

Title (en)

METHOD FOR FAST SYNTHESIS OF AN AFX-STRUCTURE ZEOLITE WITH A FAUJASITE SOURCE

Title (de)

VERFAHREN ZUR SCHNELLEN SYNTHESE EINES AFX-STRUKTUR-ZEOLITHS MIT FAUJASIT-QUELLE

Title (fr)

PROCEDE DE SYNTHESE RAPIDE D'UNE ZEOLITHE DE TYPE STRUCTURAL AFX AVEC UNE SOURCE DE FAUJASITE

Publication

EP 3956264 A1 20220223 (FR)

Application

EP 20717887 A 20200414

Priority

- FR 1904196 A 20190419
- EP 2020060476 W 20200414

Abstract (en)

[origin: WO2020212356A1] The present invention relates to a method for fast synthesis of an AFX-structure zeolite, which comprises at least:
i) mixing, in an aqueous medium, an FAU-structure zeolite having a molar ratio $\text{SiO}_2(\text{FAU})/\text{Al}_2\text{O}_3(\text{FAU})$ of between 2.00 and 100, an organic nitrogen compound R, at least one source of at least one alkali and/or alkaline-earth metal M of valency n, with the following molar composition: $(\text{SiO}_2(\text{FAU})) / (\text{Al}_2\text{O}_3(\text{FAU}))$ between 2.00 and 100, $\text{H}_2\text{O} / (\text{SiO}_2(\text{FAU}))$ between 1 and 100, $\text{R} / (\text{SiO}_2(\text{FAU}))$ between 0.01 and 0.6, $\text{M}_2/\text{nO} / (\text{SiO}_2(\text{FAU}))$ between 0.005 and 0.45, in which $\text{SiO}_2(\text{FAU})$ designates the amount of SiO_2 supplied by the FAU zeolite, and $\text{Al}_2\text{O}_3(\text{FAU})$ designates the amount of Al_2O_3 supplied by the FAU zeolite, until obtaining a homogeneous precursor gel; ii) hydrothermally treating said precursor gel obtained at the end of step i) under autogenous pressure at a temperature of between 120°C and 250°C, for 4 to 12 hours.

IPC 8 full level

C01B 39/06 (2006.01); **C01B 39/48** (2006.01)

CPC (source: EP KR US)

C01B 39/06 (2013.01 - EP KR); **C01B 39/065** (2013.01 - EP KR); **C01B 39/48** (2013.01 - EP KR US); **C01P 2002/72** (2013.01 - US); **C01P 2004/03** (2013.01 - 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 2020212356 A1 20201022; CN 113748087 A 20211203; EP 3956264 A1 20220223; FR 3095199 A1 20201023; FR 3095199 B1 20211029; JP 2022529174 A 20220617; KR 20210153626 A 20211217; US 11851338 B2 20231226; US 2022194805 A1 20220623

DOCDB simple family (application)

EP 2020060476 W 20200414; CN 202080029881 A 20200414; EP 20717887 A 20200414; FR 1904196 A 20190419; JP 2021561937 A 20200414; KR 20217033843 A 20200414; US 202017604238 A 20200414