

Title (en)
INORGANIC PARTICLES COMPRISING AN ORGANIC COATING THAT CAN BE HYDROPHILICALLY/HYDROPHOBICALLY TEMPERATURE CONTROLLED

Title (de)
ANORGANISCHE PARTIKEL MIT EINER DURCH TEMPERATUR HYDROPHIL/HYDROPHOB SCHALTBAREN ORGANISCHEN BESCHICHTUNG

Title (fr)
PARTICULES INORGANIQUES COMPORTANT UN REVÊTEMENT ORGANIQUE POUVANT ÊTRE COMMUTÉ HYDROPHILE/HYDROPHOBE SOUS L'EFFET DE LA TEMPÉRATURE

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EP 2313200 A1 20110427 (DE)

Application
EP 09780763 A 20090717

Priority

- EP 2009059215 W 20090717
- EP 08160685 A 20080718
- EP 09780763 A 20090717

Abstract (en)
[origin: WO2010007157A1] The invention relates to a method for separating at least one first substance from a mixture containing said at least one first substance and at least one second substance. Said method consists of the following steps: (A) the mixture containing the at least one first substance and at least one second substance is brought into contact with at least one selective hydrophobing agent in the presence of a suspension agent such that an adduct is formed from at least one hydrophobing agent and the at least one first substance, and not from the at least one second substance; (B) the adduct from step (A) is brought into contact with at least one magnetic particle which is functionalised on the surface with at least one polymer compound having a transition temperature LCST (Lower Critical Solution Temperature), at a temperature at which the polymer compound has a hydrophobic character, such that the adduct from step (A) and the at least one functionalised magnetic particle agglomerates; (C) another suspending agent is optionally added to the mixture obtained in step (B); (D) the agglomerate present in the suspension in steps (B) or (C) is separated by applying a magnetic field; (E) the agglomerate separated in step (D) is divided by controlling a temperature at which the polymer compound has a hydrophilic character, in order to obtain at least one first substance.

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B03C 1/01 (2006.01); **H01F 1/44** (2006.01)

CPC (source: EP US)
B03C 1/015 (2013.01 - EP US); **H01F 1/0054** (2013.01 - EP US); **H01F 1/44** (2013.01 - EP US)

Citation (search report)
See references of WO 2010007157A1

Cited by
EP2714248A4; US8507283B2; US9731221B2; US8426214B2; US9080933B2; US9302270B2; US9943860B2; US9981272B2; US9981271B2; US10357782B2; US11135597B2; US11731143B2

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