

Title (en)
PRODUCTION OF POLYMERS BY CONTROLLED RADICAL POLYMERIZATION

Title (de)
HERSTELLUNG VON POLYMEREN DURCH KONTROLLIERTE RADIKALISCHE POLYMERISATION

Title (fr)
PRODUCTION DE POLYMÈRES PAR POLYMÉRISATION RADICALEIRE CONTROLÉE

Publication
EP 2751143 A1 20140709 (DE)

Application
EP 12753968 A 20120830

Priority
• EP 11179291 A 20110830
• EP 2012066838 W 20120830
• EP 12753968 A 20120830

Abstract (en)
[origin: WO2013030261A1] Method for producing polymers by means of controlled radical polymerisation, wherein the polymerisation of one or several radically polymerisable monomers of general formula (I), where R₁, R₂, R₃ are H, C₁-C₄ alkyl, R₄ is C(=O)OR₅, C(=O)NHR₁₅, C(=O)NR₅R₆, OC(=O)CH₃, C(=O)OH, CN, aryl, hetaryl, C(=O)OR₅OH, C(=O)OR₅Si(OR₅)₃, halogen, NHC(O)H, P(=O)(OR₇)₂, R₅ is C₁-C₂₀ alkyl, R₁₅ is C₁-C₂₀-alkyl, R₆ is C₁-C₂₀ alkyl, and R₇ is H, C₁-C₂₀ alkyl, occurs in the presence of a. one or several catalysts containing Cu in the form of Cu(0), Cu(I), Cu(II) or mixtures thereof, b. one or several initiators selected from the group of organic halogenides or pseudohalogenides, c. one or several ligands, d. optionally one or several solvents, and e. optionally one or several inorganic halogenide salts, said method consisting of the following steps i) addition of the catalyst a., ii) optional addition of monomers of general formula (I), iii) optional addition of solvent d., iv) addition of ligand c., v) addition of initiator b., vi) addition of monomers of general formula (I), and vii) optional addition of inorganic halogenide salts e., on the proviso that the addition of at least some of the monomers of general formula (I) occurs immediately before or shortly after the last of the steps i), iv) and v).

IPC 8 full level
C08F 4/10 (2006.01); **C08F 4/40** (2006.01); **C08F 293/00** (2006.01); **C08F 297/00** (2006.01)

CPC (source: EP)
C08F 2/01 (2013.01); **C08F 2/38** (2013.01); **C08F 4/40** (2013.01); **C08F 293/005** (2013.01); **C08F 220/14** (2013.01); **C08F 220/1804** (2020.02); **C08F 2438/01** (2013.01); **C08F 2438/02** (2013.01)

Citation (search report)
See references of WO 2013030261A1

Designated contracting state (EPC)
AL 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 RS SE SI SK SM TR

DOCDB simple family (publication)
WO 2013030261 A1 20130307; BR 112014003922 A2 20170328; CN 103764688 A 20140430; EP 2751143 A1 20140709; IN 2321CHN2014 A 20150619; JP 2014525486 A 20140929; KR 20140069032 A 20140609; MX 2014002011 A 20140327; RU 2014111849 A 20151010; SG 2014014492 A 20140529; ZA 201402272 B 20151223

DOCDB simple family (application)
EP 2012066838 W 20120830; BR 112014003922 A 20120830; CN 201280042447 A 20120830; EP 12753968 A 20120830; IN 2321CHN2014 A 20140326; JP 2014527650 A 20120830; KR 20147007911 A 20120830; MX 2014002011 A 20120830; RU 2014111849 A 20120830; SG 2014014492 A 20120830; ZA 201402272 A 20140327