

Title (en)
PVDF MEMBRANES HAVING A SUPERHYDROPHOBIC SURFACE

Title (de)
PVDF-MEMBRANEN MIT SUPERHYDROPHOBER OBERFLÄCHE

Title (fr)
MEMBRANES DE PVDF A SURFACE SUPERHYDROPHOBE

Publication
EP 2643079 A1 20131002 (FR)

Application
EP 11802497 A 20111122

Priority
• FR 1059604 A 20101122
• FR 2011052730 W 20111122

Abstract (en)
[origin: WO2012069760A1] The present invention relates to the field of hydrophobic solid surfaces, and more particularly to polyvinylidene fluoride (PVDF) membranes having a superhydrophobic surface. The invention also relates to the process for preparing these membranes and also to the industrial applications thereof. The PVDF membranes according to the invention comprise a superhydrophobic surface comprising a structure that is porous on the nanometre scale and interconnected crystalline nodules of micrometre size.

IPC 8 full level
B01D 69/02 (2006.01); **B01D 67/00** (2006.01); **B01D 71/34** (2006.01); **H01M 50/426** (2021.01); **H01M 50/491** (2021.01)

CPC (source: EP KR US)
B01D 61/00 (2013.01 - US); **B01D 61/36** (2013.01 - KR); **B01D 67/0002** (2013.01 - US); **B01D 67/0009** (2013.01 - EP KR US); **B01D 67/00165** (2022.08 - EP KR US); **B01D 69/02** (2013.01 - EP KR US); **B01D 69/10** (2013.01 - EP KR US); **B01D 71/34** (2013.01 - EP KR US); **H01M 12/02** (2013.01 - KR); **H01M 50/426** (2021.01 - EP KR US); **H01M 50/491** (2021.01 - EP KR US); **B01D 2323/04** (2013.01 - EP KR US); **B01D 2323/22** (2013.01 - EP KR US); **B01D 2325/38** (2013.01 - EP KR US); **Y02E 60/10** (2013.01 - EP KR)

C-Set (source: US)
1. **B01D 71/34 + B01D 2323/04**
2. **B01D 71/34 + B01D 2325/38**

Citation (examination)
• ZHENG Z ET AL: "Superhydrophobicity of polyvinylidene fluoride membrane fabricated by chemical vapor deposition from solution", APPLIED SURFACE SCIENCE, ELSEVIER, AMSTERDAM, NL, vol. 255, no. 16, 30 May 2009 (2009-05-30), pages 7263 - 7267, XP026117588, ISSN: 0169-4332, [retrieved on 20090401], DOI: 10.1016/J.APSUSC.2009.03.084
• CHEN Y ET AL: "Preparation of superhydrophobic membranes by electrospinning of fluorinated silane functionalized poly(vinylidene fluoride)", APPLIED SURFACE SCIENCE, ELSEVIER, AMSTERDAM, NL, vol. 255, no. 15, 15 May 2009 (2009-05-15), pages 7073 - 7077, XP026093138, ISSN: 0169-4332, [retrieved on 20090324], DOI: 10.1016/J.APSUSC.2009.03.043
• LI C L ET AL: "Insight into the preparation of poly(vinylidene fluoride) membranes by vapor-induced phase separation", JOURNAL OF MEMBRANE SCIENCE, ELSEVIER BV, NL, vol. 361, no. 1-2, 30 September 2010 (2010-09-30), pages 154 - 166, XP027152029, ISSN: 0376-7388, [retrieved on 20100604]
• See also references of WO 2012069760A1

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)
FR 2967591 A1 20120525; FR 2967591 B1 20150424; CN 103347597 A 20131009; CN 103347597 B 20160720; EP 2643079 A1 20131002; JP 2014504946 A 20140227; JP 5792823 B2 20151014; KR 101796637 B1 20171110; KR 20140037018 A 20140326; SG 191730 A1 20130830; US 2013306560 A1 20131121; WO 2012069760 A1 20120531

DOCDB simple family (application)
FR 1059604 A 20101122; CN 201180065656 A 20111122; EP 11802497 A 20111122; FR 2011052730 W 20111122; JP 2013539326 A 20111122; KR 20137016007 A 20111122; SG 2013045836 A 20111122; US 201113988517 A 20111122