

Title (en)

CONTINUOUS METHOD FOR PRODUCING AMIDES OF LOW ALIPHATIC CARBOXYLIC ACIDS

Title (de)

KONTINUIERLICHES VERFAHREN ZUR HERSTELLUNG VON AMIDEN NIEDERER ALIPHATISCHER CARBONSÄUREN

Title (fr)

PROCÉDÉ CONTINU DE PRODUCTION D'AMIDES D'ACIDES CARBOXYLIQUES ALIPHATIQUES INFÉRIEURS

Publication

**EP 2274270 A1 20110119 (DE)**

Application

**EP 09727594 A 20090318**

Priority

- EP 2009001990 W 20090318
- DE 102008017218 A 20080404

Abstract (en)

[origin: CA2720370A1] The invention relates to a continuous method for producing amides, according to which at least one carboxylic acid of formula (I) R<sub>3</sub>-COOH (I), wherein R<sub>3</sub> is hydrogen or an optionally substituted alkyl group comprising between 1 and 4 carbon atoms, is reacted with at least one amine of formula (II) HNR<sub>1</sub>R<sub>2</sub> (II), wherein R<sub>1</sub> and R<sub>2</sub> are independently hydrogen or a hydrocarbon group comprising between 1 and 100 C atoms, to form an ammonium salt, and said ammonium salt is then reacted to form a carboxylic acid amide, under microwave irradiation in a reaction pipe, the longitudinal axis of the pipe being oriented in the direction of propagation of the microwaves of a monomode microwave applicator.

IPC 8 full level

**C07C 231/02** (2006.01); **C07C 233/03** (2006.01); **C07C 233/05** (2006.01); **C07C 235/34** (2006.01)

CPC (source: EP US)

**B01J 19/126** (2013.01 - EP US); **C07C 231/02** (2013.01 - EP US); **B01J 2219/00033** (2013.01 - EP US); **B01J 2219/0254** (2013.01 - EP US); **B01J 2219/0263** (2013.01 - EP US); **B01J 2219/0281** (2013.01 - EP US); **B01J 2219/0295** (2013.01 - EP US); **B01J 2219/0892** (2013.01 - EP US); **B01J 2219/1227** (2013.01 - EP US)

Citation (search report)

See references of WO 2009121490A1

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 MK MT NL NO PL PT RO SE SI SK TR

Designated extension state (EPC)

AL BA RS

DOCDB simple family (publication)

**DE 102008017218 A1 20091008; DE 102008017218 B4 20110922;** AU 2009231125 A1 20091008; BR PI0909369 A2 20151006; CA 2720370 A1 20091008; CN 101984755 A 20110309; CN 101984755 B 20141112; EA 018179 B1 20130628; EA 201001115 A1 20101230; EP 2274270 A1 20110119; KR 20100135719 A 20101227; MX 2010010766 A 20101026; US 2011137081 A1 20110609; WO 2009121490 A1 20091008

DOCDB simple family (application)

**DE 102008017218 A 20080404;** AU 2009231125 A 20090318; BR PI0909369 A 20090318; CA 2720370 A 20090318; CN 200980101830 A 20090318; EA 201001115 A 20090318; EP 09727594 A 20090318; EP 2009001990 W 20090318; KR 20107018469 A 20090318; MX 2010010766 A 20090318; US 93568309 A 20090318