

Title (en)

METHOD FOR PREPARING FLUORINATED SULPHANYLAMIDES AND SULPHINAMIDINES AND USES THEREOF

Title (de)

VERFAHREN ZUR HERSTELLUNG VON FLUORIERTEN SULPHANYLAMIDEN UND SULPHINAMIDINEN UND VERWENDUNGEN DAVON

Title (fr)

PROCEDE DE PREPARATION DE SULFANYLAMIDES ET SULFINAMIDINES FLUORES ET LEURS UTILISATIONS

Publication

EP 2114874 A2 20091111 (FR)

Application

EP 08761839 A 20080204

Priority

- FR 2008000136 W 20080204
- FR 0700792 A 20070205

Abstract (en)

[origin: FR2912132A1] A method for the preparation of fluorinated sulfanylamides and sulfinamidines, involves the reaction of dialkylaminosulfur trifluoride with a perfluoroalkyl-trialkyl-silane in presence of a tert. amine to give a perfluoroalkyl-difluorosulfanyl-amine, followed by reaction with a prim. amine in presence of a tert. amine. A method (M1) for the preparation of sulfanylamides of formula R 1-NH-S-R 2 (I) and sulfinamidines of formula R 1-N=S(R 2)-N(R 3)R 4 (II), involves (a) condensation between compounds of formula R 2-Si(R 5)(R 6)R 7 (IV) and S(F) 3-N(R 3)R 4 (V) in organic solvent in presence of a tert. amine to give compounds of formula S(F) 2(R 2)-N(R 3)R 4 (III), (b) condensation of (III) with amines of formula R 1NH 2 in organic solvent in presence of a tert. amine to give (I) and/or (II), and possibly (c) conversion of (II) or the mixture of (I) and (II) in organic solvent in presence of an acid to give (I). R 1 aryl, heteroaryl, alkyl, cycloalkyl, heterocycloalkyl, -SO 2-aryl, -SO 2-heteroaryl, -SO 2-fluoroalkyl, -COO-aryl, -COO-heteroaryl or -COO-alkyl (all optionally substituted except for -SO 2-fluoroalkyl); R 2perfluoroalkyl or difluoromethylene substituted with -S-aryl, -S-heteroaryl or optionally substituted benzoxazol-2-yl; R 3, R 4alkyl, alkoxyalkyl or cycloalkyl, or R 3 plus R 4 plus the linking nitrogen may form an optionally unsaturated 3- to 7-membered heterocycle which may also contain another hetero-atom (e.g. piperidinyl, pyrrolidinyl or morpholinyl); R 5, R 6, R 7optionally substituted alkyl or aryl . Independent claims are also included for (1) a method (M2) for the preparation of compounds of formula R 1R ON-S-R 2 (Ia) by the alkylation of (I) with an alkylating agent of formula R OX or R OOSO 2R in an aprotic polar solvent in presence of a base (2) a method (M3) for the production of (I) by reacting (II) with an organic or mineral acid at a temperature between 0[deg] C and the boiling point of the solvent (3) compounds of formula (I), (II), (III) and (Ia) . R 0optionally substituted alkyl, alkenyl or alkynyl; X : halogen; R : optionally substituted alkyl or aryl .

IPC 8 full level

C07C 311/48 (2006.01); **C07C 313/20** (2006.01); **C07C 313/32** (2006.01); **C07C 319/14** (2006.01); **C07C 321/18** (2006.01); **C07C 321/22** (2006.01); **C07C 323/12** (2006.01); **C07C 323/49** (2006.01); **C07C 381/00** (2006.01); **C07C 381/06** (2006.01); **C07D 231/38** (2006.01); **C07D 233/74** (2006.01); **C07D 263/36** (2006.01); **C07D 295/26** (2006.01)

CPC (source: EP KR)

C07C 311/48 (2013.01 - EP); **C07C 313/20** (2013.01 - EP); **C07C 313/32** (2013.01 - EP); **C07C 319/14** (2013.01 - EP); **C07C 323/25** (2013.01 - KR); **C07C 323/49** (2013.01 - EP); **C07C 381/00** (2013.01 - EP); **C07C 381/06** (2013.01 - EP); **C07C 381/10** (2013.01 - KR); **C07D 231/38** (2013.01 - EP); **C07D 233/74** (2013.01 - EP); **C07D 263/36** (2013.01 - EP); **C07D 295/26** (2013.01 - EP)

Citation (search report)

See references of WO 2008110698A2

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MT NL NO PL PT RO SE SI SK TR

Designated extension state (EPC)

AL BA MK RS

DOCDB simple family (publication)

FR 2912132 A1 20080808; AR 065154 A1 20090520; AU 2008224784 A1 20080918; BR PI0807119 A2 20140408; CA 2677295 A1 20080918; CN 101668735 A 20100310; EP 2114874 A2 20091111; IL 200190 A0 20100415; JP 2010517985 A 20100527; KR 20090106595 A 20091009; MX 2009008314 A 20090813; TW 200840576 A 20081016; WO 2008110698 A2 20080918; WO 2008110698 A3 20081106

DOCDB simple family (application)

FR 0700792 A 20070205; AR P080100448 A 20080204; AU 2008224784 A 20080204; BR PI0807119 A 20080204; CA 2677295 A 20080204; CN 200880004174 A 20080204; EP 08761839 A 20080204; FR 2008000136 W 20080204; IL 20019009 A 20090730; JP 2009547730 A 20080204; KR 20097016328 A 20080204; MX 2009008314 A 20080204; TW 97104739 A 20080205