

Title (en)
PROCESS OF FREE-RADICAL POLYMERIZATION IN AQUEOUS DISPERSION FOR THE PREPARATION OF POLYMERS

Title (de)
VERFAHREN ZUR RADIKALISCHEN POLYMERISATION IN WÄSSRIGER DISPERSION ZUR HERSTELLUNG VON POLYMEREN

Title (fr)
PROCEDE DE POLYMERISATION RADICALAIRE EN DISPERSION AQUEUSE POUR LA PREPARATION DE POLYMERES

Publication
EP 2049573 A2 20090422 (FR)

Application
EP 07787075 A 20070704

Priority
• EP 2007056779 W 20070704
• FR 0606079 A 20060704
• US 81827606 P 20060705

Abstract (en)
[origin: FR2903409A1] Dispersion polymerization of an ethylenically unsaturated monomer (I) in the presence of a radical generator (II), iodine (III) and a water-soluble oxidizing agent (IV) comprises introducing at least a fraction of each of (I)-(IV) into a reactor and reacting the contents of the reactor while adding any balance of (I)-(IV). Dispersion polymerization of an ethylenically unsaturated monomer (I) in the presence of a radical generator (II), iodine (III) and a water-soluble oxidizing agent (IV) comprises introducing at least a fraction of each of (I)-(IV) into a reactor and reacting the contents of the reactor while adding any balance of (I)-(IV). (I) is styrene (Ia), (meth)acrylic acid (Ib), a diene, a vinyl ester, a vinylpyridine derivative, vinylsulfonic acid (Ic), vinylphosphonic acid (Id), an N-vinyl monomer, a chlorinated vinyl monomer or a derivative of (Ia)-(Id); (II) is a diazo compound, a peroxide or a dialkyldiphenylalkane; (IV) has a water-solubility of at least 10 g/l and may be the same as (II). An independent claim is also included for producing block copolymers by dispersion polymerization of (I) in the presence of a polymer (V) produced as above or produce by reacting (I) with a polymer produced as above, where at least aa fraction of (I) and at least a fraction of (V) is introduced into a reactor and the contents of the reactor are reacted while adding any balance of (I) and/or (V).

IPC 8 full level
C08F 2/16 (2006.01); **C08F 2/18** (2006.01); **C08F 2/22** (2006.01); **C08F 2/38** (2006.01); **C08F 4/04** (2006.01); **C08F 4/40** (2006.01); **C08F 214/06** (2006.01); **C08F 293/00** (2006.01)

CPC (source: EP US)
C08F 2/18 (2013.01 - EP US); **C08F 2/22** (2013.01 - EP US); **C08F 2/38** (2013.01 - EP US); **C08F 4/04** (2013.01 - EP US); **C08F 4/40** (2013.01 - EP US); **C08F 214/06** (2013.01 - EP US); **C08F 293/00** (2013.01 - EP US); **C08F 293/005** (2013.01 - EP US); **C08F 220/14** (2013.01 - EP US); **C08F 220/1804** (2020.02 - EP US)

Citation (search report)
See references of WO 2008003729A2

Citation (examination)
• WO 03097704 A1 20031127 - SOLVAY [BE], et al
• J. TONNAR, P. LACROIX-DESMAZES, B. BOUTEVIN: "Controlled radical polymerization of styrene by reverse iodine transfer polymerization (RITP) in miniemulsion: Use of hydrogen peroxide as oxidant", MACROMOLECULES, vol. 40, 22 December 2006 (2006-12-22), pages 186 - 190

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC MT NL PL PT RO SE SI SK TR

Designated extension state (EPC)
AL BA HR MK RS

DOCDB simple family (publication)
FR 2903409 A1 20080111; EP 2041185 A1 20090401; EP 2041185 B1 20190109; EP 2049573 A2 20090422; JP 2009541567 A 20091126; JP 5201419 B2 20130605; MX 2008016485 A 20090225; US 2009292071 A1 20091126; US 2009306302 A1 20091210; US 8541524 B2 20130924; WO 2008003728 A1 20080110; WO 2008003729 A2 20080110; WO 2008003729 A3 20080508

DOCDB simple family (application)
FR 0606079 A 20060704; EP 07787074 A 20070704; EP 07787075 A 20070704; EP 2007056778 W 20070704; EP 2007056779 W 20070704; JP 2009517266 A 20070704; MX 2008016485 A 20070704; US 30525507 A 20070704; US 30897707 A 20070704