 8.28 (1H, t, J = 2.0 Hz).

[0236] Using readily available benzoic acids, the following compounds can be prepared according to the processes described in Examples 16-1 and 16-2:

3-[(2-fluorobenzoyl)amino]benzoyl chloride
3-[(3-fluorobenzoyl)amino]benzoyl chloride
3-[(4-fluorobenzoyl)amino]benzoyl chloride
3-[(2-chlorobenzoyl)amino]benzoyl chloride
3-[(3-chlorobenzoyl)amino]benzoyl chloride
3-[(4-chlorobenzoyl)amino]benzoyl chloride
3-[(3-cyanobenzoyl)amino]benzoyl chloride
3-[(4-cyanobenzoyl)amino]benzoyl chloride
3-[(2-methyl benzoyl)amino]benzoyl chloride
3-[(3-methyl benzoyl)amino]benzoyl chloride

3-[(4-methyl benzoyl)amino]benzoyl chloride
3-[(2-nitro benzoyl)amino]benzoyl chloride
3-[(3-nitrobenzoyl)amino]benzoyl chloride
3-[(4-nitrobenzoyl)amino]benzoyl chloride
3-[(2-trifluoromethyl benzoyl)amino]benzoyl chloride
3-[(3-trifluoromethyl benzoyl)amino]benzoyl chloride
3-[(4-trifluoromethyl benzoyl)amino]benzoyl chloride
3-[(2-trifluoromethoxy benzoyl)amino]benzoyl chloride
3-[(3-trifluoromethoxy benzoyl)amino]benzoyl chloride
3-[(4-trifluoromethoxy benzoyl)amino]benzoyl chloride
3-[(2,3-difluorobenzoyl)amino]benzoyl chloride
3-[(2,4-difluorobenzoyl)amino]benzoyl chloride
3-[(2,5-difluorobenzoyl)amino]benzoyl chloride
3-[(2,6-difluorobenzoyl)amino]benzoyl chloride
3-[(3,4-difluorobenzoyl)amino]benzoyl chloride
3-[(pyridin-3-yl)carbonylamino]benzoyl chloride
3-[(2-fluoropyridin-3-yl)carbonylamino]benzoyl chloride
3-[(2-chloropyridin-3-yl)carbonylamino]benzoyl chloride
3-[(2, 4-dichlorobenzoyl)amino]benzoyl chloride
3-[(2, 6-dichlorobenzoyl)amino]benzoyl chloride
3-[(3,4-dichlorobenzoyl)amino]benzoyl chloride
3-[(2-chloro-4-fluorobenzoyl)amino]benzoyl chloride
3-[(4-chloro-2-fluorobenzoyl)amino]benzoyl chloride
3-[(2-chloro-6-fluorobenzoyl)amino]benzoyl chloride
3-[(2,3,6-trifluorobenzoyl)amino]benzoyl chloride

Example 16-3

Preparation of N-(2,6-dimethyl-4-heptafluoro-n-propylthio)phenyl 3-(benzoylamino)benzamide (Compound No. 260)

[0237] To a solution prepared by adding 0.1 g of 2,6-dimethyl-4-(heptafluoro-n-propylthio)aniline and 0.03 g of pyridine to 5 ml of tetrahydrofuran and stirring at room temperature, 0.09 g of 3-(benzoylamino)benzoyl chloride dissolved in 1 ml of tetrahydrofuran was introduced. After the mixture was stirred at room temperature for 1 hour, ethyl acetate and 1N hydrochloric acid were added, and the organic layer was separated. The organic layer was washed once with a saturated aqueous sodium hydrogen carbonate solution and dried over anhydrous magnesium sulfate. This solution was filtered, the filtrate was collected, and the solvent was distilled off under reduced pressure. Thus obtained residue was purified by silica gel column chromatography (eluent : hexane:ethyl acetate = 3:1) to give 0.10 g (yield 53%) of the title compound as a white solid.
^{1}H-NMR (DMSO-d_6, ppm) δ2.31 (6H, s), 7.41 (2H, s), 7.50-7.67 (5H, m), 7.71 (1H, d, J=7.8 Hz), 7.87-7.90 (3H, m), 8.07 (1H, s), 8.31 (1H, s).

Example 17-1

Preparation of 2,6-dimethyl-4-[1-hydroxy-2,2,2-trifluoro-1-(trifluoromethyl)eth yl]aniline

[0238] At room temperature, 24.4 g of 2,6-dimethylaniline and 50.0 g of hexafluoroacetone hydrate were mixed, and 0.5 g of p-toluenesulfonic acid monohydrate was added. The reaction solution was stirred and heated to 100°C. After the loss of the starting material was confirmed through TLC, ethyl acetate and an aqueous solution of 1N sodium hydroxide were added to the reaction solution, and phase separation was carried out. The organic layer was dried over anhydrous magnesium sulfate and filtered. The filtrate was concentrated under reduced pressure, and the residue was washed by addition of hexane. The suspension was filtered, and thus obtained filtered residue was dried under reduced pressure at room temperature to give 24.3 g (yield 69%) of the title compound as a powder form.
^{1}H-NMR ($CDCl_3$, ppm) δ 2.20 (6H, s), 3.26 (1H, broad-s), 3.76 (2H, broad-s), 7.25 (2H, s).

Example 17-2

Preparation of N-[2,6-dimethyl-4-{1-hydroxy-2,2,2-trifluoro-1-(trifluoromethyl) ethyl}phenyl] 3-nitrobenzamide (Compound No. I-124)

[0239] At room temperature, 5.0 g of 2,6-dimethyl-4-[1-hydroxy-2,2,2-trifluoro-1-(trifluoromethyl)eth yl]aniline, 3.9 g of 3-nitrobenzoyl chloride and 2.1 g of pyridine were introduced to 50 ml of tetrahydrofuran in a reactor, and the mixture was stirred at room temperature. After the loss of the starting material was confirmed through TLC, a saturated sodium hydrogen carbonate solution was added to the reaction solution and the solution was stirred for a while. Subsequently, ethyl acetate and water were added to the reaction solution, and phase separation was carried out. The separated organic layer was dried over anhydrous magnesium sulfate and filtered. The filtrate was concentrated under reduced pressure and dried, and thus obtained residue was grinded to give 7.5 g (yield 95%) of the title compound as a powder form.
^{1}H-NMR (DMSO-d_6, ppm) δ 2.26 (6H, s), 7.46 (2H, s), 7.88 (1H, t, J= 7.8 Hz), 8.43-8.48 (2H, m), 8.73 (1H, s), 8.81 (1H, s), 10.27 (1H, s).

Example 17-3

Preparation of N-[2,6-dimethyl-4-{1-hydroxy-2,2,2-trifluoro-1-(trifluoromethyl) ethyl}phenyl] 3-aminobenzamide (Compound No. 1-204)

[0240] A solution prepared by adding 8.0 g of N-[2,6-dimethyl-4-{1-hydroxy-2,2,2-trifluoro-1-(trifluoromethyl) ethyl} phenyl] 3-aminobenzamide and 0.8 g of 10% palladium-carbon to 50 ml of methanol, was stirred at room temperature under a hydrogen atmosphere. After the loss of the starting material was confirmed through TLC, the reaction solution filtered, and thus obtained filtrate was concentrated under reduced pressure. Thus obtained residue was purified by silica gel chromatography (eluent : hexane:ethyl acetate = 3:1) to give 6.3 g (yield 85%) of the title compound as a powder form.
^{1}H-NMR (DMSO-d_6, ppm) δ 2.35 (6H, s), 4.31 (2H, broad), 6.84-6.87 (1H, m), 7.21-7.25 (1H, m), 7.29-7.31 (2H, m), 7.47-7.49 (2H, m), 7.83 (1H, s), 8.94 (1H, s).

Example 17-4

Preparation of N-[2,6-dimethyl-4-{1-hydroxy-2,2,2-trifluoro-1-(trifluoromethyl) ethyl}phenyl] 3-(benzoylamino)benzamide (Compound No. 1-351)

[0241] At room temperature, 6.0 g of N-[2,6-dimethyl-4-{1-hydroxy-2,2,2-trifluoro-1-(trifluoromethyl) ethyl}phenyl] 3-aminobenzamide, 2.5 g of benzoyl chloride and 1.8 g of pyridine were introduced to 50 ml of tetrahydrofuran. After the loss of the starting material was confirmed through TLC, the reaction solution was filtered, and thus obtained filtrate was concentrated under reduce pressure. Thus obtained residue was purified by silica gel chromatography (eluent : hexane:ethyl acetate = 3:1) to give 6.3 g (yield 85%) of the title compound as a powder form.
^{1}H-NMR (DMSO-d_6, ppm) δ 2.26 (6H, s), 7.44 (2H, s), 7.51-7.63 (4H, m), 7.74(1H, d, J = 7.8 Hz), 7.98-8.07 (3H, m), 8.35 (1H, s), 8.71 (1H, s), 9.90 (1H, s), 10.47 (1H, s).
[0242] Using 2-fluorobenzoyl chloride instead of benzoyl chloride, N-[2,6-dimethyl-4-{1-hydroxy-2,2,2-trifluoro-1-(trifluoromethyl) ethyl}phenyl] 3-[(2-fluorobenzoyl)amino]benzamide (Compound No. 1-358) was prepared according to Example 17-4.
^{1}H-NMR (DMSO-d_6, ppm) δ 2.34 (6H, s), 7.21 (1H, dd, J= 8.2,11.2 Hz), 7.32 (1H, t, J = 7.8 Hz), 7.49-7.56 (4H, m), 7.78 (1H, d, J = 7.8 Hz), 8.04-8.08 (2H, m), 8.23 (1H, s), 8.71 (1H, s), 9.08 (1H, d, J = 11.2 Hz).

Example 17-5

Preparation of N-[2,6-dimethyl-4-{1-chloro-2,2,2-trifluoro-1-(trifluoromethyl)e thyl}phenyl] 3-(benzoylamino)benzamide (Compound No. I-419)

[0243] At room temperature, 8.0 g of N-[2,6-dimethyl-4-{1-hydroxy-2,2,2-trifluoro-1-(trifluoromethyl) ethyl}phenyl] 3-(benzoylamino)benzamide and 1.0 g of pyridine were introduced to 40 ml of thionyl chloride. Then, the temperature was elevated, and the mixture was stirred under reflux conditions. After the loss of the starting material was confirmed through TLC, the reaction solution was cooled and was concentrated under reduce pressure. Thus obtained residue was purified by silica gel chromatography (eluent : hexane:ethyl acetate = 3:1) to give 6.2 g (yield 75%) of the title compound as a powder form.

^{1}H-NMR (DMSO-d_6, ppm) δ 2.34 (6H, s), 7.49-7.63 (6H, m), 7.76 (1H, d, J = 7.8 Hz), 7.99-8.08 (3H, m), 8.37 (1H, s), 9.99 (1H, s), 10.48 (1H, s).

Example 17-6

Preparation of N-(2,6-dimethyl-4-heptafluoroisopropyl)phenyl 3-(benzoylamino)benzamide (Compound No. 10)

[0244] At room temperature, 300 mg of N-[2,6-dimethyl-4-{1-chloro-2,2,2-trifluoro-1-(trifluoromethyl)e thyl}phenyl] 3-(benzoylamino)benzamide and 165 mg of potassium fluoride were introduced to 20 ml of N,N-dimethyl formamide. Then, the temperature was elevated to 120°C, and the mixture was stirred for 4 hours. The reaction solution was cooled to room temperature, ethyl acetate and water were added, and the organic layer was separated. The organic layer was dried over anhydrous magnesium sulfate and filtered, and the filtrate was concentrated under reduce pressure. Thus obtained residue was washed by addition of diisopropyl ether. The suspension was filtered, and thus obtained filtered residue was dried under reduced pressure at room temperature to give 250 mg (yield 85%) of the title compound as a powder form.

[0245] The characterization is described in Example 1-3.

Example 17-7

N-[2,6-dimethyl-4-{1-hydroxy-2,2,2-trifluoro-1-(trifluorome thyl)ethyl}phenyl] 3-(benzoylamino)benzamide (Compound No. 1-351)

[0246] At room temperature, 2.0 g of 2,6-dimethyl-4-[1-hydroxy-2,2,2-trifluoro-1-(trifluoromethyl)eth yl]aniline, 2.7 g of 3-(benzoylamino)benzoyl chloride and 1.2 g of pyridine were introduced to 50 ml of tetrahydrofuran, and the mixture was stirred at room temperature. After the loss of the starting material was confirmed through TLC, a saturated aqueous sodium hydrogen carbonate solution was added to the reaction solution and the solution was stirred for a while. Subsequently, ethyl acetate and water were added to the reaction solution, and phase separation was carried out. The separated organic layer was dried over anhydrous magnesium sulfate and filtered. The filtrate was concentrated under reduced pressure and dried, and thus obtained residue was grinded to give 3.4 g (yield 95%) of the title compound as a powder form.

[0247] The characterization is described in Example 17-4.

Example 17-8

Preparation of N-(2,6-dimethyl-4-heptafluoroisopropyl)phenyl 3-(benzoylamino)benzamide (Compound No. 10)

[0248] At room temperature, 300 mg of N-[2,6-dimethyl-4-{1-hydroxy-2,2,2-trifluoro-1-(trifluoromethyl) ethyl}phenyl] 3-(benzoylamino)benzamide was introduced to 20 ml of methylene chloride. Then, 480 mg of 2,2-difluoro-1,3-dimethyl-2-imidazolidinone was added dropwise, and the mixture was stirred at room temperature for 8 hours. Water was added to the reaction solution, and the organic layer was separated. The organic layer was dried over anhydrous magnesium sulfate and filtered, and thus obtained filtrate was concentrated under reduce pressure and dried. Thus obtained solid was grinded to give 180 mg (yield 60%) of the title compound as a powder form.

[0249] The characterization is described in Example 1-3.

Example 18-1

Preparation of 4-methyl-5-nitro-2-(2,2,2-trifluoro-1-trifluoromethylethoxy)pyri dine

[0250] After 1.33 g of 60% sodium hydride was introduced to 15 ml of tetrahydrofuran and cooled to 5°C, 5.84 g of 1,1,1,3,3,3-hexafluoro-2-propanol was added dropwise. The mixture was stirred at 5°C for 30 minutes, and then 3.0 g of 2-chloro-4-methyl-5-nitropyridine dissolved in 10 ml of tetrahydrofuran was added dropwise, this being stirred at room temperature for 3 hours. After being left at room temperature for 3 days, ethyl acetate and water were added thereto, and the organic layer was separated and washed with saturated brine. The organic layer was dried over anhydrous magnesium sulfate, and the solvent was distilled off under reduced pressure. Thus obtained residue was purified by silica gel column chromatography (eluent : hexane: ethyl acetate = 10:1) to give 4.5 g (yield 80%) of the title compound as a yellow oil.

^{1}H-NMR ($CDCl_3$, ppm) δ 2.69 (3H, s), 6.54 (1H, septet, J = 6.8 Hz), 6.95 (1H, s), 8.90 (1H, s).

Example 18-2

Preparation of 5-amino-4-methyl-2-(2,2,2-trifluoro-1-trifluoromethylethoxy)pyri dine

[0251] The title compound was prepared using 4-methyl-5-nitro-2-(2,2,2-trifluoro-1-trifluoromethylethoxy)pyri dine according to the conditions described in Example 1-2.
^{1}H-NMR ($CDCl_3$, ppm) δ 2.04 (3H, s), 3.49 (2H, broad-s), 6.40 (1H, septet, J = 6.3 Hz), 6.69 (1H, s), 7.54 (1H, s).

Example 18-3

Preparation of 3-amino-2-chloro-4-methyl-6-(2,2,2-trifluoro-1-trifluoromethylet hoxy)pyridine

[0252] 1.0 g of 5-amino-4-methyl-2-(2,2,2-trifluoro-1-trifluoromethylethoxy)pyri dine was introduced to 10 ml of N,N-dimethyl formamide, and 0.56 g of N-chlorosuccinimide was added at room temperature. The temperature was elevated to 60°C, and the mixture was stirred for 1 hour and poured into water. The mixture was extracted with ethyl acetate and dried over anhydrous magnesium sulfate. The solvent was distilled off under reduced pressure, and thus obtained residue was purified by silica gel column chromatography (eluent : hexane:ethyl acetate = 10:1) to give 0.50 g (yield 44%) of the title compound as a brown oil.
^{1}H-NMR ($CDCl_3$, ppm) δ 2.23 (3H, s), 3.82 (2H, broad-s), 6.24 (1H, septet, J = 6.3 Hz), 6.67 (1H, s).

Example 18-4

Preparation of N-[2-chloro-4-methyl-6-(2,2,2-trifluoro-1-trifluoromethylethoxy) pyridin-3-yl] 3-(benzoylamino)benzamide (Compound No. 464)

[0253] The title compound was prepared using 5-amino-4-methyl-2-(2,2,2-trifluoro-1-trifluoromethylethoxy)pyri dine according to the conditions described in Example 1.
^{1}H-NMR ($CDCl_3$, ppm) δ 2.38 (3H, s), 6.34 (1H, septet, J = 6.3 Hz), 6.87 (1H, s), 7.50-7.63 (5H, m), 7.72 (1H, d, J = 7.8 Hz), 7.88-7.90 (3H, m), 7.99 (1H, broad-s), 8.31 (1H, broad-s).

[0254] Preparation examples containing the compound represented by Formula (1) of the invention as an active ingredient are presented in the following, but the invention is not intended to be limited thereto. Additionally, in the formulations, the unit expressed in parts mean parts by weight.

[Preparation Example 1]

[0255] An emulsion was obtained by homogeneously mixing, with stirring, 20 parts of the compound represented by Formula (1) of the invention, 10 parts of Sol Pol 355S (Toho Chemical Industry Co. , LTD, a surfactant) and 70 parts of xylene.

[Preparation Example 2]

[0256] A water-dispersible powder was obtained by homogeneously mixing, with stirring, 10 parts of the compound represented by Formula (1) of the invention, 2 parts of sodium alkylnaphthalenesulfonate, 1 part of sodium ligninsulfonate, 5 parts of white carbon and 82 parts of diatomite.

[Preparation Example 3]

[0257] A dust formulation was obtained by homogeneously mixing, with grinding, a homogeneous mixture of 0.3 part of the compound represented by Formula (1) of the invention and 0.3 part of white carbon with 99.2 parts of clay and 0.2 part of Driless A (Sankyo Co.,Ltd).

[Preparation Example 4]

[0258] A granule was obtained by homogeneously mixing, with grinding, 2 parts of the compound represented by Formula (1) of the invention, 2 parts of white carbon, 2 parts of sodium ligninsulfonate and 94 parts of bentonite, kneading with water, and by granulating and drying.

[Preparation Example 5]

[0259] A flowable formulation was prepared by sufficiently stirring and mixing 20 parts of the compound represented by Formula (1) of the invention and 5 parts of a 20% aqueous solution of polyvinyl alcohol, adding 75 parts of a 0.8% aqueous solution of xanthan gum, and stirring and mixing them again.

[0260] Furthermore, in order to confirm the excellent insecticidal activity of the compound represented by Formula (1) of the invention, Experimental Examples will be presented below, which are not intended to limit the invention anyway.

[Experimental Example 1]

Insecticidal testing against common cutworm (Spodoptera litura)

[0261] Cabbage leaves were immersed in a liquid comprising the testing compound to a predetermined concentration for 30 seconds and air-dried. They were placed in a 7-cm polyethylene cup, and the second-stage larvae of common cutworm were left therein. The cup was placed in a constant-temperature room at 25 °C, and the survival rate was investigated after 3 days. The test was carried out with two groups of 5 larvae per group. As a result, Compound No. (to be described later)
2,3,4,5,6,7,8,9,10,11,12,13,14,16,17,18,19,20,21,22,23,25,26,27,
28,29,30,31,32,33,37,39,42,43,46,48,56,57,58,59,60,61,62,66,68,
69,70,71,73,74,75,81,82,83,84,85,86,87,89,92,96,99,100,101,105,
106,109,114,117,122,124,125,126,127,129,130,132,136,140,150,160,
163,164,165,166,168,169,170,171,172,173,174,175,176,177,178,179,
180,181,182,183,184,185,186,187,188,189,190,191,192,193,194,195,
196,197,198,199,200,201,202,204,207,208,210,212,256,257,258,259,
260,261,262,263,266,276,284,288,309,310,327,328,329,330,331,332,
333,334,335,338,369,375,376,377,378,379,380,383,414,460,461,462,
463,464,465,466,467,601,602,603,604,605,606,607,609,610,611,612,
616,618,619,624,628,629,630,631,633,634,638,639,649,650,651,652,
653,654,655,656,657,658,661,665,668,670,676,679,682,686,699,708,
711,719,722,791,1001,1016,1043,1089,1091,1097,1100,1125,1126,
1206,1207,1208,1209,1210,1211,1212,1213,1214,1216,1217,1218,
1219,1220,1229,1235,1236,1237,1238,1245,1246,1247,1255,1256,
1257,1258,1259,1260,1261,1262,1263,1264,1265,1266,1267,1274,
1293,1294,1463,1464,1465,1478,1479,1480,1481,1482,1483,1484,
1485,1486,1487,1607,1617,1645,1697,2001,2004,2034,2035,2036,
2037,2082,2085,2093,2116,2117,2164,2168,2201,2202,2203 exhibited an pesticidal rate of 70% or more at a concentration of 100 ppm.

[Experimental Example 2]

Insecticidal testing against diamondback moth (Plutella xylostella)

[0262] Cabbage leaves were immersed in a liquid comprising the testing compound to a predetermined concentration for 30 seconds and air-dried. They were placed in a 7-cm polyethylene cup, and the second-stage larvae of diamondback moth were left therein. The cup was placed in a constant-temperature room at 25°C, and the survival rate was investigated after 3 days. The test was carried out with two groups of 5 larvae per group. As a result, Compound No. (to be described later)
2,3,4,5,6,7,8,9,10,11,12,13,17,18,19,20,21,22,23,25,26,27,29,30,
31,32,33,37,39,43,47,56,58,59,60,61,62,66,68,69,70,82,83,84,85,
86,87,89,92,100,101,105,106,109,114,118,122,124,127,130,132,135,
147,150,154,160,163,164,165,166,168,169,170,171,172,173,174,175,
176,177,178,179,180,181,182,183,184,185,186,194,196,197,198,199,
200,201,202,203,204,206,207,208,209,210,212,256,258,259,260,261,
262,263,266,284,309,310,314,318,327,328,329,330,331,332,333,334, 335,338,369,375,376,377,378,379
383,414,460,461,462,463,464,465, 466,467,601,602,603,604,605,606,607,609,610,611,612,616,618,619,
620,624,628,629,630,631,633,634,638,639,650,651,652,653,654,655,
656,657,665,668,670,676,679,682,686,699,708,711,719,722,791,
1001,1016,1043,1089,1091,1097,1100,1125,1126,1206,1207,1208,

1209,1210,1211,1212,1213,1214,1215,1216,1217,1218,1219,1220,
1229,1235,1236,1237,1238,1245,1246,1247,1255,1256,1257,1258,
1259,1260,1261,1262,1263,1264,1265,1266,1267,1274,1293,1294,
1463,1464,1465,1478,1479,1480,1481,1482,1484,1485,1486,1487,
1607,1617,1645,1697,2001,2034,2037,2082,2085,2093,2116,2117, 2164,2168,2201,2202,2203
exhibited an pesticidal rate of 70% or more at a concentration of 100 ppm.

[Experimental Example 3]

Insecticidal testing against small brown planthopper (Laodelphax striatellus)

[0263] An additional test was carried out with 10 small brown planthoppers by preparing an acetone solution of the testing compound diluted to a predetermined concentration, and spraying the solution on rice paddies and air drying them. The medicament was all used as received. The paddies were placed in a constant-temperature room at 25°C, and the survival rate was investigated after 6 days. The test was carried out by means of one group of 10 pests. As a result, Compound No. (to be described later) 7,8,17,25,31,62,101,105,106,122,130,164,165,166,169,170,171,172,
173,174,175,178,179,180,181,182,183,184,185,197,199,201,202,206,
207,208,210,369,601,604,607,609,610,611,612,618,619,620,624,628,
630,633,639,650,651,652,654,655,657,665,668,686,1043,1089,1091,
1097,1100,1207,1208,1209,1210,1211,1212,1213,1214,1216,1217,
1218,1219,1220,1229,1235,1236,1237,1238,1245,1246,1247,1255,
1259,1260,1262,1263,1264,1265,1266,1293,1463,1464,1465,1487,
1607,1645,1697,2034,2035,2082,2085,2093,2116,2117,2203 exhibited an pesticidal rate of 70% or more at a concentration of 1000 ppm.

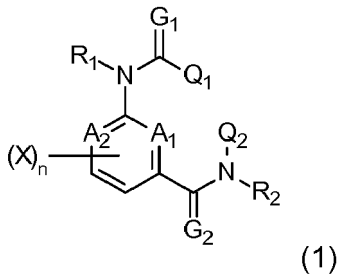
[Comparative Experimental Example 1]

Pesticidal testing using N-(4-heptafluoroisopropyl-2-methyl)phenyl 3-(2-iodobenzoylamino)benzamide (Compound A) and N-(2,6-dimethyl-4-trifluoromethyl)phenyl 3-(benzoylamino)benzamide (Compound B)

[0264] Additional tests were carried out using said Compound A and Compound B following the procedures of Experimental Examples 1 and 2, but insecticidal activity was not observed under the same conditions.

Claims

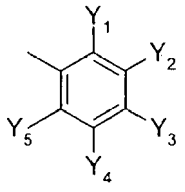
1. A compound represented by Formula (1):



(1)

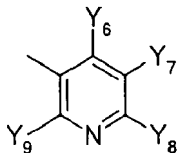
wherein A_1 and A_2 each represent a carbon atom, a nitrogen atom or an oxidized nitrogen atom;
R_1 and R_2 are each a hydrogen atom or a C1-C4 alkyl group or an optionally substituted straight, branched or cyclic C1-C4 alkylcarbonyl group, wherein the term optionally substituted means optionally substituted by one or more substituents which may be identical or different, selected from a hydrogen atom, a halogen atom, a hydroxyl group, a cyano group, a nitro group, a C1-C6 alkoxy group, a C1-C6 haloalkoxy group, a C1-C6 alkylthio group, a C1-C6 haloalkylthio group, a C1-C6 alkylsulfinyl group, a C1-C6 haloalkylsulfinyl group, a C1-C6 alkylsulfonyl group, a C1-C6 haloalkylsulfonyl group, a C1-C6 alkylcarbonyl group, a C1-C6 haloalkylcarbonyl group, a C1-C6 alkoxycarbonyl group, a C1-C6 haloalkoxycarbonyl group, a C1-C6 alkylcarbonyloxy group, a C1-C6 haloalkylcarbonyloxy group, an amino group, a C1-C6 alkylamino group, a di-C1-C6 alkylamino group, a phenyl group, a phenylcarbonyl group, a phenylamino group and a heterocyclic group;

G_1 and G_2 each represent an oxygen atom or a sulfur atom;
Xs, which may be identical to or different from each other, are a hydrogen atom, a halogen atom or a trifluoromethyl group;
n is an integer of 0 to 4;
Q_1 is a phenyl group, or a substituted phenyl group having one or more substituents, which may be identical or different, selected from a halogen atom, a C1-C4 alkyl group wherein 'alkyl group' encompasses straight, branched and cyclic alkyl groups, a C1-C4 haloalkyl group, a C2-C4 alkenyl group, a C2-C4 haloalkenyl group, a C2-C4 alkynyl group, a C2-C4 haloalkynyl group, a C3-C6 cycloalkyl group, a C3-C6 halocycloalkyl group, a C1-C3 alkoxy group, a C1-C3 haloalkoxy group, a C1-C3 alkylthio group which term is used to include cyclopropylthio, a C1-C3 haloalkylthio group, a C1-C3 alkylsulfinyl group which term is used to include cyclopropylsulfinyl, a C1-C3 haloalkylsulfinyl group, a C1-C3 alkylsulfonyl group which term is used to include cyclopropylsulfonyl, a C1-C3 haloalkylsulfonyl group, a C1-C4 alkylamino group which term is used to include cyclopropylamino, a di-C1-C4 alkylamino group, a cyano group, a nitro group, a hydroxyl group, a C1-C4 alkylcarbonyl group wherein 'alkylcarbonyl group' encompasses straight, branched and cyclic alkylcarbonyl groups, a C1-C4 alkylcarbonyloxy group, a C1-C4 alkoxycarbonyl group, an acetylamino group, and a phenyl group; a heterocyclic group selected from a pyridyl group, a pyridin-N-oxide group, a pyrimidinyl group, a pyridazinyl group, a pyrazinyl group, a furyl group, a thienyl group, an oxazolyl group, an isoxazolyl group, an oxadiazolyl group, a thiazolyl group, an isothiazolyl group, an imidazolyl group, a triazolyl group, a pyrrolyl group, a pyrazolyl group or a tetrazolyl group, or a substituted heterocyclic group selected from a pyridyl group, a pyridin-N-oxide group, a pyrimidinyl group, a pyridazinyl group, a pyrazinyl group, a furyl group, a thienyl group, an oxazolyl group, an isoxazolyl group, an oxadiazolyl group, a thiazolyl group, an isothiazolyl group, an imidazolyl group, a triazolyl group, a pyrrolyl group, a pyrazolyl group or a tetrazolyl group having one or more substituents, which may be identical or different, selected from a halogen atom, a C1-C4 alkyl group wherein 'alkyl group' encompasses straight, branched and cyclic alkyl groups, a C1-C4 haloalkyl group, a C2-C4 alkenyl group, a C2-C4 haloalkenyl group, a C2-C4 alkynyl group, a C2-C4 haloalkynyl group, a C3-C6 cycloalkyl group, a C3-C6 halocycloalkyl group, a C1-C3 alkoxy group, a C1-C3 haloalkoxy group, a C1-C3 alkylthio group which term is used to include cyclopropylthio, a C1-C3 haloalkylthio group, a C1-C3 alkylsulfinyl group which term is used to include cyclopropylsulfinyl, a C1-C3 haloalkylsulfinyl group, a C1-C3 alkylsulfonyl group which term is used to include cyclopropylsulfonyl, a C1-C3 haloalkylsulfonyl group, a C1-C4 alkylamino group which term is used to include cyclopropylamino, a di-C1-C4 alkylamino group, a cyano group, a nitro group, a hydroxyl group, a C1-C4 alkylcarbonyl group wherein 'alkylcarbonyl group' encompasses straight, branched and cyclic alkylcarbonyl groups, a C1-C4 alkylcarbonyloxy group, a C1-C4 alkoxycarbonyl group, an acetylamino group, and a phenyl group;
Q_2 is represented by Formula (2):



(2)

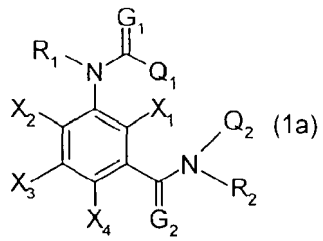
wherein Y_1 and Y_5, which may be identical or different, each represent a halogen atom, a C1-C4 alkyl group wherein 'alkyl group' encompasses straight, branched and cyclic alkyl groups, a C1-C4 haloalkyl group, a C1-C3 alkylthio group which term is used to include cyclopropylthio, a C1-C3 haloalkylthio group, a C1-C3 alkylsulfinyl group which term is used to include cyclopropylsulfinyl, a C1-C3 haloalkylsulfinyl group, a C1-C3 alkylsulfonyl group which term is used to include cyclopropylsulfonyl, a C1-C3 haloalkylsulfonyl group or a cyano group; Y_3 represents a C2-C6 perfluoroalkyl group, a C1-C6 perfluoroalkylthio group, a C1-C6 perfluoroalkylsulfinyl group or a C1-C6 perfluoroalkylsulfonyl group; and Y_2 and Y_4 each represent a hydrogen atom, a halogen atom or a C1-C4 alkyl group wherein 'alkyl group' encompasses straight, branched and cyclic alkyl groups,
or by Formula (3):



(3)

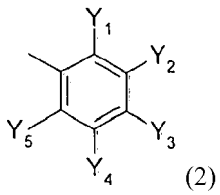
wherein Y_6 and Y_9, which may be identical or different, each represent a halogen atom, a C1-C4 alkyl group wherein 'alkyl group' encompasses straight, branched and cyclic alkyl groups, a C1-C4 haloalkyl group, a C1-C3 alkylthio group which term is used to include cyclopropylthio, a C1-C3 haloalkylthio group, a C1-C3 alkylsulfinyl group which term is used to include cyclopropylsulfinyl, a C1-C3 haloalkylsulfinyl group, a C1-C3 alkylsulfonyl group which term is used to include cyclopropylsulfonyl, a C1-C3 haloalkylsulfonyl group or a cyano group; Y_8 represents a C1-C4 haloalkoxy group, a C2-C6 perfluoroalkyl group, a C1-C6 perfluoroalkylthio group, a C1-C6 perfluoroalkylsulfinyl group or a C1-C6 perfluoroalkylsulfonyl group; and Y_7 represents a hydrogen atom, a halogen atom or a C1-C4 alkyl group wherein 'alkyl group' encompasses straight, branched and cyclic alkyl groups.

2. The compound according to claim 1, represented by Formula (Ia), which is Formula (1) with A_1 and A_2 both being carbon atoms:



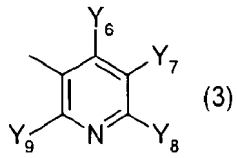
(1a)

wherein R_1, R_2, G_1, G_2 and Q_1 have the same meanings as those described in claim 1, and Q_2 is represented either by Formula (2):



(2)

wherein Y_1 and Y_5, which may be identical or different, each represent a halogen atom, a C1-C4 alkyl group wherein 'alkyl group' encompasses straight, branched and cyclic alkyl groups, a C1-C4 haloalkyl group, a C1-C3 alkylthio group which term is used to include cyclopropylthio, a C1-C3 haloalkylthio group, a C1-C3 alkylsulfinyl group which term is used to include cyclopropylsulfinyl, a C1-C3 haloalkylsulfinyl group, a C1-C3 alkylsulfonyl group which term is used to include cyclopropylsulfonyl, a C1-C3 haloalkylsulfonyl group or a cyano group; Y_3 represents a C1-C6 perfluoroalkylthio group, a C1-C6 perfluoroalkylsulfinyl group or a C1-C6 perfluoroalkylsulfonyl group; and Y_2 and Y_4 each represent a hydrogen atom, a halogen atom or a C1-C4 alkyl group wherein 'alkyl group' encompasses straight, branched and cyclic alkyl groups,
or by Formula (3):

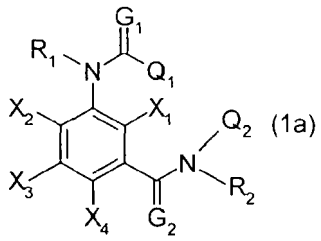


(3)

wherein Y_6 and Y_9, which may be identical or different, each represent a halogen atom, a C1-C4 alkyl group wherein 'alkyl group' encompasses straight, branched and cyclic alkyl groups, a C1-C4 haloalkyl group, a C1-C3 alkylthio group which term is used to include cyclopropylthio, a C1-C3 haloalkylthio group, a C1-C3 alkylsulfinyl group which term is used to include cyclopropylsulfinyl, a C1-C3 haloalkylsulfinyl group, a C1-C3 alkylsulfonyl group which term is used to include cyclopropylsulfonyl, a C1-C3 haloalkylsulfonyl group or a cyano group; Y_8 represents a C1-C4 haloalkoxy group, a C1-C6 perfluoroalkylthio group, a C1-C6 perfluoroalkylsulfinyl group or a C1-C6 perfluoroalkylsulfonyl group; and Y_7 represents a hydrogen atom, a halogen atom or a C1-C4 alkyl group wherein 'alkyl group' encompasses straight, branched and cyclic alkyl groups;
wherein in Formula (Ia), X_1 and X_2 each represent a hydrogen atom or a fluorine atom; and X_3 and X_4 represent

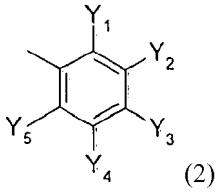
a hydrogen atom.

3. The compound according to claim 1, represented by Formula (1a), which is Formula (1) with A_1 and A_2 both being carbon atoms:



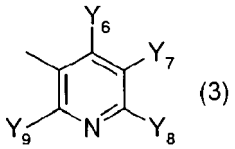
(1a)

wherein Q_2 is represented either by Formula (2):



(2)

wherein Y_1 and Y_5, which may be identical or different, each represent a halogen atom, a C1-C4 alkyl group wherein 'alkyl group' encompasses straight, branched and cyclic alkyl groups, a C1-C4 haloalkyl group, a C1-C3 alkylthio group which term is used to include cyclopropylthio, a C1-C3 haloalkylthio group, a C1-C3 alkylsulfinyl group which term is used to include cyclopropylsulfinyl, a C1-C3 haloalkylsulfinyl group, a C1-C3 alkylsulfonyl group which term is used to include cyclopropylsulfonyl, a C1-C3 haloalkylsulfonyl group or a cyano group; Y_3 represents a C2-C6 perfluoroalkyl group; and Y_2 and Y_4 each represent a hydrogen atom, a halogen atom or a C1-C4 alkyl group wherein 'alkyl group' encompasses straight, branched and cyclic alkyl groups;
or by Formula (3):



(3)

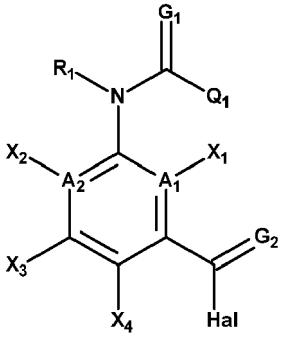
wherein Y_6 and Y_9, which may be identical or different, each represent a halogen atom, a C1-C4 alkyl group wherein 'alkyl group' encompasses straight, branched and cyclic alkyl groups, a C1-C4 haloalkyl group, a C1-C3 alkylthio group which term is used to include cyclopropylthio, a C1-C3 haloalkylthio group, a C1-C3 alkylsulfinyl group which term is used to include cyclopropylsulfinyl, a C1-C3 haloalkylsulfinyl group, a C1-C3 alkylsulfonyl group which term is used to include cyclopropylsulfonyl, a C1-C3 haloalkylsulfonyl group or a cyano group; Y_8 represents a C2-C6 perfluoroalkyl group; and Y_7 represents a hydrogen atom, a halogen atom or a C1-C4 alkyl group wherein 'alkyl group' encompasses straight, branched and cyclic alkyl groups;
X_1 and X_2 each represent a hydrogen atom or a fluorine atom;
X_3 and X_4 represent a hydrogen atom;
one of R_1 and R_2 is a hydrogen atom, the other is a C1-C4 alkyl group or an optionally substituted straight, branched or cyclic C1-C4 alkylcarbonyl group, or both of them are independently a C1-C4 alkyl group or an optionally substituted straight, branched or cyclic C1-C4 alkycarbonyl group;
G_1 and G_2 each represent an oxygen atom or a sulfur atom; and
Q_1 represents a phenyl group; or a substituted phenyl group having one or more substituents, which may be identical or different, selected from a halogen atom, a C1-C4 alkyl group wherein 'alkyl group' encompasses straight, branched and cyclic alkyl groups, a C1-C4 haloalkyl group, a C2-C4 alkenyl group, a C2-C4 haloalkenyl group, a C2-C4 alkynyl group, a C2-C4 haloalkynyl group, a C3-C6 cycloalkyl group, a C3-C6 halocycloalkyl group, a C1-C3 alkoxy group, a C1-C3 haloalkoxy group, a C1-C3 alkylthio group which term is used to include cyclopropylthio, a C1-C3 haloalkylthio group, a C1-C3 alkylsulfinyl group which term is used to include cyclo-

propylsulfinyl, a C1-C3 haloalkylsulfinyl group, a C1-C3 alkylsulfonyl group which term is used to include cyclopropylsulfonyl, a C1-C3 haloalkylsulfonyl group, a C1-C4 alkylamino group which term is used to include cyclopropylamino, a di-C1-C4 alkylamino group, a cyano group, a nitro group, a hydroxyl group, a C1-C4 alkylcarbonyl group wherein 'alkylcarbonyl group' encompasses straight, branched and cyclic alkylcarbonyl groups, a C1-C4 alkylcarbonyloxy group, a C1-C4 alkoxycarbonyl group, an acetylamino group and a phenyl group; a heterocyclic group selected from a pyridyl group, a pyridin-N-oxide group, a pyrimidinyl group, a pyridazinyl group, a pyrazinyl group, a furyl group, a thienyl group, an oxazolyl group, an isoxazolyl group, an oxadiazolyl group, a thiazolyl group, an isothiazolyl group, an imidazolyl group, a triazolyl group, a pyrrolyl group, a pyrazolyl group or a tetrazolyl group; or a substituted heterocyclic group selected from a pyridyl group, a pyridin-N-oxide group, a pyrimidinyl group, a pyridazinyl group, a pyrazinyl group, a furyl group, a thienyl group, an oxazolyl group, an isoxazolyl group, an oxadiazolyl group, a thiazolyl group, an isothiazolyl group, an imidazolyl group, a triazolyl group, a pyrrolyl group, a pyrazolyl group or a tetrazolyl group having one or more substituents, which may be identical or different, selected from a halogen atom, a C1-C4 alkyl group wherein 'alkyl group' encompasses straight, branched and cyclic alkyl groups, a C1-C4 haloalkyl group, a C2-C4 alkenyl group, a C2-C4 haloalkenyl group, a C2-C4 alkynyl group, a C2-C4 haloalkynyl group, a C3-C6 cycloalkyl group, a C3-C6 halocycloalkyl group, a C1-C3 alkoxy group, a C1-C3 haloalkoxy group, a C1-C3 alkylthio group which term is used to include cyclopropylthio, a C1-C3 haloalkylthio group, a C1-C3 alkylsulfinyl group which term is used to include cyclopropylsulfinyl, a C1-C3 haloalkylsulfinyl group, a C1-C3 alkylsulfonyl group which term is used to include cyclopropylsulfonyl, a C1-C3 haloalkylsulfonyl group, a C1-C4 alkylamino group which term is used to include cyclopropylamino, a di-C1-C4 alkylamino group, a cyano group, a nitro group, a hydroxyl group, a C1-C4 alkylcarbonyl group wherein 'alkylcarbonyl group' encompasses straight, branched and cyclic alkylcarbonyl groups, a C1-C4 alkylcarbonyloxy group, a C1-C4 alkoxycarbonyl group, an acetylamino group and a phenyl group.

4. The compound according to claim 1, represented by Formula (1), wherein
A_1 is a nitrogen atom or an oxidized nitrogen atom;
A_2 is a carbon atom;
R_1 and R_2 are each a hydrogen atom or a C1-C4 alkyl group wherein 'alkyl group' encompasses straight, branched and cyclic alkyl groups;
Xs are a hydrogen atom or a fluorine atom;
n is 0 or 1; and
G_1 and G_2 are an oxygen atom.

5. The compound according to any one of claims 2, 3 and 4 wherein
Q_1 is a phenyl group; or a substituted phenyl group having one or more substituents, which may be identical or different, selected from a halogen atom, a C1-C4 alkyl group wherein 'alkyl group' encompasses straight, branched and cyclic alkyl groups, a C1-C4 haloalkyl group, a C2-C4 alkenyl group, a C2-C4 haloalkenyl group, a C2-C4 alkynyl group, a C2-C4 haloalkynyl group, a C3-C6 cycloalkyl group, a C3-C6 halocycloalkyl group, a C1-C3 alkoxy group, a C1-C3 haloalkoxy group, a C1-C3 alkylthio group which term is used to include cyclopropylthio, a C1-C3 haloalkylthio group, a C1-C3 alkylsulfinyl group which term is used to include cyclopropylsulfinyl, a C1-C3 haloalkylsulfinyl group, a C1-C3 alkylsulfonyl group which term is used to include cyclopropylsulfonyl, a C1-C3 haloalkylsulfonyl group, a C1-C4 alkylamino group which term is used to include cyclopropylamino, a di-C1-C4 alkylamino group, a cyano group, a nitro group, a hydroxyl group, a C1-C4 alkylcarbonyl group wherein 'alkylcarbonyl group' encompasses straight, branched and cyclic alkylcarbonyl groups, a C1-C4 alkylcarbonyloxy group, a C1-C4 alkoxycarbonyl group, an acetylamino group and a phenyl group; a pyridyl group; or a substituted pyridyl group having one or more substituents, which may be identical or different, selected from a halogen atom, a C1-C4 alkyl group wherein 'alkyl group' encompasses straight, branched and cyclic alkyl groups, a C1-C4 haloalkyl group, a C2-C4 alkenyl group, a C2-C4 haloalkenyl group, a C2-C4 alkynyl group, a C2-C4 haloalkynyl group, a C3-C6 cycloalkyl group, a C3-C6 halocycloalkyl group, a C1-C3 alkoxy group, a C1-C3 haloalkoxy group, a C1-C3 alkylthio group which term is used to include cyclopropylthio, a C1-C3 haloalkylthio group, a C1-C3 alkylsulfinyl group which term is used to include cyclopropylsulfinyl, a C1-C3 haloalkylsulfinyl group, a C1-C3 alkylsulfonyl group which term is used to include cyclopropylsulfonyl, a C1-C3 haloalkylsulfonyl group, a C1-C4 alkylamino group which term is used to include cyclopropylamino, a di-C1-C4 alkylamino group, a cyano group, a nitro group, a hydroxyl group, a C1-C4 alkylcarbonyl group wherein 'alkylcarbonyl group' encompasses straight, branched and cyclic alkylcarbonyl groups, a C1-C4 alkylcarbonyloxy, a C1-C4 alkoxycarbonyl group, an acetylamino group and a phenyl group.

6. A compound represented by Formula (4):



(4)

wherein:

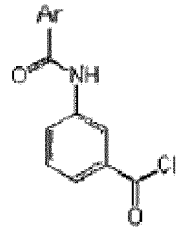
(a) in the case of R_1 represents a hydrogen atom:

A_1 and A_2 each represent a carbon atom;
G_1 and G_2 each represent an oxygen atom or a sulfur atom;
X_1 is hydrogen or fluorine;
X_2, X_3 and X_4 represent a hydrogen atom;
Q_1 represents a phenyl group; a substituted phenyl group having one or more substituents, which may be identical or different, selected from a halogen atom, a C1-C4 alkyl group, a C1-C4 haloalkyl group, a cyano group and a nitro group; a pyridyl group; or a substituted pyridyl group, having one or more substituents, which may be identical or different, selected from a halogen atom;

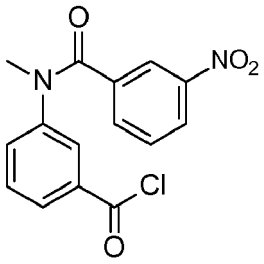
(b) in the case of R_1 represents a C1-C4 alkyl group, or a C1-C4 alkylcarbonyl group:

A_1 and A_2 each represent a carbon atom, a nitrogen atom or an oxidized nitrogen atom;
G_1 and G_2 each represent an oxygen atom or a sulfur atom;
X_1, X_2, X_3 and X_4, which may be identical or different to each other, represent a hydrogen atom, a halogen atom, an optionally substituted C1-C3 alkyl group, wherein "optionally substituted C1-C3 alkyl group" encompasses "cyclopropyl group", or a trifluoromethyl group;
Q_1 represents a phenyl group; or a substituted phenyl group having one or more substituents, which may be identical or different, selected from a halogen atom, a C1-C4 alkyl group, a C1-C4 haloalkyl group, a C2-C4 alkenyl group, a C2-C4 haloalkenyl group, a C2-C4 alkynyl group, a C2-C4 haloalkynyl group, a C3-C6 cycloalkyl group, a C3-C6 halocycloalkyl group, a C1-C3 alkoxy group, a C1-C3 haloalkoxy group, a C1-C3 alkylthio group which term is used to include cyclopropylthio, a C1-C3 haloalkylthio group, a C1-C3 alkylsulfinyl group which term is used to include cyclopropylsulfinyl, a C1-C3 haloalkylsulfinyl group, a C1-C3 alkylsulfonyl group which term is used to include cyclopropylsulfonyl, a C1-C3 haloalkylsulfonyl group, a C1-C4 alkylamino group which term is used to include cyclopropylamino, a di-C1-C4 alkylamino group, a cyano group, a nitro group, a hydroxyl group, a C1-C4 alkylcarbonyl group wherein 'alkylcarbonyl group' encompasses straight, branched and cyclic alkylcarbonyl groups, a C1-C4 alkylcarbonyloxy group, a C1-C4 alkoxycarbonyl group, an acetylamino group and a phenyl group; a heterocyclic group selected from a pyridyl group, a pyridin-N-oxide group, a pyrimidinyl group, a pyridazinyl group, a pyrazinyl group, a furyl group, a thienyl group, an oxazolyl group, an isoxazolyl group, an oxadiazolyl group, a thiazolyl group, an isothiazolyl group, an imidazolyl group, triazolyl group, a pyrrolyl group, a pyrazolyl group or a tetrazolyl group; or a substituted heterocyclic group selected from a pyridyl group, a pyridin-N-oxide group, a pyrimidinyl group, a pyridazinyl group, a pyrazinyl group, a furyl group, a thienyl group, an oxazolyl group, an isoxazolyl group, an oxadiazolyl group, a thiazolyl group, an isothiazolyl group, an imidazolyl group, triazolyl group, a pyrrolyl group, a pyrazolyl group or a tetrazolyl group, wherein the substituted heterocyclic group has one or more substituents, which may be identical or different, selected from a halogen atom, a C1-C4 alkyl group, a C1-C4 haloalkyl group, a C2-C4 alkenyl group, a C2-C4 haloalkenyl group, a C2-C4 alkynyl group, a C2-C4 haloalkynyl group, a C3-C6 cycloalkyl group, a C3-C6 halocycloalkyl group, a C1-C3 alkoxy group, a C1-C3 haloalkoxy group, a C1-C3 alkylthio group which term is used to include cyclopropylthio, a C1-C3 haloalkylthio group, a C1-C3 alkylsulfinyl group which term is used to include cyclopropylsulfinyl, a C1-C3 haloalkylsulfinyl group, a C1-C3 alkylsulfonyl group which term is used to include cyclopropylsulfonyl, a C1-C3 haloalkylsulfonyl group, a C1-C4 alkylamino group which term is used to include cyclopro-

pylamino, a di-C1-C4 alkylamino group, a cyano group, a nitro group, a hydroxyl group, a C1-C4 alkylcarbonyl group wherein 'alkylcarbonyl group' encompasses straight, branched and cyclic alkylcarbonyl groups, a C1-C4 alkylcarbonyloxy group, a C1-C4 alkoxycarbonyl group, an acetylamino group or a phenyl group;
Hal represents a chlorine atom or a bromine atom; and
the term optionally substituted means optionally substituted by one or more substituents which may be identical or different, selected from a hydrogen atom, a halogen atom, a hydroxyl group, a cyano group, a nitro group, a C1-C6 alkoxy group, a C1-C6 haloalkoxy group, a C1-C6 alkylthio group, a C1-C6 haloalkylthio group, a C1-C6 alkylsulfinyl group, a C1-C6 haloalkylsulfinyl group, a C1-C6 alkylsulfonyl group, a C1-C6 haloalkylsulfonyl group, a C1-C6 alkylcarbonyl group, a C1-C6 haloalkylcarbonyl group, a C1-C6 alkoxycarbonyl group, a C1-C6 haloalkoxycarbonyl group, a C1-C6 alkylcarbonyloxy group, a C1-C6 haloalkylcarbonyloxy group, an amino group, a C1-C6 alkylamino group, a di-C1-C6 alkylamino group, a phenyl group, a phenylcarbonyl group, a phenylamino group and a heterocyclic group;
with the proviso that the compound is not a compound of the following formula:

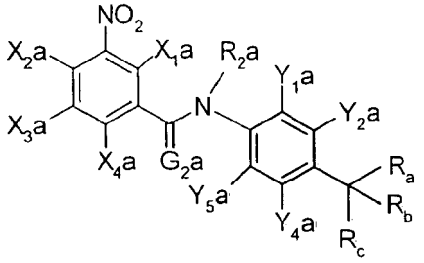


where Ar is phenyl, 3,4-dimethoxyphenyl, 3-methylphenyl, 3-chlorophenyl, 4-methoxyphenyl, 3-nitrophenyl or 3-pyridyl;
and with the proviso that the compound is not a compound of the following formula:



7. The compound according to claim 6 wherein A_2 is a carbon atom.

8. A compound represented by Formula (8):

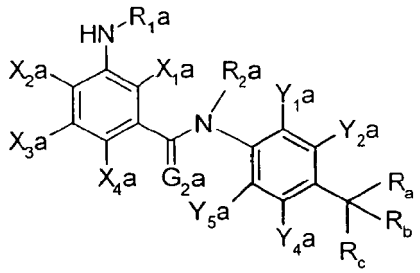


(8)

wherein X_{1a}, X_{2a}, X_{3a} and X_{4a} each represent a hydrogen atom, a C1-C3 alkyl group which term encompasses a cyclopropyl group, a trifluoromethyl group, a hydroxyl group, an amino group or a halogen atom;
R_a and R_b each represent a fluorine atom or a C1-C4 perfluoroalkyl group;
R_c represents a hydroxyl group, a group -O-R_d (wherein R_d represents a C1-C3 alkyl group which term encompasses a cyclopropyl group, a C1-C3 haloalkyl group, a C1-C3 alkylsulfonyl, a C1-C3 haloalkylsulfonyl group, an arylsulfonyl group, a C1-C4 alkylcarbonyl group wherein 'alkylcarbonyl group' encompasses straight,

branched and cyclic alkylcarbonyl groups or a C1-C4 haloalkylcarbonyl group), a chlorine atom, a bromine atom or an iodine atom;
R_{2a} represents a hydrogen atom, a C1-C3 alkyl group which term is used to include cyclopropyl group, a C1-C3 haloalkyl group, a C1-C3 alkoxy group, a C1-C3 haloalkoxy group, a C1-C4 alkylthio group which term is used to include cyclopropylthio, a C1-C4 haloalkylthio group, a C1-C4 alkylcarbonyl group wherein 'alkylcarbonyl group' encompasses straight, branched and cyclic alkylcarbonyl groups, or a C1-C4 haloalkylcarbonyl group;
Y_{1a} and Y_{5a} each represent a C1-C4 alkyl group wherein 'alkyl group' encompasses straight, branched and cyclic alkyl groups, a C1-C4 haloalkyl group, a C1-C4 alkylthio group which term is used to include cyclopropylthio, a C1-C4 haloalkylthio group, a C1-C3 alkylsulfinyl group which term is used to include cyclopropylsulfinyl or a C1-C3 haloalkylsulfinyl group, a C1-C3 alkylsulfonyl group which term is used to include cyclopropylsulfonyl, a C1-C3 haloalkylsulfonyl group, a cyano group, a hydroxyl group or a halogen atom;
Y_{2a} and Y_{4a} each represent a hydrogen atom, a C1-C4 alkyl group wherein 'alkyl group' encompasses straight, branched and cyclic alkyl groups, or a halogen atom; and
G_{2a} represents an oxygen atom or a sulfur atom.

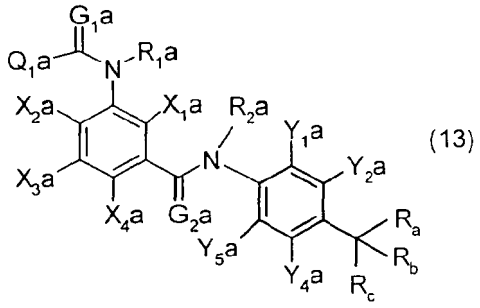
9. A compound represented by Formula (11):



(11)

wherein X_{1a}, X_{2a}, X_{3a} and X_{4a} each represent a hydrogen atom, a C1-C3 alkyl group which term is used to include cyclopropyl group, a trifluoromethyl group, a hydroxyl group, an amino group or a halogen atom;
R_a and R_b each represent a fluorine atom or a C1-C4 perfluoroalkyl group;
R_c represents a hydroxyl group, a group -O-R_d wherein R_d represents a C1-C3 alkyl group which term is used to include cyclopropyl group, a C1-C3 haloalkyl group, a C1-C3 alkylsulfonyl group which term is used to include cyclopropylsulfonyl, a C1-C3 haloalkylsulfonyl group, an arylsulfonyl group, a C1-C4 alkylcarbonyl wherein 'alkylcarbonyl group' encompasses straight, branched and cyclic alkylcarbonyl groups, or a C1-C4 haloalkylcarbonyl group, a chlorine atom, a bromine atom or an iodine atom;
R_{1a} and R_{2a} each represent a hydrogen atom, a C1-C3 alkyl group wherein 'alkyl group' encompasses straight, branched and cyclic alkyl groups, a C1-C3 haloalkyl group, a C1-C3 alkoxy group, a C1-C3 haloalkoxy group, C1-C4 alkylthio group which term is used to include cyclopropylthio, a C1-C4 haloalkylthio group, a C1-C4 alkylcarbonyl group wherein 'alkylcarbonyl group' encompasses straight, branched and cyclic alkylcarbonyl groups, or a C1-C4 haloalkylcarbonyl group;
Y_{1a} and Y_{5a} each represent a C1-C4 alkyl group, a C1-C4 haloalkyl group, a C1-C4 alkylthio group which term is used to include cyclopropylthio, a C1-C4 haloalkylthio group, a C1-C3 alkylsulfinyl group which term is used to include cyclopropylsulfinyl, a C1-C3 haloalkylsulfinyl group, a C1-C3 alkylsulfonyl group which term is used to include cyclopropylsulfonyl, a C1-C3 haloalkylsulfonyl group, a cyano group, a hydroxyl group or a halogen atom;
Y_{2a} and Y_{4a} each represent a hydrogen atom, a C1-C4 alkyl group wherein 'alkyl group' encompasses straight, branched and cyclic alkyl groups or a halogen atom; and
G_{2a} represents an oxygen atom or a sulfur atom.

10. A compound represented by Formula (13):



(13)

wherein X_{1a}, X_{2a}, X_{3a} and X_{4a} each represent a hydrogen atom, a C1-C3 alkyl group which term is used to include cyclopropyl group, a trifluoromethyl group, a hydroxyl group, an amino group or a halogen atom;
R_a and R_b each represent a fluorine atom or a C1-C4 perfluoroalkyl group;
R_c represents a hydroxyl group, a group -O-R_d wherein R_d represents a C1-C3 alkyl group which term is used to include cyclopropyl group, a C1-C3 haloalkyl group, a C1-C3 alkylsulfonyl group which term is used to include cyclopropylsulfonyl, a C1-C3 haloalkylsulfonyl group, an arylsulfonyl group, a C1-C4 alkylcarbonyl group wherein 'alkylcarbonyl group' encompasses straight, branched and cyclic alkylcarbonyl groups or a C1-C4 haloalkylcarbonyl group, a chlorine atom, a bromine atom or an iodine atom;
R_{1a} and R_{2a} each represent a hydrogen atom, a C1-C3 alkyl group wherein 'alkyl group' encompasses straight, branched and cyclic alkyl groups, a C1-C3 haloalkyl group, a C1-C3 alkoxy group, a C1-C3 haloalkoxy group, a C1-C4 alkylthio group which term is used to include cyclopropylthio, a C1-C4 haloalkylthio group, a C1-C4 alkylcarbonyl group wherein 'alkylcarbonyl group' encompasses straight, branched and cyclic alkylcarbonyl groups or a C1-C4 haloalkylcarbonyl group;
Y_{1a} and Y_{5a} each represent a C1-C4 alkyl group wherein 'alkyl group' encompasses straight, branched and cyclic alkyl groups, a C1-C4 haloalkyl group, a C1-C4 alkylthio group which term is used to include cyclopropylthio, a C1-C4 haloalkylthio group, a C1-C3 alkylsulfinyl group which term is used to include cyclopropylsulfinyl, a C1-C3 haloalkylsulfinyl group, a C1-C3 alkylsulfonyl group which term is used to include cyclopropylsulfonyl, a C1-C3 haloalkylsulfonyl group, a cyano group, a hydroxyl group or a halogen atom;
Y_{2a} and Y_{4a} each represent a hydrogen atom, a C1-C4 alkyl group wherein 'alkyl group' encompasses straight, branched and cyclic alkyl groups, or a halogen atom;
G_{1a} and G_{2a} each represent an oxygen atom or a sulfur atom;
Q_{1a} represents a phenyl group; or a substituted phenyl group having one or more substituents, which may be identical or different, selected from a halogen atom, a C1-C4 alkyl group wherein 'alkyl group' encompasses straight, branched and cyclic alkyl groups, a C1-C4 haloalkyl group, a C2-C4 alkenyl group, a C2-C4 haloalkenyl group, a C2-C4 alkynyl group, a C2-C4 haloalkynyl group, a C3-C6 cycloalkyl group, a C3-C6 halocycloalkyl group, a C1-C3 alkoxy group, a C1-C3 haloalkoxy group, a C1-C3 alkylthio group which term is used to include cyclopropylthio, a C1-C3 haloalkylthio group, a C1-C3 alkylsulfinyl group which term is used to include cyclopropylsulfinyl, a C1-C3 haloalkylsulfinyl group, a C1-C3 alkylsulfonyl group which term is used to include cyclopropylsulfonyl, a C1-C3 haloalkylsulfonyl group, a C1-C4 alkylamino group which term is used to include cyclopropylamino, a di-C1-C4 alkylamino group, a cyano group, a nitro group, a hydroxyl group, a C1-C4 alkylcarbonyl group wherein 'alkylcarbonyl group' encompasses straight, branched and cyclic alkylcarbonyl groups, a C1-C4 alkylcarbonyloxy group, a C1-C4 alkoxycarbonyl group, an acetylamino group and a phenyl group; a heterocyclic group selected from a pyridyl group, a pyridin-N-oxide group, a pyrimidinyl group, a pyridazinyl group, a pyrazinyl group, a furyl group, a thienyl group, an oxazolyl group, an isoxazolyl group, an oxadiazolyl group, a thiazolyl group, an isothiazolyl group, an imidazolyl group, a triazolyl group, a pyrrolyl group, a pyrazolyl group or a tetrazolyl group; or a substituted heterocyclic group selected from a pyridyl group, a pyridin-N-oxide group, a pyrimidinyl group, a pyridazinyl group, a pyrazinyl group, a furyl group, a thienyl group, an oxazolyl group, an isoxazolyl group, an oxadiazolyl group, a thiazolyl group, an isothiazolyl group, an imidazolyl group, a triazolyl group, a pyrrolyl group, a pyrazolyl group or a tetrazolyl group having one or more substituents, which may be identical or different, selected from a halogen atom, a C1-C4 alkyl group, a C1-C4 haloalkyl group, a C2-C4 alkenyl group, a C2-C4 haloalkenyl group, a C2-C4 alkynyl group, a C2-C4 haloalkynyl group, a C3-C6 cycloalkyl group, a C3-C6 halocycloalkyl group, a C1-C3 alkoxy group, a C1-C3 haloalkoxy group, a C1-C3 alkylthio group which term is used to include cyclopropylthio, a C1-C3 haloalkylthio group, a C1-C3 alkylsulfinyl group which term is used to include cyclopropylsulfinyl, a C1-C3 haloalkylsulfinyl group, a C1-C3 alkylsulfonyl group which term is used to include cyclopropylsulfonyl, a C1-C3 haloalkylsulfonyl group, a C1-C4 alkylamino group which term is used to include cyclopropylamino, a di-C1-C4 alkylamino group, a cyano group, a nitro group, a hydroxyl group, a C1-C4 alkylcarbonyl group wherein 'alkylcarbonyl group' en-

compasses straight, branched and cyclic alkylcarbonyl groups, a C1-C4 alkylcarbonyloxy group, a C1-C4 alkoxycarbonyl group, an acetylamino group and a phenyl group.

11. An insecticide containing the compound according to any one of claims 1 to 5 as the active ingredient.

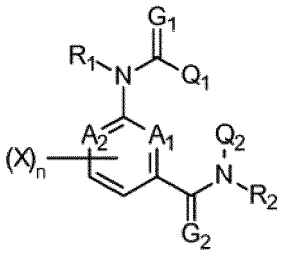
12. A method of using pesticide in treating crops or soil for use in cultivation by treating the crops or soil with an effective amount of the compounds according to any one of claims 1 to 5, in order to protect the crops from harmful organisms.

13. A mixture in which the compound as described in claims 1 to 5 is combined with at least one other insecticide and/or fungicide.

14. The mixture according to claim 13, wherein the other insecticide is at least one selected from allethrin, tetramethrin, resmethrin, phenothrin, furamethrin, permethrin, cypermethrin, deltamethrin, cyhalothrin, cyfluthrin, fenpropathrin, tralomethrin, cycloprothrin, flucythrinate, fluvalinate, acrinathrin, tefluthrin, bifenthrin, empenthrin, beta-cyfluthrin, zeta-cypermethrin, fenvalerate, and the isomers thereof; or Dalmatian pyrethrum extract, DDVP, cyanophos, fenthion, fenitrothion, tetrachlorvinphos, dimethylvinphos, propaphos, methylparathion, temephos, phoxim, acephate, isofenphos, salithion, DEP, EPN, ethion, mecarbam, pyridafenthion, diazinon, pirimiphos-methyl, etrimfos, isoxathion, quinalphos, chlorpyrifos-methyl, chlorpyrifos, phosalone, phosmet, methidathion, oxydeprofos, vamidothion, malathion, phenthoate, dimethoate, formothion, thiometon, disulfoton, phorate, terbufos, profenofos, prothiofos, sulprofos, pyraclofos, monocrotofos, naled, fosthiazate, cadusafos, NAC, MTMC, MIPC, BPMC, XMC, PHC, MPMC, ethiofencarb, bendiocarb, pirimicarb, carbosulfan, benfuracarb, methomyl, oxamyl, aldicarb, etofenprox, halfenprox, silafluofen, nicotine-sulfate, polynactins, abamectin, milbemectin, BT, cartap, thiocyclam, bensultap, diflubenzuron, chlorfluazuron, teflubenzuron, triflumuron, flufenoxuron, flucycloxuron, hexaflumuron, fluazuron, imidacloprid, nitenpyram, acetamiprid, dinotefuran, pymetrozine, fipronil, buprofezin, fenoxycarb, pyriproxyfen, methoprene, hydroprene, kinoprene, endosulfan, diafenthiuron, triazamate, tebufenozide, benzoepin, dicofol, chlorobenzilate, phenisobromolate, tetradifon, CPCBS, BPPS, chinomethionate, amitraz, benzomate, hexythiazox, fenbutatin oxide, cyhexatin, dienochlor, clofentezine, pyridaben, fenpyroximate, fenazaquin, tebufenpyrad, novaluron, noviflumuron, emamectin benzoate, clothianidin, thiacloprid, thiamethoxam, flupyrazofos, acequinocyl, bifenazate, chromafenozide, etoxazole, fluacrypyrim, flufenzine, halofenozide, indoxacarb, methoxyfenozide, spirodiclofen, tolfenpyrad, gamma-cyhalothrin, ethiprole, amidoflumet, bistrifluron, flonicamid, flubrocythrinate, flufenerim, pyridalyl, pyrimidifen, spinosad, and spiromesifen;
and the other fungicide is at least one selected from triadimefon, hexaconazole, propiconazole, ipconazole, prochloraz, triflumizole, pyrifenox, fenarimol, mepanipyrim, cyprodinil, metalaxyl, oxadixyl, benalaxyl, thiophanate-methyl, benomyl, mancozeb, propineb, zineb, metiram, tetrachloroisophthalonitrile, carpropamid, ethaboxam, dimethomorph, azoxystrobin, kresoxim-methyl, metominostrobin, orysastrobin, fluoxastrobin, trifloxystrobin, dimoxystrobin, pyraclostrobin, picoxystrobin, iprodione, procymidone, flusulfamide, dazomet, methyl isothiocyanate, chloropicrin, basic copper chloride, basic copper sulfate, copper nonylphenol sulfonate, oxine-copper, sulfur, zinc sulfate, edifenphos, tolclofos-methyl, fosetyl, phthalide, tricyclazole, pyroquilon, diclocymet, kasugamycin, validamycin, polyoxins, rape seed oil, benthiavalicarb-isopropyl, iprovalicarb, cyflufenamid, fenhexamid, quinoxyfen, spiroxamine, diflumetorim, metrafenone, picobenzamid, proquinazid, silthiofam, oxpoconazole, famoxadone, cyazofamid, fenamidone, furametpyr, zoxamide, boscalid, tiadinil, simeconazole, chlorothalonil, cymoxanil, captan, dithianon, fluazinam, folpet, dichlofluanid, (*RS*)-N-[2-(1,3-dimethylbutyl)thiophen-3-yl]-1-methyl-3-trifluoromethyl-1*H*-pyrazole-4-carboxamide (penthiopyrad: ISO proposed), oxycarboxin, mepronil, flutolanil, triforine, oxolinic acid, probenazole, acibenzolar-*S*-methyl, isoprothiolane, ferimzone, diclomezine, pencycuron, fluoroimide, chinomethionate, iminoctadine-triacetate and iminoctadine-albesilate.

Patentansprüche

1. Verbindung der Formel (1):

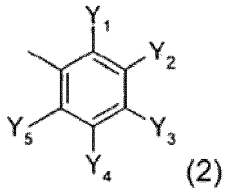


(1)

worin A_1 und A_2 jeweils für ein Kohlenstoffatom, ein Stickstoffatom oder ein oxidiertes Stickstoffatom stehen;
worin R_1 und R_2 jeweils für ein Wasserstoffatom oder eine C_1-C_4-Alkylgruppe oder eine gegebenenfalls substituierte unverzweigte, verzweigte oder zyklische C_1-C_4-Alkylcarbonylgruppe stehen, wobei die Bezeichnung gegebenenfalls substituiert für gegebenenfalls mit einem oder mehreren Substituenten substituiert steht, die gleich oder unterschiedlich sein können und aus einem Wasserstoffatom, einem Halogenatom, einer Hydroxylgruppe, einer Cyanogruppe, einer Nitrogruppe, einer C_1-C_6-Alkoxygruppe, einer C_1-C_6-Halogenalkoxygruppe, einer C_1-C_6-Alkylthiogruppe, einer C_1-C_6-Halogenalkylthiogruppe, einer C_1-C_6-Alkylsulfinylgruppe, einer C_1-C_6-Halogenalkylsulfinylgruppe, einer C_1-C_6-Alkylsulfonylgruppe, einer C_1-C_6-Halogenalkylsulfonylgruppe, einer C_1-C_6-Alkylcarbonylgruppe, einer C_1-C_6-Halogenalkylcarbonylgruppe, einer C_1-C_6-Alkoxycarbonylgruppe, einer C_1-C_6-Halogenalkoxycarbonylgruppe, einer C_1-C_6-Alkylcarbonyloxygruppe, einer C_1-C_6-Halogenalkylcarbonyloxygruppe, einer Aminogruppe, einer C_1-C_6-Alkylaminogruppe, einer Di-C_1-C_6-alkylaminogruppe, einer Phenylgruppe, einer Phenylcarbonylgruppe, einer Phenylaminogruppe und einer heterozyklischen Gruppe ausgewählt sind;
G_1 und G_2 jeweils für ein Sauerstoffatom oder Schwefelatom stehen;
die X, die gleich oder unterschiedlich sein können, für ein Wasserstoffatom, ein Halogenatom oder eine Trifluormethylgruppe stehen;
n für eine ganze Zahl von 0 bis 4 steht;
Q_1 für eine Phenylgruppe oder eine substituierte Phenylgruppe mit einem oder mehreren Substituenten steht, die gleich oder unterschiedlich sein können, ausgewählt aus einem Halogenatom, einer C_1-C_4-Alkylgruppe, worin 'Alkylgruppe' unverzweigte, verzweigte oder zyklische Alkylgruppen umfasst, einer C_1-C_4-Halogenalkylgruppe, einer C_2-C_4-Alkenylgruppe, einer C_2-C_4-Halogenalkenylgruppe, einer C_2-C_4-Alkinylgruppe, einer C_2-C_4-Halogenalkinylgruppe, einer C_3-C_6-Cycloalkylgruppe, einer C_3-C_6-Halogencycloalkylgruppe, einer C_1-C_3-Alkoxygruppe, einer C_1-C_3-Halogenalkoxygruppe, einer C_1-C_3-Alkylthiogruppe, wobei diese Bezeichnung Cyclopropylthio umfasst, einer C_1-C_3-Halogenalkylthiogruppe, einer C_1-C_3-Alkylsulfinylgruppe, wobei die Bezeichnung Cyclopropylsulfinyl umfasst, einer C_1-C_3-Halogenalkylsulfinylgruppe, einer C_1-C_3-Alkylsulfonylgruppe, wobei die Bezeichnung Cyclopropylsulfonyl umfasst, einer C_1-C_3-Halogenalkylsulfonylgruppe, einer C_1-C_4-Alkylaminogruppe, wobei die Bezeichnung Cyclopropylamino umfasst, einer Di-C_1-C_4-Alkylaminogruppe, einer Cyanogruppe, einer Nitrogruppe, einer Hydroxylgruppe, einer C_1-C_4-Alkylcarbonylgruppe, wobei 'Alkylcarbonylgruppe' unverzweigte, verzweigte und zyklische Alkylcarbonylgruppen umfasst, einer C_1-C_4-Alkylcarbonyloxygruppe, einer C_1-C_4-Alkoxycarbonylgruppe, einer Acetylaminogruppe und einer Phenylgruppe; für eine heterozyklische Gruppe, ausgewählt aus einer Pyridylgruppe, einer Pyridin-N-oxidgruppe, einer Pyrimidinylgruppe, einer Pyridazinylgruppe, einer Pyrazinylgruppe, einer Furylgruppe, einer Thienylgruppe, einer Oxazolylgruppe, einer Isoxazolylgruppe, einer Oxadiazolylgruppe, einer Thiazolylgruppe, einer Isothiazolylgruppe, einer Imidazolylgruppe, einer Triazolylgruppe, einer Pyrrolylgruppe, einer Pyrazolylgruppe oder einer Tetrazolylgruppe; oder für eine substituierte heterozyklische Gruppe, ausgewählt aus einer Pyridylgruppe, einer Pyridin-N-oxidgruppe, einer Pyrimidinylgruppe, einer Pyridazinylgruppe, einer Pyrazinylgruppe, einer Furylgruppe, einer Thienylgruppe, einer Oxazolylgruppe, einer Isoxazolylgruppe, einer Oxadiazolylgruppe, einer Thiazolylgruppe, einer Isothiazolylgruppe, einer Imidazolylgruppe, einer Triazolylgruppe, einer Pyrrolylgruppe, einer Pyrazolylgruppe oder einer Tetrazolylgruppe mit einem oder mehreren Substituenten, die gleich oder unterschiedlich sein können, ausgewählt aus einem Halogenatom, einer C_1-C_4-Alkylgruppe, wobei 'Alkylgruppe' unverzweigte, verzweigte und zyklische Alkylgruppen umfasst, einer C_1-C_4-Halogenalkylgruppe, einer C_2-C_4-Alkenylgruppe, einer C_2-C_4-Halogenalkenylgruppe, einer C_2-C_4-Alkinylgruppe, einer C_2-C_4-Halogenalkinylgruppe, einer C_3-C_6-Cycloalkylgruppe, einer C_3-C_6-Halogencycloalkylgruppe, einer C_1-C_3-Alkoxygruppe, einer C_1-C_3-Halogenalkoxy-gruppe, einer C_1-C_3-Alkylthiogruppe, wobei die Bezeichnung Cyclopropylthio umfasst, einer C_1-C_3-Halogenalkylthiogruppe, einer C_1-C_3-Alkylsulfinylgruppe, wobei die Bezeichnung Cyclopropylsulfinyl umfasst, einer C_1-C_3-Halogenalkylsulfinylgruppe, einer C_1-C_3-Alkylsulfonylgruppe, wobei die Bezeichnung Cyclopropylsulfonyl umfasst, einer C_1-C_3-Halogenalkylsulfonylgruppe, einer C_1-C_4-Alkylaminogruppe, wobei die Be-

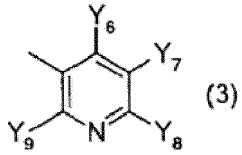
zeichnung Cyclopropylamino umfasst, einer Di-C_1-C_4-alkylaminogruppe, einer Cyanogruppe, einer Nitrogruppe, einer Hydroxylgruppe, einer C_1-C_4-Alkylcarbonylgruppe, wobei ‚Alkylcarbonylgruppe' unverzweigte, verzweigte und zyklische Alkylcarbonylgruppen umfasst, einer C_1-C_4-Alkylcarbonyloxygruppe, einer C_1-C_4-Alkoxycarbonylgruppe, einer Acetylaminogruppe und einer Phenylgruppe;

Q_2 durch die Formel (2):



(2)

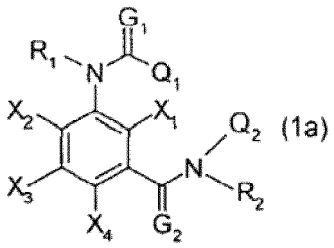
worin Y_1 und Y_5, die gleich oder unterschiedlich sein können, jeweils für ein Halogenatom, eine C_1-C_4-Alkylgruppe, wobei ‚Alkylgruppe' unverzweigte, verzweigte und zyklische Alkylgruppen umfasst, eine C_1-C_4-Halogenalkylgruppe, eine C_1-C_3-Alkylthiogruppe, wobei die Bezeichnung Cyclopropylthio umfasst, eine C_1-C_3-Halogenalkylthiogruppe, eine C_1-C_3-Alkylsulfinylgruppe, wobei die Bezeichnung Cyclopropylsulfinyl umfasst, eine C_1-C_3-Halogenalkylsulfinylgruppe, eine C_1-C_3-Alkylsulfonylgruppe, wobei die Bezeichnung Cyclopropylsulfonyl umfasst, eine C_1-C_3-Halogenalkylsulfonylgruppe oder eine Cyanogruppe stehen; Y_3 für eine C_2-C_6-Perfluoralkylgruppe, eine C_1-C_6-Perfluoralkylthiogruppe, eine C_1-C_6-Perfluoralkylsulfinylgruppe oder eine C_1-C_6-Perfluoralkylsulfonylgruppe steht; und Y_2 und Y_4 jeweils für ein Wasserstoffatom, ein Halogenatom oder eine C_1-C_4-Alkylgruppe stehen, wobei ‚Alkylgruppe' unverzweigte, verzweigte und zyklische Alkylgruppen umfasst,
oder durch Formel (3) dargestellt ist:



(3)

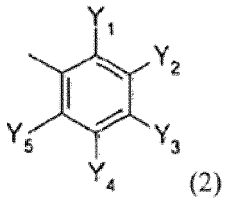
worin Y_6 und Y_9, die gleich oder unterschiedlich sein können, jeweils für ein Halogenatom, eine C_1-C_4-Alkylgruppe, wobei ‚Alkylgruppe' unverzweigte, verzweigte und zyklische Alkylgruppen umfasst, eine C_1-C_4-Halogenalkylgruppe, eine C_1-C_3-Alkylthiogruppe, wobei die Bezeichnung Cyclopropylthio umfasst, eine C_1-C_3-Halogenalkylthiogruppe, eine C_1-C_3-Alkylsulfinylgruppe, wobei die Bezeichnung Cyclopropylsulfinyl umfasst, eine C_1-C_3-Halogenalkylsulfinylgruppe, eine C_1-C_3-Alkylsulfonylgruppe, wobei die Bezeichnung Cyclopropylsulfonyl umfasst, eine C_1-C_3-Halogenalkylsulfonylgruppe oder eine Cyanogruppe stehen; Y_8 für eine C_1-C_4-Halogenalkoxygruppe, eine C_2-C_6-Perfluoralkylgruppe, eine C_1-C_6-Perfluoralkylthiogruppe, eine C_1-C_6-Perfluoralkylsulfinylgruppe oder eine C_1-C_6-Perfluoralkylsulfonylgruppe steht; und Y_7 für ein Wasserstoffatom, ein Halogenatom oder eine C_1-C_4-Alkylgruppe steht, wobei ‚Alkylgruppe' unverzweigte, verzweigte und zyklische Alkylgruppen umfasst.

2. Verbindung nach Anspruch 1, die durch die Formel (Ia) dargestellt ist, die Formel (1) entspricht, in der A_1 und A_2 beide Kohlenstoffatome sind:

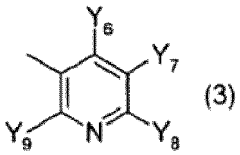


(1a)

worin R_1, R_2, G_1, G_2 und Q_1 die gleiche Bedeutung haben wie in Anspruch 1 beschrieben und Q_2 durch entweder Formel (2):

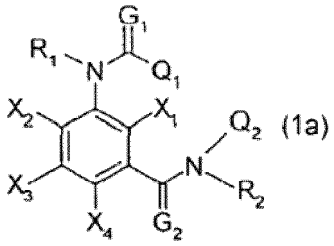


worin Y_1 und Y_5, die gleich oder unterschiedlich sein können, jeweils für ein Halogenatom, eine C_1-C_4-Alkylgruppe, wobei ‚Alkylgruppe' unverzweigte, verzweigte und zyklische Alkylgruppen umfasst, eine C_1-C_4-Halogenalkylgruppe, eine C_1-C_3-Alkylthiogruppe, wobei die Bezeichnung Cyclopropylthio umfasst, eine C_1-C_3-Halogenalkylthiogruppe, eine C_1-C_3-Alkylsulfinylgruppe, wobei die Bezeichnung Cyclopropylsulfinyl umfasst, eine C_1-C_3-Halogenalkylsulfinylgruppe, eine C_1-C_3-Alkylsulfonylgruppe, wobei die Bezeichnung Cyclopropylsulfonyl umfasst, eine C_1-C_3-Halogenalkylsulfonylgruppe oder eine Cyanogruppe stehen; Y_3 für eine C_1-C_6-Perfluoralkylthiogruppe, eine C_1-C_6-Perfluoralkylsulfinylgruppe oder eine C_1-C_6-Perfluoralkylsulfonylgruppe steht; und Y_2 und Y_4 jeweils für ein Wasserstoffatom, ein Halogenatom oder eine C_1-C_4-Alkylgruppe stehen, wobei .Alkylgruppe' unverzweigte, verzweigte und zyklische Alkylgruppen umfasst,
oder Formel (3) dargestellt ist:

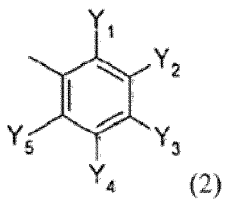


worin Y_6 und Y_9, die gleich oder unterschiedlich sein können, jeweils für ein Halogenatom, eine C_1-C_4-Alkylgruppe, wobei ‚Alkylgruppe' unverzweigte, verzweigte und zyklische Alkylgruppen umfasst, eine C_1-C_4-Halogenalkylgruppe, eine C_1-C_3-Alkylthiogruppe, wobei die Bezeichnung Cyclopropylthio umfasst, eine C_1-C_3-Halogenalkylthiogruppe, eine C_1-C_3-Alkylsulfinylgruppe, wobei die Bezeichnung Cyclopropylsulfinyl umfasst, eine C_1-C_3-Halogenalkylsulfinylgruppe, eine C_1-C_3-Alkylsulfonylgruppe, wobei die Bezeichnung Cyclopropylsulfonyl umfasst, eine C_1-C_3-Halogenalkylsulfonylgruppe oder eine Cyanogruppe stehen; Y_8 für eine C_1-C_4-Halogenalkoxygruppe, eine C_1-C_6-Perfluoralkylthiogruppe, eine C_1-C_6-Perfluoralkylsulfinylgruppe oder eine C_1-C_6-Perfluoralkylsulfonylgruppe steht; und Y_7 für ein Wasserstoffatom, ein Halogenatom oder eine C_1-C_4-Alkylgruppe steht, wobei ‚Alkylgruppe' unverzweigte, verzweigte und zyklische Alkylgruppen umfasst;
wobei in Formel (Ia) X_1 und X_2 jeweils für ein Wasserstoffatom oder ein Fluoratom stehen; und X_3 und X_4 für ein Wasserstoff stehen.

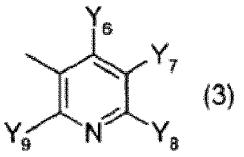
3. Verbindung nach Anspruch 1, die durch Formel (1a) dargestellt ist, die Formel (1) entspricht, in der A_1 und A_2 beide Kohlenstoffatome sind:



worin Q_2 durch Formel (2):



worin Y_1 und Y_5, die gleich oder unterschiedlich sein können, jeweils für ein Halogenatom, eine C_1-C_4-Alkylgruppe, wobei ‚Alkylgruppe' unverzweigte, verzweigte und zyklische Alkylgruppen umfasst, eine C_1-C_4-Halogenalkylgruppe, eine C_1-C_3-Alkylthiogruppe, wobei die Bezeichnung Cyclopropylthio umfasst, eine C_1-C_3-Halogenalkylthiogruppe, eine C_1-C_3-Alkylsulfinylgruppe, wobei die Bezeichnung Cyclopropylsulfinyl umfasst, eine C_1-C_3-Halogenalkylsulfinylgruppe, eine C_1-C_3-Alkylsulfonylgruppe, wobei die Bezeichnung Cyclopropylsulfonyl umfasst, eine C_1-C_3-Halogenalkylsulfonylgruppe oder eine Cyanogruppe stehen; Y_3 für eine C_2-C_6-Perfluoralkylgruppe steht; und Y_2 und Y_4 jeweils für ein Wasserstoffatom, ein Halogenatom oder eine C_1-C_4-Alkylgruppe stehen, wobei ‚Alkylgruppe' unverzweigte, verzweigte und zyklische Alkylgruppen umfasst,
oder Formel (3) dargestellt ist:



(3)

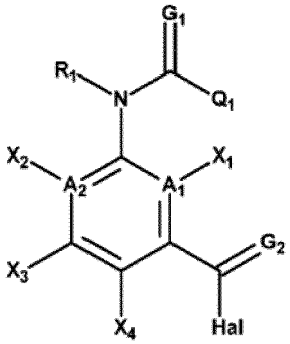
worin Y_6 und Y_9, die gleich oder unterschiedlich sein können, jeweils für ein Halogenatom, eine C_1-C_4-Alkylgruppe, wobei ‚Alkylgruppe' unverzweigte, verzweigte und zyklische Alkylgruppen umfasst, eine C_1-C_4-Halogenalkylgruppe, eine C_1-C_3-Alkylthiogruppe, wobei die Bezeichnung Cyclopropylthio umfasst, eine C_1-C_3-Halogenalkylthiogruppe, eine C_1-C_3-Alkylsulfinylgruppe, wobei die Bezeichnung Cyclopropylsulfinyl umfasst, eine C_1-C_3-Halogenalkylsulfinylgruppe, eine C_1-C_3-Alkylsulfonylgruppe, wobei die Bezeichnung Cyclopropylsulfonyl umfasst, eine C_1-C_3-Halogenalkylsulfonylgruppe oder eine Cyanogruppe stehen; Y_8 für eine C_2-C_6-Perfluoralkylgruppe steht; und Y_7 für ein Wasserstoffatom, ein Halogenatom oder eine C_1-C_4-Alkylgruppe steht, wobei ‚Alkylgruppe' unverzweigte, verzweigte und zyklische Alkylgruppen umfasst;
X_1 und X_2 jeweils für ein Wasserstoffatom oder ein Fluoratom stehen;
X_3 und X_4 für ein Wasserstoff stehen;
eines aus R_1 und R_2 ein Wasserstoffatom ist und das andere eine C_1-C_4-Alkylgruppe oder eine gegebenenfalls substituierte unverzweigte, verzweigte oder zyklische C_1-C_4-Alkylcarbonylgruppe ist oder beide unabhängig voneinander eine C_1-C_4-Alkylgruppe oder eine gegebenenfalls substituierte unverzweigte oder verzweigte C_1-C_4-Alkylcarbonylgruppe sind;
G_1 und G_2 jeweils für ein Sauerstoffatom oder ein Schwefelatom stehen; und
Q_1 für eine Phenylgruppe steht; oder eine substituierte Phenylgruppe mit einem oder mehreren Substituierten, die gleich oder unterschiedlich sein können, ausgewählt aus einem Halogenatom, einer C_1-C_4-Alkylgruppe, worin ‚Alkylgruppe' unverzweigte, verzweigte oder zyklische Alkylgruppen umfasst, einer C_1-C_4-Halogenalkylgruppe, einer C_2-C_4-Alkenylgruppe, einer C_2-C_4-Halogenalkenylgruppe, einer C_2-C_4-Alkinylgruppe, einer C_2-C_4-Halogenalkinylgruppe, einer C_3-C_6-Cycloalkylgruppe, einer C_3-C_6-Halogencycloalkylgruppe, einer C_1-C_3-Alkoxygruppe, einer C_1-C_3-Halogenalkoxygruppe, einer C_1-C_3-Alkylthiogruppe, wobei diese Bezeichnung Cyclopropylthio umfasst, einer C_1-C_3-Halogenalkylthiogruppe, einer C_1-C_3-Alkylsulfinylgruppe, wobei die Bezeichnung Cyclopropylsulfinyl umfasst, einer C_1-C_3-Halogenalkylsulfinylgruppe, einer C_1-C_3-Alkylsulfonylgruppe, wobei die Bezeichnung Cyclopropylsulfonyl umfasst, einer C_1-C_3-Halogenalkylsulfonylgruppe, einer C_1-C_4-Alkylaminogruppe, wobei die Bezeichnung Cyclopropylamino umfasst, einer Di-C_1-C_4-Alkylaminogruppe, einer Cyanogruppe, einer Nitrogruppe, einer Hydroxylgruppe, einer C_1-C_4-Alkylcarbonylgruppe, wobei ‚Alkylcarbonylgruppe' unverzweigte, verzweigte und zyklische Alkylcarbonylgruppen umfasst, einer C_1-C_4-Alkylcarbonyloxygruppe, einer C_1-C_4-Alkoxycarbonylgruppe, einer Acetylaminogruppe und einer Phenylgruppe; eine heterozyklische Gruppe, ausgewählt aus einer Pyridylgruppe, einer Pyridin-N-oxidgruppe, einer Pyrimidinylgruppe, einer Pyridazinylgruppe, einer Pyrazinylgruppe, einer Furylgruppe, einer Thienylgruppe, einer Oxazolylgruppe, einer Isoxazolylgruppe, einer Oxadiazolylgruppe, einer Thiazolylgruppe, einer Isothiazolylgruppe, einer Imidazolylgruppe, einer Triazolylgruppe, einer Pyrrolylgruppe, einer Pyrazolylgruppe oder einer Tetrazolylgruppe; oder für eine substituierte heterozyklische Gruppe, ausgewählt aus einer Pyridylgruppe, einer Pyridin-N-oxidgruppe, einer Pyrimidinylgruppe, einer Pyridazinylgruppe, einer Pyrazinylgruppe, einer Furylgruppe, einer Thienylgruppe, einer Oxazolylgruppe, einer Isoxazolylgruppe, einer Oxadiazolylgruppe, einer Thiazolylgruppe, einer Isothiazolylgruppe, einer Imidazolylgruppe, einer Triazolylgruppe, einer Pyrrolylgruppe, einer Pyrazolylgruppe oder einer Tetrazolylgruppe mit einem oder mehreren Substituenten, die gleich oder unterschiedlich sein können, ausgewählt aus einem Halogenatom, einer C_1-C_4-Alkylgruppe, wobei ‚Alkylgruppe' unverzweigte, verzweigte und zyklische Alkylgruppen umfasst, einer C_1-C_4-Halogenalkylgruppe, einer C_2-C_4-Alkenylgruppe, einer C_2-C_4-Halogenalkenylgruppe, einer C_2-C_4-Alkinylgruppe, einer C_2-C_4-Halogenalkinylgruppe, einer C_3-C_6-Cycloalkylgruppe, einer C_3-C_6-Halogencycloalkylgruppe, einer C_1-C_3-Alkoxygruppe, einer C_1-C_3-Halogenalkoxygruppe, einer C_1-C_3-Alkylthiogruppe, wobei die Bezeichnung Cyclopropylthio umfasst,

einer C_1-C_3-Halogenalkylthiogruppe, einer C_1-C_3-Alkylsulfinylgruppe, wobei die Bezeichnung Cyclopropylsulfinyl umfasst, einer C_1-C_3-Halogenalkylsulfinylgruppe, einer C_1-C_3-Alkylsulfonylgruppe, wobei die Bezeichnung Cyclopropylsulfonyl umfasst, einer C_1-C_3-Halogenalkylsulfonylgruppe, einer C_1-C_4-Alkylaminogruppe, wobei die Bezeichnung Cyclopropylamino umfasst, einer Di-C_1-C_4-alkylaminogruppe, einer Cyanogruppe, einer Nitrogruppe, einer Hydroxylgruppe, einer C_1-C_4-Alkylcarbonylgruppe, wobei ‚Alkylcarbonylgruppe' unverzweigte, verzweigte und zyklische Alkylcarbonylgruppen umfasst, einer C_1-C_4-Alkylcarbonyloxygruppe, einer C_1-C_4-Alkoxycarbonylgruppe, einer Acetylaminogruppe und einer Phenylgruppe.

4. Verbindung nach Anspruch 1, die durch die Formel (1) dargestellt ist, worin
A_1 für ein Stickstoffatom oder ein oxidiertes Stickstoffatom steht;
A_2 für ein Kohlenstoffatom steht;
R_1 und R_2 jeweils für ein Wasserstoffatom oder eine C_1-C_4-Alkylgruppe stehen, wobei ‚Alkylgruppe' unverzweigte, verzweigte und zyklische Alkylgruppen umfasst;
die X für ein Wasserstoffatom oder ein Fluoratom stehen;
n = 0 oder 1 ist; und
G_1 und G_2 für ein Sauerstoffatom stehen.

5. Verbindung nach einem der Ansprüche 2, 3 oder 4, worin
Q_1 für eine Phenylgruppe steht; oder eine substituierte Phenylgruppe mit einem oder mehreren Substituierten, die gleich oder unterschiedlich sein können, ausgewählt aus einem Halogenatom, einer C_1-C_4-Alkylgruppe, worin ‚Alkylgruppe' unverzweigte, verzweigte oder zyklische Alkylgruppen umfasst, einer C_1-C_4-Halogenalkylgruppe, einer C_2-C_4-Alkenylgruppe, einer C_2-C_4-Halogenalkenylgruppe, einer C_2-C_4-Alkinylgruppe, einer C_2-C_4-Halogenalkinylgruppe, einer C_3-C_6-Cycloalkylgruppe, einer C_3-C_6-Halogencycloalkylgruppe, einer C_1-C_3-Alkoxygruppe, einer C_1-C_3-Halogenalkoxygruppe, einer C_1-C_3-Alkylthiogruppe, wobei diese Bezeichnung Cyclopropylthio umfasst, einer C_1-C_3-Halogenalkylthiogruppe, einer C_1-C_3-Alkylsulfinylgruppe, wobei die Bezeichnung Cyclopropylsulfinyl umfasst, einer C_1-C_3-Halogenalkylsulfinylgruppe, einer C_1-C_3-Alkylsulfonylgruppe, wobei die Bezeichnung Cyclopropylsulfonyl umfasst, einer C_1-C_3-Halogenalkylsulfonylgruppe, einer C_1-C_4-Alkylaminogruppe, wobei die Bezeichnung Cyclopropylamino umfasst, einer Di-C_1-C_4-Alkylaminogruppe, einer Cyanogruppe, einer Nitrogruppe, einer Hydroxylgruppe, einer C_1-C_4-Alkylcarbonylgruppe, wobei ‚Alkylcarbonylgruppe' unverzweigte, verzweigte und zyklische Alkylcarbonylgruppen umfasst, einer C_1-C_4-Alkylcarbonyloxygruppe, einer C_1-C_4-Alkoxycarbonylgruppe, einer Acetylaminogruppe und einer Phenylgruppe; eine Pyridylgruppe; oder eine substituierte Pyridylgruppe mit einem oder mehreren Substituenten, die gleich oder unterschiedlich sein können, ausgewählt aus einem Halogenatom, einer C_1-C_4-Alkylgruppe, wobei ‚Alkylgruppe' unverzweigte, verzweigte und zyklische Alkylgruppen umfasst, einer C_1-C_4-Halogenalkylgruppe, einer C_2-C_4-Alkenylgruppe, einer C_2-C_4-Halogenalkenylgruppe, einer C_2-C_4-Alkinylgruppe, einer C_2-C_4-Halogenalkinylgruppe, einer C_3-C_6-Cycloalkylgruppe, einer C_3-C_6-Halogencycloalkylgruppe, einer C_1-C_3-Alkoxygruppe, einer C_1-C_3-Halogenalkoxygruppe, einer C_1-C_3-Alkylthiogruppe, wobei die Bezeichnung Cyclopropylthio umfasst, einer C_1-C_3-Halogenalkylthiogruppe, einer C_1-C_3-Alkylsulfinylgruppe, wobei die Bezeichnung Cyclopropylsulfinyl umfasst, einer C_1-C_3-Halogenalkylsulfinylgruppe, einer C_1-C_3-Alkylsulfonylgruppe, wobei die Bezeichnung Cyclopropylsulfonyl umfasst, einer C_1-C_3-Halogenalkylsulfonylgruppe, einer C_1-C_4-Alkylaminogruppe, wobei die Bezeichnung Cyclopropylamino umfasst, einer Di-C_1-C_4-alkylaminogruppe, einer Cyanogruppe, einer Nitrogruppe, einer Hydroxylgruppe, einer C_1-C_4-Alkylcarbonylgruppe, wobei ‚Alkylcarbonylgruppe' unverzweigte, verzweigte und zyklische Alkylcarbonylgruppen umfasst, einer C_1-C_4-Alkylcarbonyloxygruppe, einer C_1-C_4-Alkoxycarbonylgruppe, einer Acetylaminogruppe und einer Phenylgruppe.

6. Verbindung der Formel (4):



(4)

worin:

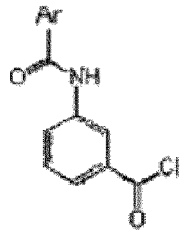
(a) im Fall, dass R_1 ein Wasserstoffatom ist:

A_1 und A_2 jeweils für ein Kohlenstoffatom stehen;
G_1 und G_2 jeweils für ein Sauerstoffatom oder ein Schwefelatom stehen;
X_1 Wasserstoff oder Fluor ist;
X_2, X_3 und X_4 für ein Wasserstoffatom stehen;
Q_1 für eine Phenylgruppe; eine substituierte Phenylgruppe mit einem oder mehreren Substituenten, die gleich oder unterschiedlich sein können, ausgewählt aus einem Halogenatom, einer C_1-C_4-Alkylgruppe, einer C_1-C_4-Halogenalkylgruppe, einer Cyanogruppe und einer Nitrogruppe; eine Pyridylgruppe; oder eine substituierte Pyridylgruppe mit einem oder mehreren Substituenten, die gleich oder unterschiedlich sein können, ausgewählt aus einem Halogenatom, steht;

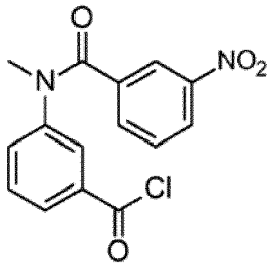
(b) im Fall, dass R_1 eine C_1-C_4-Alkylgruppe oder eine C_1-C_4-Alkylcarbonylgruppe ist:

A_1 und A_2 jeweils für ein Kohlenstoffatom, ein Stickstoffatom oder ein oxidiertes Stickstoffatom stehen;
G_1 und G_2 jeweils für ein Sauerstoffatom oder ein Schwefelatom stehen;
X_1, X_2, X_3 und X_4, die gleich oder unterschiedlich sein können, für ein Wasserstoffatom, ein Halogenatom, eine gegebenenfalls substituierte C_1-C_3-Alkylgruppe, wobei "gegebenenfalls substituierte C_1-C_3-Alkylgruppe" eine "Cyclopropylgruppe" umfasst, oder eine Trifluormethylgruppe steht;
Q_1 für eine Phenylgruppe steht; oder für eine substituierte Phenylgruppe mit einem oder mehreren Substituenten, die gleich oder unterschiedlich sein können, ausgewählt aus einem Halogenatom, einer C_1-C_4-Alkylgruppe, einer C_1-C_4-Halogenalkylgruppe, einer C_2-C_4-Alkenylgruppe, einer C_2-C_4-Halogenalkenylgruppe, einer C_2-C_4-Alkinylgruppe, einer C_2-C_4-Halogenalkinylgruppe, einer C_3-C_6-Cycloalkylgruppe, einer C_3-C_6-Halogencycloalkylgruppe, einer C_1-C_3-Alkoxygruppe, einer C_1-C_3-Halogenalkoxygruppe, einer C_1-C_3-Alkylthiogruppe, wobei diese Bezeichnung Cyclopropylthio umfasst, einer C_1-C_3-Halogenalkylthiogruppe, einer C_1-C_3-Alkylsulfinylgruppe, wobei die Bezeichnung Cyclopropylsulfinyl umfasst, einer C_1-C_3-Halogenalkylsulfinylgruppe, einer C_1-C_3-Alkylsulfonylgruppe, wobei die Bezeichnung Cyclopropylsulfonyl umfasst, einer C_1-C_3-Halogenalkylsulfonylgruppe, einer C_1-C_4-Alkylaminogruppe, wobei die Bezeichnung Cyclopropylamino umfasst, einer Di-C_1-C_4-alkylaminogruppe, einer Cyanogruppe, einer Nitrogruppe, einer Hydroxylgruppe, einer C_1-C_4-Alkylcarbonylgruppe, wobei ‚Alkylcarbonylgruppe' unverzweigte, verzweigte und zyklische Alkylcarbonylgruppen umfasst, einer C_1-C_4-Alkylcarbonyloxygruppe, einer C_1-C_4-Alkoxycarbonylgruppe, einer Acetylaminogruppe und einer Phenylgruppe; für eine heterozyklische Gruppe, ausgewählt aus einer Pyridylgruppe, einer Pyridin-N-oxidgruppe, einer Pyrimidinylgruppe, einer Pyridazinylgruppe, einer Pyrazinylgruppe, einer Furylgruppe, einer Thienylgruppe, einer Oxazolylgruppe, einer Isoxazolylgruppe, einer Oxadiazolylgruppe, einer Thiazolylgruppe, einer Isothiazolylgruppe, einer Imidazolylgruppe, einer Triazolylgruppe, einer Pyrrolylgruppe, einer Pyrazolylgruppe oder einer Tetrazolylgruppe; oder für eine substituierte heterozyklische Gruppe, ausgewählt aus einer Pyridylgruppe, einer Pyridin-N-oxidgruppe, einer Pyrimidinylgruppe, einer Pyridazinylgruppe, einer Pyrazinylgruppe, einer Furylgruppe, einer Thienylgruppe, einer Oxazolylgruppe, einer Isoxazolylgruppe, einer Oxadiazolylgruppe, einer Thiazolylgruppe, einer Isothiazolylgruppe, einer Imidazolylgruppe, einer Triazolylgruppe, einer Pyrrolylgruppe, einer Pyrazolylgruppe oder einer Tetrazolylgruppe, wobei die substituierte heterozyklische Gruppe einen oder mehrere Substituenten aufweist, die gleich oder unterschiedlich sein können, ausgewählt aus einem Halogenatom, einer C_1-C_4-Alkylgruppe, einer C_1-C_4-Halogenalkylgruppe, einer C_2-C_4-Alkenylgruppe, einer C_2-C_4-Halogenalkenylgruppe, einer C_2-C_4-Alkinylgruppe, einer C_2-C_4-Halogenalkinylgruppe, einer C_3-C_6-Cycloalkylgruppe, einer C_3-C_6-Halogencycloalkylgruppe, einer C_1-C_3-Alkoxygruppe, einer C_1-C_3-Halogenalkoxygruppe, einer C_1-C_3-Alkylthiogruppe, wobei die Bezeichnung Cyclopropylthio umfasst, einer C_1-C_3-Halogenalkylthiogruppe, einer C_1-C_3-Alkylsulfinylgruppe, wobei die Bezeichnung Cyclopropylsulfinyl umfasst, einer C_1-C_3-Halogenalkylsulfinylgruppe, einer C_1-C_3-Alkylsulfonylgruppe, wobei die Bezeichnung Cyclopropylsulfonyl umfasst, einer C_1-C_3-Halogenalkylsulfonylgruppe, einer C_1-C_4-Alkylaminogruppe, wobei die Bezeichnung Cyclopropylamino umfasst, einer Di-C_1-C_4-alkylaminogruppe, einer Cyanogruppe, einer Nitrogruppe, einer Hydroxylgruppe, einer C_1-C_4-Alkylcarbonylgruppe, wobei ‚Alkylcarbonylgruppe' unverzweigte, verzweigte und zyklische Alkylcarbonylgruppen umfasst, einer C_1-C_4-Alkylcarbonyloxygruppe, einer C_1-C_4-Alkoxycarbonylgruppe, einer Acetylaminogruppe und einer Phenylgruppe;
Hal für ein Chloratom oder ein Bromatom steht; und
die Bezeichnung gegebenenfalls substituiert für gegebenenfalls mit einem oder mehreren Substituenten

substituiert steht, die gleich oder unterschiedlich sein können und aus einem Wasserstoffatom, einem Halogenatom, einer Hydroxylgruppe, einer Cyanogruppe, einer Nitrogruppe, einer C_1-C_6-Alkoxygruppe, einer C_1-C_6-Halogenalkoxygruppe, einer C_1-C_6-Alkylthiogruppe, einer C_1-C_6-Halogenalkylthiogruppe, einer C_1-C_6-Alkylsulfinylgruppe, einer C_1-C_6-Halogenalkylsulfinylgruppe, einer C_1-C_6-Alkylsulfonylgruppe, einer C_1-C_6-Halogenalkylsulfonylgruppe, einer C_1-C_6-Alkylcarbonylgruppe, einer C_1-C_6-Halogenalkylcarbonylgruppe, einer C_1-C_6-Alkoxycarbonylgruppe, einer C_1-C_6-Halogenalkoxycarbonylgruppe, einer C_1-C_6-Alkylcarbonyloxygruppe, einer C_1-C_6-Halogenalkylcarbonyloxygruppe, einer Aminogruppe, einer C_1-C_6-Alkylaminogruppe, einer Di-C_1-C_6-alkylaminogruppe, einer Phenylgruppe, einer Phenylcarbonylgruppe, einer Phenylaminogruppe und einer heterozyklischen Gruppe ausgewählt sind;
mit der Maßgabe, dass die Verbindung keine Verbindung der folgenden Formel ist:

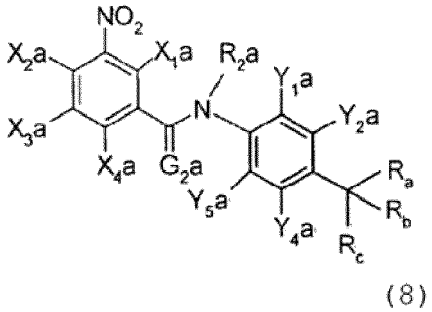


worin Ar Phenyl, 3,4-Dimethoxyphenyl, 3-Methylphenyl, 3-Chlorphenyl, 4-Methoxyphenyl, 3-Nitrophenyl oder 3-Pyridyl ist;
und mit der Maßgabe, dass die Verbindung keine Verbindung der folgenden Formel ist:



7. Verbindung nach Anspruch 6, worin A_2 ein Kohlenstoffatom ist.

8. Verbindung der Formel (8):

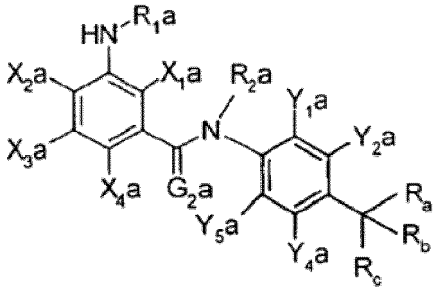


(8)

worin X_{1a}, X_{2a}, X_{3a} und X_{4a} jeweils für ein Wasserstoffatom, eine C_1-C_3-Alkylgruppe, wobei die Bezeichnung eine Cyclopropylgruppe umfasst, eine Trifluormethylgruppe, eine Hydroxylgruppe, eine Aminogruppe oder ein Halogenatom stehen;
R_a und R_b für ein Fluoratom oder eine C_1-C_4-Perfluoralkylgruppe stehen;
R_c für eine Hydroxylgruppe, eine Gruppe -O-R_d (worin R_d für eine C_1-C_3-Alkylgruppe, wobei die Bezeichnung eine Cyclopropylgruppe umfasst, eine C_1-C_3-Halogenalkylgruppe, ein C_1-C_3-Alkylsulfonyl, eine C_1-C_3-Halo-

genalkylsulfonylgruppe, eine Arylsulfonylgruppe, eine C_1-C_4-Alkylcarbonylgruppe, wobei ‚Alkylcarbonylgruppe' unverzweigte, verzweigte und zyklische Alkylcarbonylgruppen umfasst, oder eine C_1-C_4-Halogenalkylcarbonylgruppe steht), ein Chloratom, ein Bromatom oder ein Iodatom steht;
R_{2a} für ein Wasserstoffatom, eine C_1-C_3-Alkylgruppe, wobei die Bezeichnung eine Cyclopropylgruppe umfasst, eine C_1-C_3-Halogenalkylgruppe, eine C_1-C_3-Alkoxygruppe, eine C_1-C_3-Halogenalkoxygruppe, eine C_1-C_4-Alkylthiogruppe, wobei die Bezeichnung Cyclopropylthio umfasst, eine C_1-C_4-Halogenalkylthiogruppe, eine C_1-C_4-Alkylcarbonylgruppe, wobei ‚Alkylcarbonylgruppe' unverzweigte, verzweigte oder zyklische Alkylcarbonylgruppen umfasst, oder eine C_1-C_4-Halogenalkylcarbonylgruppe steht;
Y_{1a} und Y_{5a} jeweils für eine C_1-C_4-Alkylgruppe, wobei ‚Alkylgruppe' unverzweigte, verzweigte oder zyklische Alkylgruppen umfasst, eine C_1-C_4-Halogenalkylgruppe, eine C_1-C_4-Alkylthiogruppe, wobei die Bezeichnung Cyclopropylthio umfasst, eine C_1-C_4-Halogenalkylthiogruppe, eine C_1-C_3-Alkylsulfinylgruppe, wobei die Bezeichnung Cyclopropylsulfinyl umfasst, oder eine C_1-C_3-Halogenalkylsulfinylgruppe, eine C_1-C_3-Alkylsulfonylgruppe, wobei die Bezeichnung Cyclopropylsulfonyl umfasst, eine C_1-C_3-Halogenalkylsulfonylgruppe, eine Cyanogruppe, eine Hydroxylgruppe oder ein Halogenatom stehen;
Y_{2a} und Y_{4a} jeweils für ein Wasserstoffatom, eine C_1-C_4-Alkylgruppe, wobei Alkylgruppe' unverzweigte, verzweigte oder zyklische Alkylgruppen umfasst, oder ein Halogenatom stehen; und
G_{2a} für ein Sauerstoffatom oder ein Schwefelatom steht.

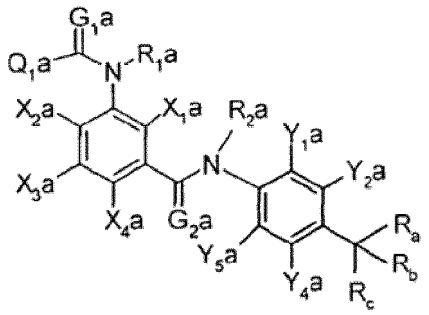
9. Verbindung der Formel (11):



(11)

worin X_{1a}, X_{2a}, X_{3a} und X_{4a} jeweils für ein Wasserstoffatom, eine C_1-C_3-Alkylgruppe, wobei die Bezeichnung eine Cyclopropylgruppe umfasst, eine Trifluormethylgruppe, eine Hydroxylgruppe, eine Aminogruppe oder ein Halogenatom stehen;
R_a und R_b für ein Fluoratom oder eine C_1-C_4-Perfluoralkylgruppe stehen;
R_c für eine Hydroxylgruppe, eine Gruppe -O-R_d, worin R_d für eine C_1-C_3-Alkylgruppe, wobei die Bezeichnung eine Cyclopropylgruppe umfasst, eine C_1-C_3-Halogenalkylgruppe, eine C_1-C_3-Alkylsulfonylgruppe, wobei die Bezeichnung Cyclopropylsulfonyl umfasst, eine C_1-C_3-Halogenalkylsulfonylgruppe, eine Arylsulfonylgruppe, eine C_1-C_4-Alkylcarbonylgruppe, wobei ‚Alkylcarbonylgruppe' unverzweigte, verzweigte und zyklische Alkylcarbonylgruppen umfasst, oder eine C_1-C_4-Halogenalkylcarbonylgruppe steht, ein Chloratom, ein Bromatom oder ein Iodatom steht;
R_{1a} und R_{2a} jeweils für ein Wasserstoffatom, eine C_1-C_3-Alkylgruppe, wobei Alkylgruppe' unverzweigte, verzweigte oder zyklische Alkylgruppen umfasst, eine C_1-C_3-Halogenalkylgruppe, eine C_1-C_3-Alkoxygruppe, eine C_1-C_3-Halogenalkoxygruppe, eine C_1-C_4-Alkylthiogruppe, wobei die Bezeichnung Cyclopropylthio umfasst, eine C_1-C_4-Halogenalkylthiogruppe, eine C_1-C_4-Alkylcarbonylgruppe, wobei ‚Alkylcarbonylgruppe' unverzweigte, verzweigte oder zyklische Alkylcarbonylgruppen umfasst, oder eine C_1-C_4-Halogenalkylcarbonylgruppe stehen;
Y_{1a} und Y_{5a} jeweils für eine C_1-C_4-Alkylgruppe, eine C_1-C_4-Halogenalkylgruppe, eine C_1-C_4-Alkylthiogruppe, wobei die Bezeichnung Cyclopropylthio umfasst, eine C_1-C_4-Halogenalkylthiogruppe, eine C_1-C_3-Alkylsulfinylgruppe, wobei die Bezeichnung Cyclopropylsulfinyl umfasst, oder eine C_1-C_3-Halogenalkylsulfinylgruppe, eine C_1-C_3-Alkylsulfonylgruppe, wobei die Bezeichnung Cyclopropylsulfonyl umfasst, eine C_1-C_3-Halogenalkylsulfonylgruppe, eine Cyanogruppe, eine Hydroxylgruppe oder ein Halogenatom stehen;
Y_{2a} und Y_{4a} jeweils für ein Wasserstoffatom, eine C_1-C_4-Alkylgruppe, wobei Alkylgruppe' unverzweigte, verzweigte oder zyklische Alkylgruppen umfasst, oder ein Halogenatom stehen; und
G_{2a} für ein Sauerstoffatom oder ein Schwefelatom steht.

10. Verbindung der Formel (13):



(13)

worin X_{1a}, X_{2a}, X_{3a} und X_{4a} jeweils für ein Wasserstoffatom, eine C_1-C_3-Alkylgruppe, wobei die Bezeichnung eine Cyclopropylgruppe umfasst, eine Trifluormethylgruppe, eine Hydroxylgruppe, eine Aminogruppe oder ein Halogenatom stehen;

R_a und R_b für ein Fluoratom oder eine C_1-C_4-Perfluoralkylgruppe stehen;

R_c für eine Hydroxylgruppe, eine Gruppe -O-R_d, worin R_d für eine C_1-C_3-Alkylgruppe, wobei die Bezeichnung eine Cyclopropylgruppe umfasst, eine C_1-C_3-Halogenalkylgruppe, eine C_1-C_3-Alkylsulfonylgruppe, wobei die Bezeichnung Cyclopropylsulfonyl umfasst, eine C_1-C_3-Halogenalkylsulfonylgruppe, eine Arylsulfonylgruppe, eine C_1-C_4-Alkylcarbonylgruppe, wobei ‚Alkylcarbonylgruppe' unverzweigte, verzweigte und zyklische Alkylcarbonylgruppen umfasst, oder eine C_1-C_4-Halogenalkylcarbonylgruppe steht, ein Chloratom, ein Bromatom oder ein Iodatom steht;

R_{1a} und R_{2a} jeweils für ein Wasserstoffatom, eine C_1-C_3-Alkylgruppe, wobei Alkylgruppe' unverzweigte, verzweigte oder zyklische Alkylgruppen umfasst, eine C_1-C_3-Halogenalkylgruppe, eine C_1-C_3-Alkoxygruppe, eine C_1-C_3-Halogenalkoxygruppe, eine C_1-C_4-Alkylthiogruppe, wobei die Bezeichnung Cyclopropylthio umfasst, eine C_1-C_4-Halogenalkylthiogruppe, eine C_1-C_4-Alkylcarbonylgruppe, wobei ‚Alkylcarbonylgruppe' unverzweigte, verzweigte oder zyklische Alkylcarbonylgruppen umfasst, oder eine C_1-C_4-Halogenalkylcarbonylgruppe stehen;

Y_{1a} und Y_{5a} jeweils für eine C_1-C_4-Alkylgruppe, wobei ‚Alkylgruppe' unverzweigte, verzweigte oder zyklische Alkylgruppen umfasst, eine C_1-C_4-Halogenalkylgruppe, eine C_1-C_4-Alkylthiogruppe, wobei die Bezeichnung Cyclopropylthio umfasst, eine C_1-C_4-Halogenalkylthiogruppe, eine C_1-C_3-Alkylsulfinylgruppe, wobei die Bezeichnung Cyclopropylsulfinyl umfasst, oder eine C_1-C_3-Halogenalkylsulfinylgruppe, eine C_1-C_3-Alkylsulfonylgruppe, wobei die Bezeichnung Cyclopropylsulfonyl umfasst, eine C_1-C_3-Halogenalkylsulfonylgruppe, eine Cyanogruppe, eine Hydroxylgruppe oder ein Halogenatom stehen;

Y_{2a} und Y_{4a} jeweils für ein Wasserstoffatom, eine C_1-C_4-Alkylgruppe, wobei Alkylgruppe' unverzweigte, verzweigte oder zyklische Alkylgruppen umfasst, oder ein Halogenatom stehen;

G_{1a} und G_{2a} jeweils für ein Sauerstoffatom oder ein Schwefelatom stehen;

Q_{1a} für eine Phenylgruppe steht; oder eine substituierte Phenylgruppe mit einem oder mehreren Substituenten steht, die gleich oder unterschiedlich sein können, ausgewählt aus einem Halogenatom, einer C_1-C_4-Alkylgruppe, worin ‚Alkylgruppe' unverzweigte, verzweigte oder zyklische Alkylgruppen umfasst, einer C_1-C_4-Halogenalkylgruppe, einer C_2-C_4-Alkenylgruppe, einer C_2-C_4-Halogenalkenylgruppe, einer C_2-C_4-Alkinylgruppe, einer C_2-C_4-Halogenalkinylgruppe, einer C_3-C_6-Cycloalkylgruppe, einer C_3-C_6-Halogencycloalkylgruppe, einer C_1-C_3-Alkoxygruppe, einer C_1-C_3-Halogenalkoxygruppe, einer C_1-C_3-Alkylthiogruppe, wobei diese Bezeichnung Cyclopropylthio umfasst, einer C_1-C_3-Halogenalkylthiogruppe, einer C_1-C_3-Alkylsulfinylgruppe, wobei die Bezeichnung Cyclopropylsulfinyl umfasst, einer C_1-C_3-Halogenalkylsulfinylgruppe, einer C_1-C_3-Alkylsulfonylgruppe, wobei die Bezeichnung Cyclopropylsulfonyl umfasst, einer C_1-C_3-Halogenalkylsulfonylgruppe, einer C_1-C_4-Alkylaminogruppe, wobei die Bezeichnung Cyclopropylamino umfasst, einer Di-C_1-C_4-Alkylaminogruppe, einer Cyanogruppe, einer Nitrogruppe, einer Hydroxylgruppe, einer C_1-C_4-Alkylcarbonylgruppe, wobei ‚Alkylcarbonylgruppe' unverzweigte, verzweigte und zyklische Alkylcarbonylgruppen umfasst, einer C_1-C_4-Alkylcarbonyloxygruppe, einer C_1-C_4-Alkoxycarbonylgruppe, einer Acetylaminogruppe und einer Phenylgruppe; für eine heterozyklische Gruppe, ausgewählt aus einer Pyridylgruppe, einer Pyridin-N-oxidgruppe, einer Pyrimidinylgruppe, einer Pyridazinylgruppe, einer Pyrazinylgruppe, einer Furylgruppe, einer Thienylgruppe, einer Oxazolylgruppe, einer Isoxazolylgruppe, einer Oxadiazolylgruppe, einer Thiazolylgruppe, einer Isothiazolylgruppe, einer Imidazolylgruppe, einer Triazolylgruppe, einer Pyrrolylgruppe, einer Pyrazolylgruppe oder einer Tetrazolylgruppe; oder für eine substituierte heterozyklische Gruppe, ausgewählt aus einer Pyridylgruppe, einer Pyridin-N-oxidgruppe, einer Pyrimidinylgruppe, einer Pyridazinylgruppe, einer Pyrazinylgruppe, einer Furylgruppe, einer Thienylgruppe, einer Oxazolylgruppe, einer Isoxazolylgruppe, einer Oxadiazolylgruppe, einer Thiazolylgruppe, einer Isothiazolylgruppe, einer Imidazolylgruppe, einer Triazolylgruppe, einer Pyrrolylgruppe, einer Pyrazolylgruppe oder einer Tetrazolylgruppe; oder für eine substituierte heterozyklische Gruppe, ausge-

wählt aus einer Pyridylgruppe, einer Pyridin-N-oxidgruppe, einer Pyrimidinylgruppe, einer Pyridazinylgruppe, einer Pyrazinylgruppe, einer Furylgruppe, einer Thienylgruppe, einer Oxazolylgruppe, einer Isoxazolylgruppe, einer Oxadiazolylgruppe, einer Thiazolylgruppe, einer Isothiazolylgruppe, einer Imidazolylgruppe, einer Triazolylgruppe, einer Pyrrolylgruppe, einer Pyrazolylgruppe oder einer Tetrazolylgruppe mit einem oder mehreren Substituenten, die gleich oder unterschiedlich sein können, ausgewählt aus einem Halogenatom, einer C_1-C_4-Alkylgruppe, einer C_1-C_4-Halogenalkylgruppe, einer C_2-C_4-Alkenylgruppe, einer C_2-C_4-Halogenalkenylgruppe, einer C_2-C_4-Alkinylgruppe, einer C_2-C_4-Halogenalkinylgruppe, einer C_3-C_6-Cycloalkylgruppe, einer C_3-C_6-Halogencycloalkylgruppe, einer C_1-C_3-Alkoxygruppe, einer C_1-C_3-Halogenalkoxygruppe, einer C_1-C_3-Alkylthiogruppe, wobei die Bezeichnung Cyclopropylthio umfasst, einer C_1-C_3-Halogenalkylthiogruppe, einer C_1-C_3-Alkylsulfinylgruppe, wobei die Bezeichnung Cyclopropylsulfinyl umfasst, einer C_1-C_3-Halogenalkylsulfinylgruppe, einer C_1-C_3-Alkylsulfonylgruppe, wobei die Bezeichnung Cyclopropylsulfonyl umfasst, einer C_1-C_3-Halogenalkylsulfonylgruppe, einer C_1-C_4-Alkylaminogruppe, wobei die Bezeichnung Cyclopropylamino umfasst, einer Di-C_1-C_4-alkylaminogruppe, einer Cyanogruppe, einer Nitrogruppe, einer Hydroxylgruppe, einer C_1-C_4-Alkylcarbonylgruppe, wobei ‚Alkylcarbonylgruppe' unverzweigte, verzweigte und zyklische Alkylcarbonylgruppen umfasst, einer C_1-C_4-Alkylcarbonyloxygruppe, einer C_1-C_4-Alkoxycarbonylgruppe, einer Acetylaminogruppe und einer Phenylgruppe.

11. Insektizid, das eine Verbindung nach einem der Ansprüche 1 bis 5 als Wirkbestandteil umfasst.

12. Verfahren zur Verwendung eines Pestizids zur Behandlung von Feldfrüchten oder Boden zur Verwendung bei der Kultvierung durch Behandlung der Feldfrüchte oder des Bodens mit einer wirksamen Menge von Verbindungen nach einem der Ansprüche 1 bis 5, um die Feldfrüchte vor schädlichen Organismen zu schützen.

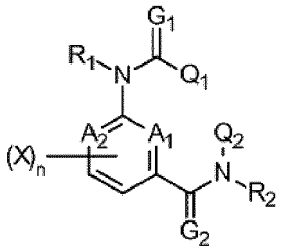
13. Gemisch, in dem eine Verbindung nach einem der Ansprüche 1 bis 5 mit zumindest einem weiteren Insektizid und/oder Fungizid vereinigt ist.

14. Gemisch nach Anspruch 13, wobei das andere Insektizid zumindest eines aus Allethrin, Tetramethrin, Resmethrin, Phenothrin, Furamethrin, Permethrin, Cypermethrin, Deltamethrin, Cyhalothrin, Cyfluthrin, Fenpropathrin, Tralomethrin, Cycloprothrin, Flucythrinat, Fluvalinat, Acrinathrin, Tefluthrin, Bifenthrin, Empenthrin, beta-Cyfluthrin, zeta-Cypermethrin, Fenvalerat und verschiedenen Isomeren davon; oder Pyrethrum-Extrakt aus der Dalmatinischen Insektenblume; DDVP, Cyanophos, Fenthion, Fenitrothion, Tetrachlorvinphos, Dimethylvinphos, Propaphos, Methylparathion, Temephos, Phoxim, Acephat, Isofenphos, Salithion, DEP, EPN, Ethion, Mecarbam, Pyridafenthion, Diazinon, Pirimiphosmethyl, Etrimfos, Isoxathion, Chinalphos, Chlorpyrifosmethyl, Chlorpyrifos, Phosalon, Phosmet, Methidathion, Oxydeprofos, Vamidothion, Malathion, Phenthoat, Dimethoat, Formothion, Thiometon, Disulfoton, Phorat, Terbufos, Profenofos, Prothiofos, Sulprofos, Pyraclofos, Monocrotofos, Naled, Fosthiazat, Cadusafos, NAC, MTMC, MIPC, BPMC, XMC, PHC, MPMC, Ethiofencarb, Bendiocarb, Pirimicarb, Carbosulfan, Benfuracarb, Methomyl, Oxamyl, Aldicarb, Etofenprox, Halfenprox, Silafluofen, Nicotinsulfat, Polynactine, Abamectin, Milbemectin, BT, Cartap, Thiocyclam, Bensultap, Diflubenzuron, Chlorfluazuron, Teflubenzuron, Triflumuron, Flufenoxuron, Flucycloxuron, Hexaflumuron, Fluazuron, Imidacloprid, Nitenpyram, Acetamiprid, Dinotefuran, Pymetrozin, Fipronil, Buprofezin, Fenoxycarb, Pyriproxyfen, Methopren, Hydropren, Kinopren, Endosulfan, Diafenthiuron, Triazamat, Tebufenozid, Benzoepin, Dicofol, Chlorbenzilat, Phenisobromolat, Tetradifon, CPCBS, BPPS, Chinomethionat, Amitraz, Benzomat, Hexythiazox, Fenbutatinoxid, Cyhexatin, Dienochlor, Clofentezin, Pyridaben, Fenpyroximat, Fenazaquin, Tebufenpyrad, Novaluron, Noviflumuron, Emamectinbenzoat, Clothianidin, Thiacloprid, Thiamethoxam, Flupyrazofos, Acequinocyl, Bifenazat, Chromafenozid, Etoxazol, Fluacrypyrim, Flufenzin, Halofenozid, Indoxacarb, Methoxyfenozid, Spirodiclofen, Tolfenpyrad, Gamma-Cyhalothrin, Ethiprol, Amidoflumet, Bistrifluron, Flonicamid, Flubrocythrinat, Flufenerim, Pyridalyl, Pyrimidifen, Spinosad oder Spiromesifen ausgewähltes ist;
und das andere Fungizid zumindest eines aus Triadimefon, Hexaconazol, Propiconazol, Ipconazol, Prochloraz, Triflumizol, Pyrifenox, Fenarimol, Mepanipyrim, Cyprodinil, Metalaxyl, Oxadixyl, Benalaxyl, Thiophanatmethyl, Benomyl, Mancozeb, Propineb, Zineb, Metiram, Tetrachlorisophthalonitril, Carpropamid, Ethaboxam, Dimethomorph, Azoxystrobin, Kresoximmethyl, Metominostrobin, Orysastrobin, Fluoxastrobin, Trifloxystrobin, Dimoxystrobin, Pyraclostrobin, Picoxystrobin, Iprodion, Procymidon, Flusulfamid, Dazomet, Methylisothiocyanat, Chloropicrin, basischem Kupferchlorid, basischem Kupfersulfat, Kupfernonylphenolsulfonat, Oxin-kupfer, Schwefel, Zinksulfat, Edifenphos, Tolclofosmethyl, Fosetyl, Phthalid, Tricyclazol, Pyroquilon, Diclocymet, Kasugamycin, Validamycin, Polyoxinen, Rapsöl, Benthiavalicarbisopropyl, Iprovalicarb, Cyflufenamid, Fenhexamid, Quinoxyfen, Spiroxamin, Diflumetorim, Metrafenon, Picobenzamid, Proquinazid, Silthiofam, Oxpoconazol, Famoxadon, Cyazofamid, Fenamidon, Furametpyr, Zoxamid, Boscalid, Tiadinil, Simeconazol, Chlorthalonil, Cymoxanil, Captan, Dithianon, Fluazinam, Folpet, Dichlofluanid, (RS)-N-[2-(1,3-Dimethylbutyl)thiophen-3-yl]-1-methyl-3-trifluormethyl-1 H-pyrazol-4-carboxamid (Penthiopyrad: ISO-Vorschlag), Oxycarboxin, Mepronil, Flutolanil, Triforin, Oxolinsäure, Probenazol, Aciben-

zolar-S-methyl, Isoprothiolan, Ferimzone, Diclomezin, Pencycuron, Fluorimid, Chinomethionat, Iminoctadintriacetat, Iminoctadinalbesilat ausgewähltes ist.

Revendications

1. Composé représenté par la formule (1) :



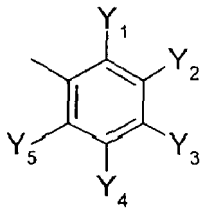
(1)

dans laquelle

chacun de A_1 et A_2 représente un atome de carbone, un atome d'azote ou un atome d'azote oxydé ;
chacun de R_1 et R_2 est un atome d'hydrogène ou un groupe alkyle en C_1 à C_4 ou un groupe (alkyle en C_1 à C_4)carbonyle linéaire, ramifié ou cyclique, éventuellement substitué, l'expression "éventuellement substitué" signifiant éventuellement substitué par un ou plusieurs substituants qui peuvent être identiques ou différents, choisis parmi un atome d'hydrogène, un atome d'halogène, un groupe hydroxyle, un groupe cyano, un groupe nitro, un groupe alcoxy en C_1 à C_6, un groupe halogénoalcoxy en C_1 à C_6, un groupe alkylthio en C_1 à C_6, un groupe halogénoalkylthio en C_1 à C_6, un groupe alkylsulfinyle en C_1 à C_6, un groupe halogénoalkylsulfinyle en C_1 à C_6, un groupe alkylsulfonyle en C_1 à C_6, un groupe halogénoalkylsulfonyle en C_1 à C_6, un groupe (alkyle en C_1 à C_6)carbonyle, un groupe (halogénoalkyle en C_1 à C_6)carbonyle, un groupe (alcoxy en C_1 à C_6)carbonyle, un groupe (halogénoalcoxy en C_1 à C_6)carbonyle, un groupe (alkyle en C_1 à C_6)carbonyloxy, un groupe (halogénoalkyle en C_1 à C_6)carbonyloxy, un groupe amino, un groupe alkylamino en C_1 à C_6, un groupe di(alkyle en C_1 à C_6)amino, un groupe phényle, un groupe phénylcarbonyle, un groupe phénylamino et un groupe hétérocyclique ;
chacun de G_1 et G_2 représente un atome d'oxygène ou un atome de soufre ;
les X, qui peuvent être identiques ou différents, représentent un atome d'hydrogène, un atome d'halogène ou un groupe trifluorométhyle ;
n est un entier de 0 à 4 ;
Q_1 est un groupe phényle, ou un groupe phényle substitué portant un ou plusieurs substituants, qui peuvent être identiques ou différents, choisis parmi un atome d'halogène, un groupe alkyle en C_1 à C_4, le "groupe alkyle" englobant les groupes alkyle linéaires, ramifiés et cycliques, un groupe halogénoalkyle en C_1 à C_4, un groupe alcényle en C_2 à C_4, un groupe halogénoalcényle en C_2 à C_4, un groupe alcynyle en C_2 à C_4, un groupe halogénoalcynyle en C_2 à C_4, un groupe cycloalkyle en C_3 à C_6, un groupe halogénocycloalkyle en C_3 à C_6, un groupe alcoxy en C_1 à C_3, un groupe halogénoalcoxy en C_1 à C_3, un groupe alkylthio en C_1 à C_3, ce terme étant utilisé pour englober cyclopropylthio, un groupe halogénoalkylthio en C_1 à C_3, un groupe alkylsulfinyle en C_1 à C_3, ce terme étant utilisé pour englober cyclopropylsulfinyle, un groupe halogénoalkylsulfinyle en C_1 à C_3, un groupe alkylsulfonyle en C_1 à C_3, ce terme étant utilisé pour englober cyclopropylsulfonyle, un groupe halogénoalkylsulfonyle en C_1 à C_3, un groupe alkylamino en C_1 à C_4, ce terme étant utilisé pour englober cyclopropylamino, un groupe di(alkyle en C_1 à C_4)amino, un groupe cyano, un groupe nitro, un groupe hydroxyle, un groupe (alkyle en C_1 à C_4)carbonyle, le "groupe alkylcarbonyle" englobant les groupes alkylcarbonyle linéaires, ramifiés et cycliques, un groupe (alkyle en C_1 à C_4)carbonyloxy, un groupe (alcoxy en C_1 à C_4)carbonyle, un groupe acétylamino, et un groupe phényle ; un groupe hétérocyclique choisi parmi un groupe pyridyle, un groupe pyridine-N-oxyde, un groupe pyrimidinyle, un groupe pyridazinyle, un groupe pyrazinyle, un groupe furyle, un groupe thiényle, un groupe oxazolyle, un groupe isoxazolyle, un groupe oxadiazolyle, un groupe thiazolyle, un groupe isothiazolyle, un groupe imidazolyle, un groupe triazolyle, un groupe pyrrolyle, un groupe pyrazolyle ou un groupe tétrazolyle, ou un groupe hétérocyclique substitué choisi parmi un groupe pyridyle, un groupe pyridine-N-oxyde, un groupe pyrimidinyle, un groupe pyridazinyle, un groupe pyrazinyle, un groupe furyle, un groupe thiényle, un groupe oxazolyle, un groupe isoxazolyle, un groupe oxadiazolyle, un groupe

thiazolyle, un groupe isothiazolyle, un groupe imidazolyle, un groupe triazolyle, un groupe pyrrolyle, un groupe pyrazolyle ou un groupe tétrazolyle portant un ou plusieurs substituants, qui peuvent être identiques ou différents, choisis parmi un atome d'halogène, un groupe alkyle en C_1 à C_4, le "groupe alkyle" englobant les groupes alkyle linéaires, ramifiés et cycliques, un groupe halogénoalkyle en C_1 à C_4, un groupe alcényle en C_2 à C_4, un groupe halogénoalcényle en C_2 à C_4, un groupe alcynyle en C_2 à C_4, un groupe halogénoalcynyle en C_2 à C_4, un groupe cycloalkyle en C_3 à C_6, un groupe halogénocycloalkyle en C_3 à C_6, un groupe alcoxy en C_1 à C_3, un groupe halogénoalcoxy en C_1 à C_3, un groupe alkylthio en C_1 à C_3, ce terme étant utilisé pour englober cyclopropylthio, un groupe halogénoalkylthio en C_1 à C_3, un groupe alkylsulfinyle en C_1 à C_3, ce terme étant utilisé pour englober cyclopropylsulfinyle, un groupe halogénoalkylsulfinyle en C_1 à C_3, un groupe alkylsulfonyle en C_1 à C_3, ce terme étant utilisé pour englober cyclopropylsulfonyle, un groupe halogénoalkylsulfonyle en C_1 à C_3, un groupe alkylamino en C_1 à C_4, ce terme étant utilisé pour englober cyclopropylamino, un groupe di(alkyle en C_1 à C_4)amino, un groupe cyano, un groupe nitro, un groupe hydroxyle, un groupe (alkyle en C_1 à C_4)carbonyle, le "groupe alkylcarbonyle" englobant les groupes alkylcarbonyle linéaires, ramifiés et cycliques, un groupe (alkyle en C_1 à C_4)carbonyloxy, un groupe (alcoxy en C_1 à C_4)carbonyle, un groupe acétylamino, et un groupe phényle ;

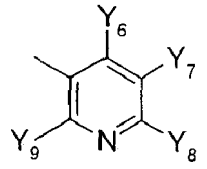
Q_2 est représenté par la formule (2) :



(2)

dans laquelle chacun de Y_1 et Y_5, qui peuvent être identiques ou différents, représente un atome d'halogène, un groupe alkyle en C_1 à C_4, le "groupe alkyle" englobant les groupes alkyle linéaires, ramifiés et cycliques, un groupe halogénoalkyle en C_1 à C_4, un groupe alkylthio en C_1 à C_3, ce terme étant utilisé pour englober cyclopropylthio, un groupe halogénoalkylthio en C_1 à C_3, un groupe alkylsulfinyle en C_1 à C_3, ce terme étant utilisé pour englober cyclopropylsulfinyle, un groupe halogénoalkylsulfinyle en C_1 à C_3, un groupe alkylsulfonyle en C_1 à C_3, ce terme étant utilisé pour englober cyclopropylsulfonyle, un groupe halogénoalkylsulfonyle en C_1 à C_3 ou un groupe cyano ; Y_3 représente un groupe perfluoroalkyle en C_2 à C_6, un groupe perfluoroalkylthio en C_1 à C_6, un groupe perfluoroalkylsulfinyle en C_1 à C_6 ou un groupe perfluoroalkylsulfonyle en C_1 à C_6 ; et chacun de Y_2 et Y_4 représente un atome d'hydrogène, un atome d'halogène ou un groupe alkyle en C_1 à C_4, le "groupe alkyle" englobant les groupes alkyle linéaires, ramifiés et cycliques,

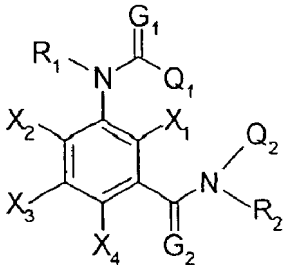
ou par la formule (3) :



(3)

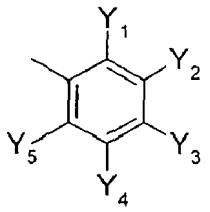
dans laquelle chacun de Y_6 et Y_9, qui peuvent être identiques ou différents, représente un atome d'halogène, un groupe alkyle en C_1 à C_4, le "groupe alkyle" englobant les groupes alkyle linéaires, ramifiés et cycliques, un groupe halogénoalkyle en C_1 à C_4, un groupe alkylthio en C_1 à C_3, ce terme étant utilisé pour englober cyclopropylthio, un groupe halogénoalkylthio en C_1 à C_3, un groupe alkylsulfinyle en C_1 à C_3, ce terme étant utilisé pour englober cyclopropylsulfinyle, un groupe halogénoalkylsulfinyle en C_1 à C_3, un groupe alkylsulfonyle en C_1 à C_3, ce terme étant utilisé pour englober cyclopropylsulfonyle, un groupe halogénoalkylsulfonyle en C_1 à C_3 ou un groupe cyano ; Y_8 représente un groupe halogénoalcoxy en C_1 à C_4, un groupe perfluoroalkyle en C_2 à C_6, un groupe perfluoroalkylthio en C_1 à C_6, un groupe perfluoroalkylsulfinyle en C_1 à C_6 ou un groupe perfluoroalkylsulfonyle en C_1 à C_6 ; et Y_7 représente un atome d'hydrogène, un atome d'halogène ou un groupe alkyle en C_1 à C_4, le "groupe alkyle" englobant les groupes alkyle linéaires, ramifiés et cycliques.

2. Composé selon la revendication 1, représenté par la formule (Ia), qui est la formule (1) dans laquelle A_1 et A_2 sont tous deux des atomes de carbone :



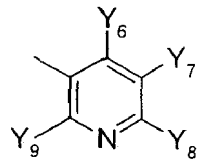
(1a)

dans laquelle R_1, R_2, G_1, G_2 et Q_1 ont les mêmes significations que celles indiquées dans la revendication 1, et Q_2 est représenté soit par la formule (2) :



(2)

dans laquelle chacun de Y_1 et Y_5, qui peuvent être identiques ou différents, représente un atome d'halogène, un groupe alkyle en C_1 à C_4, le "groupe alkyle" englobant les groupes alkyle linéaires, ramifiés et cycliques, un groupe halogénoalkyle en C_1 à C_4, un groupe alkylthio en C_1 à C_3, ce terme étant utilisé pour englober cyclopropylthio, un groupe halogénoalkylthio en C_1 à C_3, un groupe alkylsulfinyle en C_1 à C_3, ce terme étant utilisé pour englober cyclopropylsulfinyle, un groupe halogénoalkylsulfinyle en C_1 à C_3, un groupe alkylsulfonyle en C_1 à C_3, ce terme étant utilisé pour englober cyclopropylsulfonyle, un groupe halogénoalkylsulfonyle en C_1 à C_3 ou un groupe cyano ; Y_3 représente un groupe perfluoroalkylthio en C_1 à C_6, un groupe perfluoroalkylsulfinyle en C_1 à C_6 ou un groupe perfluoroalkylsulfonyle en C_1 à C_6 ; et chacun de Y_2 et Y_4 représente un atome d'hydrogène, un atome d'halogène ou un groupe alkyle en C_1 à C_4, le "groupe alkyle" englobant les groupes alkyle linéaires, ramifiés et cycliques, soit par la formule (3) :

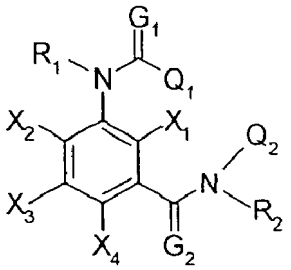


(3)

dans laquelle chacun de Y_6 et Y_9, qui peuvent être identiques ou différents, représente un atome d'halogène, un groupe alkyle en C_1 à C_4, le "groupe alkyle" englobant les groupes alkyle linéaires, ramifiés et cycliques, un groupe halogénoalkyle en C_1 à C_4, un groupe alkylthio en C_1 à C_3, ce terme étant utilisé pour englober cyclopropylthio, un groupe halogénoalkylthio en C_1 à C_3, un groupe alkylsulfinyle en C_1 à C_3, ce terme étant utilisé pour englober cyclopropylsulfinyle, un groupe halogénoalkylsulfinyle en C_1 à C_3, un groupe alkylsulfonyle en C_1 à C_3, ce terme étant utilisé pour englober cyclopropylsulfonyle, un groupe halogénoalkylsulfonyle en C_1 à C_3 ou un groupe cyano ; Y_8 représente un groupe halogénoalcoxy en C_1 à C_4, un groupe perfluoroalkylthio en C_1 à C_6, un groupe perfluoroalkylsulfinyle en C_1 à C_6 ou un groupe perfluoroalkylsulfonyle en C_1 à C_6 ; et Y_7 représente un atome d'hydrogène, un atome d'halogène ou un groupe alkyle en C_1 à C_4, le "groupe alkyle" englobant les groupes alkyle linéaires, ramifiés et cycliques ;

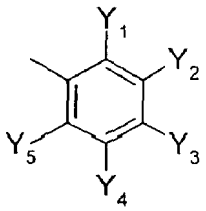
où, dans la formule (Ia), chacun de X_1 et X_2 représente un atome d'hydrogène ou un atome de fluor ; et X_3 et X_4 représentent des atomes d'hydrogène.

3. Composé selon la revendication 1, représenté par la formule (Ia), qui est la formule (1) dans laquelle A_1 et A_2 sont tous deux des atomes de carbone :



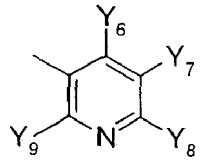
(1a)

dans laquelle Q_2 est représenté soit par la formule (2) :



(2)

dans laquelle chacun de Y_1 et Y_5, qui peuvent être identiques ou différents, représente un atome d'halogène, un groupe alkyle en C_1 à C_4, le "groupe alkyle" englobant les groupes alkyle linéaires, ramifiés et cycliques, un groupe halogénoalkyle en C_1 à C_4, un groupe alkylthio en C_1 à C_3, ce terme étant utilisé pour englober cyclopropylthio, un groupe halogénoalkylthio en C_1 à C_3, un groupe alkylsulfinyle en C_1 à C_3, ce terme étant utilisé pour englober cyclopropylsulfinyle, un groupe halogénoalkylsulfinyle en C_1 à C_3, un groupe alkylsulfonyle en C_1 à C_3, ce terme étant utilisé pour englober cyclopropylsulfonyle, un groupe halogénoalkylsulfonyle en C_1 à C_3 ou un groupe cyano ; Y_3 représente un groupe perfluoroalkyle en C_2 à C_6 ; et chacun de Y_2 et Y_4 représente un atome d'hydrogène, un atome d'halogène ou un groupe alkyle en C_1 à C_4, le "groupe alkyle" englobant les groupes alkyle linéaires, ramifiés et cycliques,
soit par la formule (3) :



(3)

dans laquelle chacun de Y_6 et Y_9, qui peuvent être identiques ou différents, représente un atome d'halogène, un groupe alkyle en C_1 à C_4, le "groupe alkyle" englobant les groupes alkyle linéaires, ramifiés et cycliques, un groupe halogénoalkyle en C_1 à C_4, un groupe alkylthio en C_1 à C_3, ce terme étant utilisé pour englober cyclopropylthio, un groupe halogénoalkylthio en C_1 à C_3, un groupe alkylsulfinyle en C_1 à C_3, ce terme étant utilisé pour englober cyclopropylsulfinyle, un groupe halogénoalkylsulfinyle en C_1 à C_3, un groupe alkylsulfonyle en C_1 à C_3, ce terme étant utilisé pour englober cyclopropylsulfonyle, un groupe halogénoalkylsulfonyle en C_1 à C_3 ou un groupe cyano ; Y_8 représente un groupe perfluoroalkyle en C_2 à C_6 ; et Y_7 représente un atome d'hydrogène, un atome d'halogène ou un groupe alkyle en C_1 à C_4, le "groupe alkyle" englobant les groupes

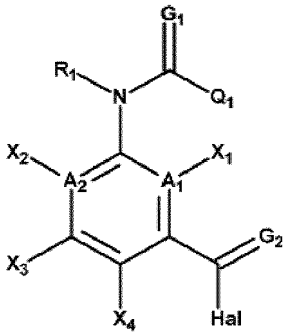
alkyle linéaires, ramifiés et cycliques ;
chacun de X_1 et X_2 représente un atome d'hydrogène ou un atome de fluor ;
X_3 et X_4 représentent des atomes d'hydrogène ;
l'un de R_1 et R_2 est un atome d'hydrogène, et l'autre est un groupe alkyle en C_1 à C_4 ou un groupe (alkyle en C_1 à C_4)carbonyle linéaire, ramifié ou cyclique, éventuellement substitué, ou bien les deux sont indépendamment un groupe alkyle en C_1 à C_4 ou un groupe (alkyle en C_1 à C_4)carbonyle linéaire, ramifié ou cyclique ;
chacun de G_1 et G_2 représente un atome d'oxygène ou un atome de soufre ; et
Q_1 représente un groupe phényle, ou un groupe phényle substitué portant un ou plusieurs substituants, qui peuvent être identiques ou différents, choisis parmi un atome d'halogène, un groupe alkyle en C_1 à C_4, le "groupe alkyle" englobant les groupes alkyle linéaires, ramifiés et cycliques, un groupe halogénoalkyle en C_1 à C_4, un groupe alcényle en C_2 à C_4, un groupe halogénoalcényle en C_2 à C_4, un groupe alcynyle en C_2 à C_4, un groupe halogénoalcynyle en C_2 à C_4, un groupe cycloalkyle en C_3 à C_6, un groupe halogénocycloalkyle en C_3 à C_6, un groupe alcoxy en C_1 à C_3, un groupe halogénoalcoxy en C_1 à C_3, un groupe alkylthio en C_1 à C_3, ce terme étant utilisé pour englober cyclopropylthio, un groupe halogénoalkylthio en C_1 à C_3, un groupe alkylsulfinyle en C_1 à C_3, ce terme étant utilisé pour englober cyclopropylsulfinyle, un groupe halogénoalkylsulfinyle en C_1 à C_3, un groupe alkylsulfonyle en C_1 à C_3, ce terme étant utilisé pour englober cyclopropylsulfonyle, un groupe halogénoalkylsulfonyle en C_1 à C_3, un groupe alkylamino en C_1 à C_4, ce terme étant utilisé pour englober cyclopropylamino, un groupe di(alkyle en C_1 à C_4)amino, un groupe cyano, un groupe nitro, un groupe hydroxyle, un groupe (alkyle en C_1 à C_4)carbonyle, le "groupe alkylcarbonyle" englobant les groupes alkylcarbonyle linéaires, ramifiés et cycliques, un groupe (alkyle en C_1 à C_4)carbonyloxy, un groupe (alcoxy en C_1 à C_4)carbonyle, un groupe acétylamino, et un groupe phényle ; un groupe hétérocyclique choisi parmi un groupe pyridyle, un groupe pyridine-N-oxyde, un groupe pyrimidinyle, un groupe pyridazinyle, un groupe pyrazinyle, un groupe furyle, un groupe thiényle, un groupe oxazolyle, un groupe isoxazolyle, un groupe oxadiazolyle, un groupe thiazolyle, un groupe isothiazolyle, un groupe imidazolyle, un groupe triazolyle, un groupe pyrrolyle, un groupe pyrazolyle ou un groupe tétrazolyle ; ou un groupe hétérocyclique substitué choisi parmi un groupe pyridyle, un groupe pyridine-N-oxyde, un groupe pyrimidinyle, un groupe pyridazinyle, un groupe pyrazinyle, un groupe furyle, un groupe thiényle, un groupe oxazolyle, un groupe isoxazolyle, un groupe oxadiazolyle, un groupe thiazolyle, un groupe isothiazolyle, un groupe imidazolyle, un groupe triazolyle, un groupe pyrrolyle, un groupe pyrazolyle ou un groupe tétrazolyle portant un ou plusieurs substituants, qui peuvent être identiques ou différents, choisis parmi un atome d'halogène, un groupe alkyle en C_1 à C_4, le "groupe alkyle" englobant les groupes alkyle linéaires, ramifiés et cycliques, un groupe halogénoalkyle en C_1 à C_4, un groupe alcényle en C_2 à C_4, un groupe halogénoalcényle en C_2 à C_4, un groupe alcynyle en C_2 à C_4, un groupe halogénoalcynyle en C_2 à C_4, un groupe cycloalkyle en C_3 à C_6, un groupe halogénocycloalkyle en C_3 à C_6, un groupe alcoxy en C_1 à C_3, un groupe halogénoalcoxy en C_1 à C_3, un groupe alkylthio en C_1 à C_3, ce terme étant utilisé pour englober cyclopropylthio, un groupe halogénoalkylthio en C_1 à C_3, un groupe alkylsulfinyle en C_1 à C_3, ce terme étant utilisé pour englober cyclopropylsulfinyle, un groupe halogénoalkylsulfinyle en C_1 à C_3, un groupe alkylsulfonyle en C_1 à C_3, ce terme étant utilisé pour englober cyclopropylsulfonyle, un groupe halogénoalkylsulfonyle en C_1 à C_3, un groupe alkylamino en C_1 à C_4, ce terme étant utilisé pour englober cyclopropylamino, un groupe di(alkyle en C_1 à C_4)amino, un groupe cyano, un groupe nitro, un groupe hydroxyle, un groupe (alkyle en C_1 à C_4)carbonyle, le "groupe alkylcarbonyle" englobant les groupes alkylcarbonyle linéaires, ramifiés et cycliques, un groupe (alkyle en C_1 à C_4)carbonyloxy, un groupe (alcoxy en C_1 à C_4)carbonyle, un groupe acétylamino, et un groupe phényle.

4. Composé selon la revendication 1 représenté par la formule (1), dans lequel
A_1 est un atome d'azote ou un atome d'azote oxydé ;
A_2 est un atome de carbone ;
chacun de R_1 et R_2 est un atome d'hydrogène ou un groupe alkyle en C_1 à C_4, le "groupe alkyle" englobant les groupes alkyle linéaires, ramifiés et cycliques ,
les X représentent un atome d'hydrogène ou un atome de fluor ;
n vaut 0 ou 1 ; et
G_1 et G_2 sont des atomes d'oxygène.

5. Composé selon l'une quelconque des revendications 2, 3 et 4, dans lequel
Q_1 est un groupe phényle ; ou un groupe phényle substitué portant un ou plusieurs substituants, qui peuvent être identiques ou différents, choisis parmi un atome d'halogène, un groupe alkyle en C_1 à C_4, le "groupe alkyle" englobant les groupes alkyle linéaires, ramifiés et cycliques, un groupe halogénoalkyle en C_1 à C_4, un groupe alcényle en C_2 à C_4, un groupe halogénoalcényle en C_2 à C_4, un groupe alcynyle en C_2 à C_4, un groupe halogénoalcynyle en C_2 à C_4, un groupe cycloalkyle en C_3 à C_6, un groupe halogénocycloalkyle en C_3 à C_6, un groupe alcoxy en C_1 à C_3,

un groupe halogénoalcoxy en C_1 à C_3, un groupe alkylthio en C_1 à C_3, ce terme étant utilisé pour englober cyclopropylthio, un groupe halogénoalkylthio en C_1 à C_3, un groupe alkylsulfinyle en C_1 à C_3, ce terme étant utilisé pour englober cyclopropylsulfinyle, un groupe halogénoalkylsulfinyle en C_1 à C_3, un groupe alkylsulfonyle en C_1 à C_3, ce terme étant utilisé pour englober cyclopropylsulfonyle, un groupe halogénoalkylsulfonyle en C_1 à C_3, un groupe alkylamino en C_1 à C_4, ce terme étant utilisé pour englober cyclopropylamino, un groupe di(alkyle en C_1 à C_4)amino, un groupe cyano, un groupe nitro, un groupe hydroxyle, un groupe (alkyle en C_1 à C_4)carbonyle, le "groupe alkylcarbonyle" englobant les groupes alkylcarbonyle linéaires, ramifiés et cycliques, un groupe (alkyle en C_1 à C_4)carbonyloxy, un groupe (alcoxy en C_1 à C_4)carbonyle, un groupe acétylamino, et un groupe phényle ; un groupe pyridyle ; ou un groupe pyridyle substitué portant un ou plusieurs substituants, qui peuvent être identiques ou différents, choisis parmi un atome d'halogène, un groupe alkyle en C_1 à C_4, le "groupe alkyle" englobant les groupes alkyle linéaires, ramifiés et cycliques, un groupe halogénoalkyle en C_1 à C_4, un groupe alcényle en C_2 à C_4, un groupe halogénoalcényle en C_2 à C_4, un groupe alcynyle en C_2 à C_4, un groupe halogénoalcynyle en C_2 à C_4, un groupe cycloalkyle en C_3 à C_6, un groupe halogénocycloalkyle en C_3 à C_6, un groupe alcoxy en C_1 à C_3, un groupe halogénoalcoxy en C_1 à C_3, un groupe alkylthio en C_1 à C_3, ce terme étant utilisé pour englober cyclopropylthio, un groupe halogénoalkylthio en C_1 à C_3, un groupe alkylsulfinyle en C_1 à C_3, ce terme étant utilisé pour englober cyclopropylsulfinyle, un groupe halogénoalkylsulfinyle en C_1 à C_3, un groupe alkylsulfonyle en C_1 à C_3, ce terme étant utilisé pour englober cyclopropylsulfonyle, un groupe halogénoalkylsulfonyle en C_1 à C_3, un groupe alkylamino en C_1 à C_4, ce terme étant utilisé pour englober cyclopropylamino, un groupe di(alkyle en C_1 à C_4)amino, un groupe cyano, un groupe nitro, un groupe hydroxyle, un groupe (alkyle en C_1 à C_4)carbonyle, le "groupe alkylcarbonyle" englobant les groupes alkylcarbonyle linéaires, ramifiés et cycliques, un groupe (alkyle en C_1 à C_4)carbonyloxy, un groupe (alcoxy en C_1 à C_4)carbonyle, un groupe acétylamino, et un groupe phényle.

6. Composé représenté par la formule (4) :



(4)

dans laquelle

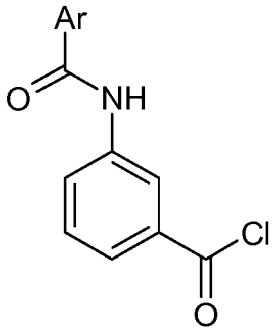
(a) dans le cas où R_1 représente un atome d'hydrogène :

chacun de A_1 et A_2 représente un atome de carbone ;
chacun de G_1 et G_2 représente un atome d'oxygène ou un atome de soufre ;
X_1 est l'hydrogène ou le fluor ;
X_2, X_3 et X_4 représentent des atomes d'hydrogène ;
Q_1 représente un groupe phényle ; un groupe phényle substitué portant un ou plusieurs substituants, qui peuvent être identiques ou différents, choisis parmi un atome d'halogène, un groupe alkyle en C_1 à C_4, un groupe halogénoalkyle en C_1 à C_4, un groupe cyano et un groupe nitro ; un groupe pyridyle ; ou un groupe pyridyle substitué portant un ou plusieurs substituants, qui peuvent être identiques ou différents, choisis parmi les atomes d'halogène ;

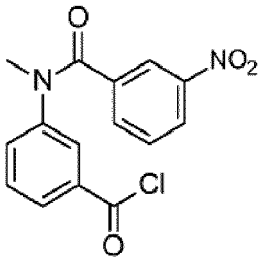
(b) dans le cas où R_1 représente un groupe alkyle en C_1 à C_4 ou un groupe (alkyle en C_1 à C_4)carbonyle :

chacun de A_1 et A_2 représente un atome de carbone, un atome d'azote ou un atome d'azote oxydé ;
chacun de G_1 et G_2 représente un atome d'oxygène ou un atome de soufre ;
X_1, X_2, X_3 et X_4, qui peuvent être identiques ou différents, représentent un atome d'hydrogène, un atome d'halogène, un groupe alkyle en C_1 à C_3 éventuellement substitué, le "groupe alkyle en C_1 à C_3 éventuel-

lement substitué" englobant un "groupe cyclopropyle", ou un groupe trifluorométhyle ;
Q_1 représente un groupe phényle ; ou un groupe phényle substitué portant un ou plusieurs substituants, qui peuvent être identiques ou différents, choisis parmi un atome d'halogène, un groupe alkyle en C_1 à C_4, un groupe halogénoalkyle en C_1 à C_4, un groupe alcényle en C_2 à C_4, un groupe halogénoalcényle en C_2 à C_4, un groupe alcynyle en C_2 à C_4, un groupe halogénoalcynyle en C_2 à C_4, un groupe cycloalkyle en C_3 à C_6, un groupe halogénocycloalkyle en C_3 à C_6, un groupe alcoxy en C_1 à C_3, un groupe halogénoalcoxy en C_1 à C_3, un groupe alkylthio en C_1 à C_3, ce terme étant utilisé pour englober cyclopropylthio, un groupe halogénoalkylthio en C_1 à C_3, un groupe alkylsulfinyle en C_1 à C_3, ce terme étant utilisé pour englober cyclopropylsulfinyle, un groupe halogénoalkylsulfinyle en C_1 à C_3, un groupe alkylsulfonyle en C_1 à C_3, ce terme étant utilisé pour englober cyclopropylsulfonyle, un groupe halogénoalkylsulfonyle en C_1 à C_3, un groupe alkylamino en C_1 à C_4, ce terme étant utilisé pour englober cyclopropylamino, un groupe di(alkyle en C_1 à C_4)amino, un groupe cyano, un groupe nitro, un groupe hydroxyle, un groupe (alkyle en C_1 à C_4)carbonyle, le "groupe alkylcarbonyle" englobant les groupes alkylcarbonyle linéaires, ramifiés et cycliques, un groupe (alkyle en C_1 à C_4)carbonyloxy, un groupe (alcoxy en C_1 à C_4)carbonyle, un groupe acétylamino, et un groupe phényle ; un groupe hétérocyclique choisi parmi un groupe pyridyle, un groupe pyridine-N-oxyde, un groupe pyrimidinyle, un groupe pyridazinyle, un groupe pyrazinyle, un groupe furyle, un groupe thiényle, un groupe oxazolyle, un groupe isoxazolyle, un groupe oxadiazolyle, un groupe thiazolyle, un groupe isothiazolyle, un groupe imidazolyle, un groupe triazolyle, un groupe pyrrolyle, un groupe pyrazolyle ou un groupe tétrazolyle ; ou un groupe hétérocyclique substitué choisi parmi un groupe pyridyle, un groupe pyridine-N-oxyde, un groupe pyrimidinyle, un groupe pyridazinyle, un groupe pyrazinyle, un groupe furyle, un groupe thiényle, un groupe oxazolyle, un groupe isoxazolyle, un groupe oxadiazolyle, un groupe thiazolyle, un groupe isothiazolyle, un groupe imidazolyle, un groupe triazolyle, un groupe pyrrolyle, un groupe pyrazolyle ou un groupe tétrazolyle, le groupe hétérocyclique substitué portant un ou plusieurs substituants, qui peuvent être identiques ou différents, choisis parmi un atome d'halogène, un groupe alkyle en C_1 à C_4, un groupe halogénoalkyle en C_1 à C_4, un groupe alcényle en C_2 à C_4, un groupe halogénoalcényle en C_2 à C_4, un groupe alcynyle en C_2 à C_4, un groupe halogénoalcynyle en C_2 à C_4, un groupe cycloalkyle en C_3 à C_6, un groupe halogénocycloalkyle en C_3 à C_6, un groupe alcoxy en C_1 à C_3, un groupe halogénoalcoxy en C_1 à C_3, un groupe alkylthio en C_1 à C_3, ce terme étant utilisé pour englober cyclopropylthio, un groupe halogénoalkylthio en C_1 à C_3, un groupe alkylsulfinyle en C_1 à C_3, ce terme étant utilisé pour englober cyclopropylsulfinyle, un groupe halogénoalkylsulfinyle en C_1 à C_3, un groupe alkylsulfonyle en C_1 à C_3, ce terme étant utilisé pour englober cyclopropylsulfonyle, un groupe halogénoalkylsulfonyle en C_1 à C_3, un groupe alkylamino en C_1 à C_4, ce terme étant utilisé pour englober cyclopropylamino, un groupe di(alkyle en C_1 à C_4)amino, un groupe cyano, un groupe nitro, un groupe hydroxyle, un groupe (alkyle en C_1 à C_4)carbonyle, le "groupe alkylcarbonyle" englobant les groupes alkylcarbonyle linéaires, ramifiés et cycliques, un groupe (alkyle en C_1 à C_4)carbonyloxy, un groupe (alcoxy en C_1 à C_4)carbonyle, un groupe acétylamino, et un groupe phényle ;
Hal représente un atome de chlore ou un atome de brome ; et
l'expression "éventuellement substitué" signifie éventuellement substitué par un ou plusieurs substituants qui peuvent être identiques ou différents, choisis parmi un atome d'hydrogène, un atome d'halogène, un groupe hydroxyle, un groupe cyano, un groupe nitro, un groupe alcoxy en C_1 à C_6, un groupe halogénoalcoxy en C_1 à C_6, un groupe alkylthio en C_1 à C_6, un groupe halogénoalkylthio en C_1 à C_6, un groupe alkylsulfinyle en C_1 à C_6, un groupe halogénoalkylsulfinyle en C_1 à C_6, un groupe alkylsulfonyle en C_1 à C_6, un groupe halogénoalkylsulfonyle en C_1 à C_6, un groupe (alkyle en C_1 à C_6)carbonyle, un groupe (halogénoalkyle en C_1 à C_6)carbonyle, un groupe (alcoxy en C_1 à C_6)carbonyle, un groupe (halogénoalcoxy en C_1 à C_6)carbonyle, un groupe (alkyle en C_1 à C_6)carbonyloxy, un groupe (halogénoalkyle en C_1 à C_6)carbonyloxy, un groupe amino, un groupe alkylamino en C_1 à C_6, un groupe di(alkyle en C_1 à C_6)amino, un groupe phényle, un groupe phénylcarbonyle, un groupe phénylamino et un groupe hétérocyclique ;
sous réserve que le composé ne soit pas un composé de formule suivante :

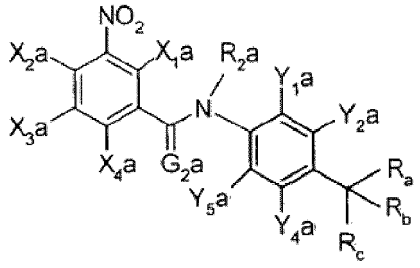


dans laquelle Ar est phényle, 3,4-diméthoxyphényle, 3-méthylphényle, 3-chlorophényle, 4-méthoxyphényle, 3-nitrophényle ou 3-pyridyle ;
et sous réserve que le composé ne soit pas un composé de formule suivante :



7. Composé selon la revendication 6, dans lequel A_2 est un atome de carbone.

8. Composé représenté par la formule (8) :



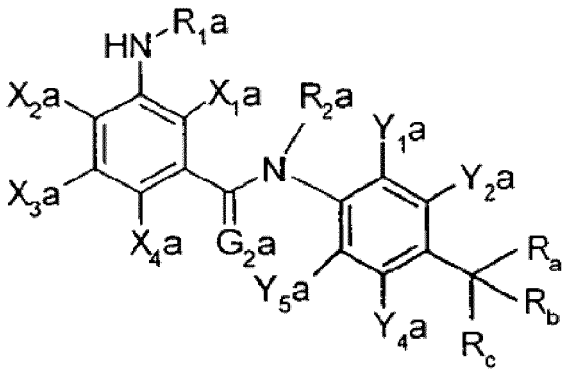
(8)

dans laquelle

chacun de X_{1a}, X_{2a}, X_{3a} et X_{4a} représente un atome d'hydrogène, un groupe alkyle en C_1 à C_3, lequel terme englobe un groupe cyclopropyle, un groupe trifluorométhyle, un groupe hydroxyle, un groupe amino ou un atome d'halogène ;
chacun de R_a et R_b représente un atome de fluor ou un groupe perfluoroalkyle en C_1 à C_4 ;
R_c représente un groupe hydroxyle, un groupe -O-R_d (où R_d représente un groupe alkyle en C_1 à C_3, ce terme englobant un groupe cyclopropyle, un groupe halogénoalkyle en C_1 à C_3, un groupe alkylsulfonyle en C_1 à C_3, un groupe halogénoalkylsulfonyle en C_1 à C_3, un groupe arylsulfonyle, un groupe (alkyle en C_1 à C_4)carbonyle, le "groupe alkylcarbonyle" englobant les groupes alkylcarbonyle linéaires, ramifiés et cycliques, ou un groupe (halogénoalkyle en C_1 à C_4)carbonyle, un atome de chlore, un atome de brome ou un atome d'iode ;
R_{2a} représente un atome d'hydrogène, un groupe alkyle en C_1 à C_3, ce terme étant utilisé pour englober un groupe cyclopropyle, un groupe halogénoalkyle en C_1 à C_3, un groupe alcoxy en C_1 à C_3, un groupe halogénoalcoxy en C_1 à C_3, un groupe alkylthio en C_1 à C_4, ce terme étant utilisé pour englober cyclopropylthio, un groupe halogénoalkylthio en C_1 à C_4, un groupe (alkyle en C_1 à C_4)carbonyle, le "groupe alkylcarbonyle" englobant les groupes alkylcarbonyle linéaires, ramifiés et cycliques, ou un groupe (halogénoalkyle en C_1 à

C_4)carbonyle ;
chacun de Y_{1a} et Y_{5a} représente un groupe alkyle en C_1 à C_4, le "groupe alkyle" englobant les groupes alkyle linéaires, ramifiés ou cycliques, un groupe halogénoalkyle en C_1 à C_4, un groupe alkylthio en C_1 à C_4, ce terme étant utilisé pour englober cyclopropylthio, un groupe halogénoalkylthio en C_1 à C_4, un groupe alkylsulfinyle en C_1 à C_3, ce terme étant utilisé pour englober cyclopropylsulfinyle, ou un groupe halogénoalkylsulfinyle en C_1 à C_3, un groupe alkylsulfonyle en C_1 à C_3, ce terme étant utilisé pour englober cyclopropylsulfonyle, un groupe halogénoalkylsulfonyle en C_1 à C_3, un groupe cyano, un groupe hydroxyle ou un atome d'halogène ;
chacun de Y_{2a} et Y_{4a} représente un atome d'hydrogène, un groupe alkyle en C_1 à C_4, le "groupe alkyle" englobant les groupes alkyle linéaires, ramifiés et cycliques, ou un atome d'halogène ; et
G_{2a} représente un atome d'oxygène ou un atome de soufre.

9. Composé représenté par la formule (11) :

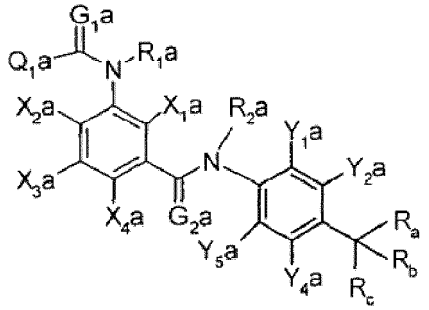


(11)

dans laquelle

chacun de X_{1a}, X_{2a}, X_{3a} et X_{4a} représente un atome d'hydrogène, un groupe alkyle en C_1 à C_3, ce terme étant utilisé pour englober un groupe cyclopropyle, un groupe trifluorométhyle, un groupe hydroxyle, un groupe amino ou un atome d'halogène ;
chacun de R_a et R_b représente un atome de fluor ou un groupe perfluoroalkyle en C_1 à C_4 ;
R_c représente un groupe hydroxyle, un groupe -O-R_d où R_d représente un groupe alkyle en C_1 à C_3, ce terme étant utilisé pour englober un groupe cyclopropyle, un groupe halogénoalkyle en C_1 à C_3, un groupe alkylsulfonyle en C_1 à C_3, ce terme étant utilisé pour englober cyclopropylsulfonyle, un groupe halogénoalkylsulfonyle en C_1 à C_3, un groupe arylsulfonyle, un groupe (alkyle en C_1 à C_4)carbonyle, le "groupe alkylcarbonyle" englobant les groupes alkylcarbonyle linéaires, ramifiés et cycliques, ou un groupe (halogénoalkyle en C_1 à C_4)carbonyle, un atome de chlore, un atome de brome ou un atome d'iode ;
chacun de R_{1a} et R_{2a} représente un atome d'hydrogène, un groupe alkyle en C_1 à C_3, le "groupe alkyle" englobant les groupes alkyle linéaires, ramifiés et cycliques, un groupe halogénoalkyle en C_1 à C_3, un groupe alcoxy en C_1 à C_3, un groupe halogénoalcoxy en C_1 à C_3, un groupe alkylthio en C_1 à C_4, ce terme étant utilisé pour englober cyclopropylthio, un groupe halogénoalkylthio en C_1 à C_4, un groupe (alkyle en C_1 à C_4)carbonyle, le "groupe alkylcarbonyle" englobant les groupes alkylcarbonyle linéaires, ramifiés et cycliques, ou un groupe (halogénoalkyle en C_1 à C_4)carbonyle ;
chacun de Y_{1a} et Y_{5a} représente un groupe alkyle en C_1 à C_4, un groupe halogénoalkyle en C_1 à C_4, un groupe alkylthio en C_1 à C_4, ce terme étant utilisé pour englober cyclopropylthio, un groupe halogénoalkylthio en C_1 à C_4, un groupe alkylsulfinyle en C_1 à C_3, ce terme étant utilisé pour englober cyclopropylsulfinyle, un groupe halogénoalkylsulfinyle en C_1 à C_3, un groupe alkylsulfonyle en C_1 à C_3, ce terme étant utilisé pour englober cyclopropylsulfonyle, un groupe halogénoalkylsulfonyle en C_1 à C_3, un groupe cyano, un groupe hydroxyle ou un atome d'halogène ;
chacun de Y_{2a} et Y_{4a} représente un atome d'hydrogène, un groupe alkyle en C_1 à C_4, le "groupe alkyle" englobant les groupes alkyle linéaires, ramifiés et cycliques, ou un atome d'halogène ; et
G_{2a} représente un atome d'oxygène ou un atome de soufre.

10. Composé représenté par la formule (13) :



(13)

dans laquelle

chacun de X_{1a}, X_{2a}, X_{3a} et X_{4a} représente un atome d'hydrogène, un groupe alkyle en C_1 à C_3, ce terme étant utilisé pour englober un groupe cyclopropyle, un groupe trifluorométhyle, un groupe hydroxyle, un groupe amino ou un atome d'halogène ;

chacun de R_a et R_b représente un atome de fluor ou un groupe perfluoroalkyle en C_1 à C_4 ;

R_c représente un groupe hydroxyle, un groupe -O-R_d où R_d représente un groupe alkyle en C_1 à C_3, ce terme étant utilisé pour englober un groupe cyclopropyle, un groupe halogénoalkyle en C_1 à C_3, un groupe alkylsulfonyle en C_1 à C_3, ce terme étant utilisé pour englober cyclopropylsulfonyle, un groupe halogénoalkylsulfonyle en C_1 à C_3, un groupe arylsulfonyle, un groupe (alkyle en C_1 à C_4)carbonyle, le "groupe alkylcarbonyle" englobant les groupes alkylcarbonyle linéaires, ramifiés et cycliques, ou un groupe (halogénoalkyle en C_1 à C_4)carbonyle, un atome de chlore, un atome de brome ou un atome d'iode ;

chacun de R_{1a} et R_{2a} représente un atome d'hydrogène, un groupe alkyle en C_1 à C_3, le "groupe alkyle" englobant les groupes alkyle linéaires, ramifiés et cycliques, un groupe halogénoalkyle en C_1 à C_3, un groupe alcoxy en C_1 à C_3, un groupe halogénoalcoxy en C_1 à C_3, un groupe alkylthio en C_1 à C_4, ce terme étant utilisé pour englober cyclopropylthio, un groupe halogénoalkylthio en C_1 à C_4, un groupe (alkyle en C_1 à C_4)carbonyle, le "groupe alkylcarbonyle" englobant les groupes alkylcarbonyle linéaires, ramifiés et cycliques, ou un groupe (halogénoalkyle en C_1 à C_4) carbonyle ;

chacun de Y_{1a} et Y_{5a} représente un groupe alkyle en C_1 à C_4, le "groupe alkyle" englobant les groupes alkyle linéaires, ramifiés et cycliques, un groupe halogénoalkyle en C_1 à C_4, un groupe alkylthio en C_1 à C_4, ce terme étant utilisé pour englober cyclopropylthio, un groupe halogénoalkylthio en C_1 à C_4, un groupe alkylsulfinyle en C_1 à C_3, ce terme étant utilisé pour englober cyclopropylsulfinyle, un groupe halogénoalkylsulfinyle en C_1 à C_3, un groupe alkylsulfonyle en C_1 à C_3, ce terme étant utilisé pour englober cyclopropylsulfonyle, un groupe halogénoalkylsulfonyle en C_1 à C_3, un groupe cyano, un groupe hydroxyle ou un atome d'halogène ;

chacun de Y_{2a} et Y_{4a} représente un atome d'hydrogène, un groupe alkyle en C_1 à C_4, le "groupe alkyle" englobant les groupes alkyle linéaires, ramifiés et cycliques, ou un atome d'halogène ;

chacun de G_{1a} et G_{2a} représente un atome d'oxygène ou un atome de soufre ;

Q_{1a} représente un groupe phényle ; ou un groupe phényle substitué portant un ou plusieurs substituants, qui peuvent être identiques ou différents, choisis parmi un atome d'halogène, un groupe alkyle en C_1 à C_4, le "groupe alkyle" englobant les groupes alkyle linéaires, ramifiés et cycliques, un groupe halogénoalkyle en C_1 à C_4, un groupe alcényle en C_2 à C_4, un groupe halogénoalcényle en C_2 à C_4, un groupe alcynyle en C_2 à C_4, un groupe halogénoalcynyle en C_2 à C_4, un groupe cycloalkyle en C_3 à C_6, un groupe halogénocycloalkyle en C_3 à C_6, un groupe alcoxy en C_1 à C_3, un groupe halogénoalcoxy en C_1 à C_3, un groupe alkylthio en C_1 à C_3, ce terme étant utilisé pour englober cyclopropylthio, un groupe halogénoalkylthio en C_1 à C_3, un groupe alkylsulfinyle en C_1 à C_3, ce terme étant utilisé pour englober cyclopropylsulfinyle, un groupe halogénoalkylsulfinyle en C_1 à C_3, un groupe alkylsulfonyle en C_1 à C_3, ce terme étant utilisé pour englober cyclopropylsulfonyle, un groupe halogénoalkylsulfonyle en C_1 à C_3, un groupe alkylamino en C_1 à C_4, ce terme étant utilisé pour englober cyclopropylamino, un groupe di(alkyle en C_1 à C_4)amino, un groupe cyano, un groupe nitro, un groupe hydroxyle, un groupe (alkyle en C_1 à C_4)carbonyle, le "groupe alkylcarbonyle" englobant les groupes alkylcarbonyle linéaires, ramifiés et cycliques, un groupe (alkyle en C_1 à C_4)carbonyloxy, un groupe (alcoxy en C_1 à C_4)carbonyle, un groupe acétylamino, et un groupe phényle ;

un groupe hétérocyclique choisi parmi un groupe pyridyle, un groupe pyridine-N-oxyde, un groupe pyrimidinyle, un groupe pyridazinyle, un groupe pyrazinyle, un groupe furyle, un groupe thiényle, un groupe oxazolyle, un groupe isoxazolyle, un groupe oxadiazolyle, un groupe thiazolyle, un groupe isothiazolyle, un groupe imidazolyle, un groupe triazolyle, un groupe pyrrolyle, un groupe pyrazolyle ou un groupe tétrazolyle ; ou un groupe hété-

rocyclique substitué choisi parmi un groupe pyridyle, un groupe pyridine-N-oxyde, un groupe pyrimidinyle, un groupe pyridazinyle, un groupe pyrazinyle, un groupe furyle, un groupe thiényle, un groupe oxazolyle, un groupe isoxazolyle, un groupe oxadiazolyle, un groupe thiazolyle, un groupe isothiazolyle, un groupe imidazolyle, un groupe triazolyle, un groupe pyrrolyle, un groupe pyrazolyle ou un groupe tétrazolyle portant un ou plusieurs substituants, qui peuvent être identiques ou différents, choisis parmi un atome d'halogène, un groupe alkyle en C_1 à C_4, un groupe halogénoalkyle en C_1 à C_4, un groupe alcényle en C_2 à C_4, un groupe halogénoalcényle en C_2 à C_4, un groupe alcynyle en C_2 à C_4, un groupe halogénoalcynyle en C_2 à C_4, un groupe cycloalkyle en C_3 à C_6, un groupe halogénocycloalkyle en C_3 à C_6, un groupe alcoxy en C_1 à C_3, un groupe halogénoalcoxy en C_1 à C_3, un groupe alkylthio en C_1 à C_3, ce terme étant utilisé pour englober cyclopropylthio, un groupe halogénoalkylthio en C_1 à C_3, un groupe alkylsulfinyle en C_1 à C_3, ce terme étant utilisé pour englober cyclopropylsulfinyle, un groupe halogénoalkylsulfinyle en C_1 à C_3, un groupe alkylsulfonyle en C_1 à C_3, ce terme étant utilisé pour englober cyclopropylsulfonyle, un groupe halogénoalkylsulfonyle en C_1 à C_3, un groupe alkylamino en C_1 à C_4, ce terme étant utilisé pour englober cyclopropylamino, un groupe di(alkyle en C_1 à C_4)amino, un groupe cyano, un groupe nitro, un groupe hydroxyle, un groupe (alkyle en C_1 à C_4)carbonyle, le "groupe alkylcarbonyle" englobant les groupes alkylcarbonyle linéaires, ramifiés et cycliques, un groupe (alkyle en C_1 à C_4)carbonyloxy, un groupe (alcoxy en C_1 à C_4)carbonyle, un groupe acétylamino, et un groupe phényle.

11. Insecticide contenant le composé selon l'une quelconque des revendications 1 à 5 à titre d'agent actif.

12. Procédé d'utilisation d'un pesticide dans le traitement de cultures ou du sol, pour utilisation en culture, par traitement des cultures ou du sol avec une quantité efficace du composé selon l'une quelconque des revendications 1 à 5 afin que les cultures soient protégées contre des organismes nuisibles.

13. Mélange dans lequel le composé tel que décrit dans les revendications 1 à 5 est combiné avec au moins un autre insecticide et/ou fongicide.

14. Mélange selon la revendication 13, dans lequel l'autre insecticide est au moins l'un choisi parmi les suivants : alléthrine, tétraméthrine, resméthrine, phénothrine, furaméthrine, perméthrine, cyperméthrine, deltaméthrine, cyhalothrine, cyfluthrine, fenpropathrine, tralométhrine, cycloprothrine, flucythrinate, fluvalinate, acrinathrine, téfluthrine, bifenthrine, empenthrine, bêta-cyfluthrine, zêta-cyperméthrine, fenvalérate et leurs isomères ; ou extrait de pyrèthre de Dalmatie, DDVP, cyanophos, fenthion, fénitrothion, tétrachlorvinphos, diméthylvinphos, propaphos, méthylparathion, téméphos, phoxim, acéphate, isofenphos, salithion, DEP, EPN, éthion, mécarbam, pyridafenthion, diazinon, pirimiphos-méthyl, étrimfos, isoxathion, quinalphos, chlorpyrifos-méthyl, chlorpyrifos, phosalone, phosmet, méthidathion, oxydéprofos, vamidothion, malathion, phenthoate, diméthoate, formothion, thiométon, disulfoton, phorate, terbufos, profénofos, prothiofos, sulprofos, pyraclofos, monocrotofos, naled, fosthiazate, cadusafos, NAC, MTMC, MIPC, BPMC, XMC, PHC, MPMC, éthiofencarb, bendiocarb, pirimicarb, carbosulfan, benfuracarb, méthomyl, oxamyl, aldicarb, étofenprox, halfenprox, silafluofène, nicotine-sulfate, polynactines, abamectine, milbémectine, BT, cartap, thiocyclam, bensultap, diflubenzuron, chlorfluazuron, téflubenzuron, triflumuron, flufénoxuron, flucycloxuron, hexaflumuron, fluazuron, imidacloprid, nitenpyram, acétamiprid, dinotéfuran, pymétrozine, fipronil, buprofézine, fénoxycarb, pyriproxyfène, méthoprène, hydroprène, kinoprène, endosulfan, diafenthiuron, triazamate, tébufénozide, benzoépine, dicofol, chlorobenzilate, phénisobromolate, tétradifon, CPCBS, BPPS, chinométhionate, amitraz, benzomate, hexythiazox, fenbutatine oxyde, cyhexatine, diénochlor, clofentézine, pyridabène, fenpyroximate, fénazaquine, tébufenpyrad, novaluron, noviflumuron, émamectine benzoate, clothianidine, thiacloprid, thiaméthoxam, flupyrazofos, acéquinocyl, bifénazate, chromafénozide, étoxazole, fluacrypyrim, flufenzine, halofénozide, indoxacarb, méthoxyfénozide, spirodiclofène, tolfenpyrad, gamma-cyhalothrine, éthiprole, amidoflumet, bistrifluron, flonicamid, flubrocythrinate, flufénérim, pyridalyl, pyrimidifène, spinosad, ou spiromesifène ;
et l'autre fongicide est au moins l'un choisi parmi les suivants : triadiméfon, hexaconazole, propiconazole, ipconazole, prochloraz, triflumizole, pyrifénox, fénarimol, mépanipyrim, cyprodinil, métalaxyl, oxadixyl, bénalaxyl, thiophanate-méthyl, bénomyl, mancozeb, propineb, zineb, métiram, tétrachloroisophtalonitrile, carpropamid, éthaboxam, diméthomorph, azoxystrobine, krésoxim-méthyl, métominostrobine, orysastrobine, fluoxastrobine, trifloxystrobine, dimoxystrobine, pyraclostrobine, picoxystrobin, iprodione, procymidone, flusulfamide, dazomet, isothiocyanate de méthyle, chloropicrine, chlorure de cuivre basique, sulfate de cuivre basique, nonylphénolsulfonate de cuivre, oxyne-cuivre, soufre, sulfate de zinc, édifenphos, tolclofos-méthyl, fosétyl, phtalide, tricyclazole, pyroquilon, diclocymet, kasugamycine, validamycine, polyoxines, huile de ricin, benthiavalicarbisopropyl, iprovalicarb, cyflufénamid, fenhexamid, quinoxyfène, spiroxamine, diflumétorim, métrafénone, picobenzamide, proquinazid, silthiofam, oxpoconazole, famoxadone, cyazofamid, fénamidone, furametpyr, zoxamide, boscalid, tiadinil, siméconazole, chlorothalonil, cymoxanil, captan, dithianon, fluazinam, folpet, dichlofluanid, (*RS*)-N-[2-(1,3-diméthylbutyl)thiophén-3-yl]-1-méthyl-3-trifluorométhyl-1H-pyrazole-4-carboxamide (penthiopyrad : nom ISO proposé), oxycarboxine, mépronil,

flutolanil, triforine, acide oxolinique, probénazole, acibenzolar-S-méthyl, isoprothiolane, férimzone, diclomézine, pencycuron, fluoroimide, chinométhionate, iminoctadine-triacétate, iminoctadine-albésilate.

REFERENCES CITED IN THE DESCRIPTION

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