

Title (en)

METHOD FOR PRODUCING, VIA ORGANOMETALLIC COMPOUNDS, ORGANIC INTERMEDIATE PRODUCTS

Title (de)

VERFAHREN ZUR METALLORGANISCHEN HERSTELLUNG ORGANISCHER ZWISCHENPRODUKTE

Title (fr)

PROCEDE DE PRODUCTION, VIA DES ORGANOMETALLIQUES, DE PRODUITS INTERMEDIAIRES ORGANIQUES

Publication

**EP 1436301 A1 20040714 (DE)**

Application

**EP 02801306 A 20021002**

Priority

- DE 10150614 A 20011012
- EP 0211052 W 20021002

Abstract (en)

[origin: WO03033504A1] The invention concerns a method for producing aryllithium compounds by reacting halogenaliphates (I) with metal lithium, to obtain a lithiumalkyl (II), then by subsequent reaction with aromatic halogen compounds (III) with halogen-metal exchange reaction resulting in corresponding lithium aromatic compounds (IV). Step 1: producing the base; step 2: halogen-metal exchange (equation I), formulae wherein: R represents methyl, primary, secondary or tertiary alkyl radical containing 2 to 12 carbon atoms, which are optionally substituted by a radical from the following groups: {phenyl, substituted phenyl, aryl, heteroaryl, alkoxy, dialkylamino, alkylthio}, substituted alkyl, substituted or unsubstituted cycloalkyl containing 3 to 8 carbon atoms; Hal1 = fluorine, chlorine, bromine or iodine; Hal2 represents chlorine, bromine or iodine; X1-5 independently represent a carbon or one or several X1-5 R1-5 groups may represent together nitrogen, or two neighbouring X1-5 R1-5 may together represent O, S, NH or NR', wherein R' represents C1-C5 alkyl, SO2-phenyl, SO2-p-tolyl or benzoyl; the radicals R1-5 represent substituents from the group {hydrogen, methyl, cyclic or acyclic primary, secondary or tertiary alkyl radicals containing 2 to 12 carbon atoms, for which, as the case may be, one or several hydrogen atoms are substituted by fluorine, for example, CF3, substituted cyclic or acyclic alkyl groups, alkoxy, dialkylamino, alkylamino, arylamino, diarylamino, phenyl, substituted phenyl, alkylthio, diarylphosphino, dialkylphosphino, dialkyl- or diarylaminocarbonyl, monoalkyl- or monoarylamino carbonyl, CO2, hydroxylalkyl, alkoxyalkyl, fluorine or chlorine}, two neighbouring R1-4 radicals capable of representing an aromatic or aliphatic ring condensed on the chain.

IPC 1-7

**C07F 1/02; C07C 63/06; C07C 51/15**

IPC 8 full level

**C07B 61/00** (2006.01); **C07C 45/00** (2006.01); **C07C 45/45** (2006.01); **C07C 51/15** (2006.01); **C07F 1/02** (2006.01)

CPC (source: EP US)

**C07C 45/00** (2013.01 - EP US); **C07C 45/45** (2013.01 - EP US); **C07C 51/15** (2013.01 - EP US); **C07F 1/02** (2013.01 - EP US)

C-Set (source: EP US)

1. **C07C 45/00 + C07C 49/80**
2. **C07C 45/45 + C07C 49/80**
3. **C07C 51/15 + C07C 63/70**
4. **C07C 51/15 + C07C 63/06**

Citation (search report)

See references of WO 03033504A1

Citation (examination)

- M. SCHLOSSER: "organometallics in synthesis", 1994, WILEY, UNITED KINGDOM
- PATENT ABSTRACTS OF JAPAN
- T.A. ONDRUS ET AL., AUST. J. CHEM., vol. 32, 1979, pages 2313 - 2316

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR IE IT LI LU MC NL PT SE SK TR

DOCDB simple family (publication)

**WO 03033504 A1 20030424;** CN 1568327 A 20050119; DE 10150614 A1 20030430; EP 1436301 A1 20040714; JP 2005505629 A 20050224;  
RU 2004114272 A 20051027; US 2005001333 A1 20050106

DOCDB simple family (application)

**EP 0211052 W 20021002;** CN 02820061 A 20021002; DE 10150614 A 20011012; EP 02801306 A 20021002; JP 2003536243 A 20021002;  
RU 2004114272 A 20021002; US 49196704 A 20040408