

Title (en)

PROCESS FOR PREPARING AN ADSORBENT MATERIAL IN THE ABSENCE OF BINDER COMPRISING A HYDROTHERMAL TREATMENT STEP AND PROCESS FOR EXTRACTING LITHIUM FROM SALINE SOLUTIONS USING SAID MATERIAL

Title (de)

VERFAHREN ZUR HERSTELLUNG EINES ADSORPTIONSMATERIALS IN ABWESENHEIT EINES BINDEMIMITTELS MIT EINEM HYDROTHERMALEN BEHANDLUNGSSCHRITT UND VERFAHREN ZUM EXTRAHIEREN VON LITHIUM AUS SALZLÖSUNGEN UNTER VERWENDUNG DES BESAGTEN MATERIALS

Title (fr)

PROCEDE DE PREPARATION D'UN MATERIAU ADSORBANT EN L'ABSENCE DE LIANT COMPRENANT UNE ETAPE DE TRAITEMENT HYDROTHERMAL ET PROCEDE D'EXTRACTION DE LITHIUM A PARTIR DE SOLUTIONS SALINES UTILISANT LEDIT MATERIAU

Publication

EP 3134202 A1 20170301 (FR)

Application

EP 15720043 A 20150424

Priority

- FR 1453779 A 20140425
- EP 2015058973 W 20150424

Abstract (en)

[origin: WO2015162272A1] The invention relates to a process for preparing a crystalline solid material of formula $\text{LiCl} \cdot 2\text{Al}(\text{OH})_3 \cdot n\text{H}_2\text{O}$ with n being between 0.01 and 10, said process comprising at least the following steps: a) a step of mixing, in an aqueous medium, at least one source of alumina and at least one source of lithium in order to obtain a suspension, b) a step of filtering the suspension obtained in step a) in order to obtain a paste, c) a step of drying the paste obtained at the end of step b), d) a step of shaping said dried paste, directly after the drying step c) in order to obtain a shaped solid material, said shaping step d) being carried out in the absence of binder, and e) the drying of the shaped solid material obtained, f) a step of hydrothermal treatment in order to obtain the shaped crystalline solid material of formula $\text{LiCl} \cdot 2\text{Al}(\text{OH})_3 \cdot n\text{H}_2\text{O}$. The invention also relates to a solid material obtained according to this process and to a process for extracting lithium from saline solutions using the material thus prepared.

IPC 8 full level

B01J 20/04 (2006.01); **B01J 20/08** (2006.01); **B01J 20/30** (2006.01); **B01J 39/10** (2006.01); **B01J 41/10** (2006.01); **C01D 15/04** (2006.01); **C01F 7/021** (2022.01); **C01F 7/78** (2022.01)

CPC (source: CN EP US)

B01J 20/041 (2013.01 - CN EP US); **B01J 20/046** (2013.01 - CN EP US); **B01J 20/08** (2013.01 - CN EP US); **B01J 20/3007** (2013.01 - CN EP US); **B01J 20/3078** (2013.01 - CN EP US); **B01J 20/3085** (2013.01 - CN EP US); **B01J 39/10** (2013.01 - EP US); **B01J 41/10** (2013.01 - EP US); **C01D 15/04** (2013.01 - CN EP US); **C01F 7/021** (2013.01 - EP US); **C01F 7/78** (2022.01 - EP US); **C01P 2002/72** (2013.01 - EP US); **C01P 2006/12** (2013.01 - CN EP US)

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

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

WO 2015162272 A1 20151029; AR 100178 A1 20160914; CL 2016002663 A1 20170106; CN 106457203 A 20170222; EP 3134202 A1 20170301; FR 3020284 A1 20151030; US 2017043317 A1 20170216

DOCDB simple family (application)

EP 2015058973 W 20150424; AR P150101237 A 20150424; CL 2016002663 A 20161020; CN 201580021946 A 20150424; EP 15720043 A 20150424; FR 1453779 A 20140425; US 201515306026 A 20150424