

Title (en)  
COMBINATORIAL MATERIAL SYSTEM FOR ION EXCHANGE MEMBRANES, AND USE OF SAID MATERIAL SYSTEM IN ELECTROCHEMICAL PROCESSES

Title (de)  
KOMBINATORISCHES MATERIALSYSTEM FÜR IONENAUSTAUSCHERMEMBRANEN UND DESSEN VERWENDUNG IN ELEKTROCHEMISCHEN PROZESSEN

Title (fr)  
SYSTÈME DE MATIÈRES COMBINATOIRE POUR DES MEMBRANES ÉCHANGEUSES D'IONS ET SON UTILISATION DANS DES PROCESSUS ÉLECTROCHIMIQUES

Publication  
**EP 3155674 A2 20170419 (DE)**

Application  
**EP 15763190 A 20150612**

Priority  
• DE 102014009170 A 20140612  
• DE 2015000294 W 20150612

Abstract (en)  
[origin: WO2015188806A2] Described is a method for producing covalently and/or ionically cross-linked blend membranes from a halomethylated polymer, a polymer comprising tertiary N-basic groups, preferably polybenzimidazole, and, optionally, a polymer comprising cation exchanger groups such as sulfonic acid groups or phosphonic acid groups. The membranes can be tailor-made in respect of the properties thereof and are suitable, for example, for use as cation exchanger membranes or anion exchanger membranes in low-temperature fuel cells or low-temperature electrolysis or in redox flow batteries, or - when doped with proton conductors such as phosphoric acid or phosphonic acid - for use in medium-temperature fuel cells or medium-temperature electrolysis.

IPC 8 full level  
**B01D 71/00** (2006.01); **C08J 5/22** (2006.01); **H01M 8/10** (2016.01); **H01M 50/403** (2021.01); **H01M 50/414** (2021.01); **H01M 50/426** (2021.01); **H01M 50/489** (2021.01)

CPC (source: EP US)  
**B01D 71/62** (2013.01 - US); **B01D 71/76** (2013.01 - EP US); **C08J 3/246** (2013.01 - EP US); **C08J 5/2256** (2013.01 - EP US); **C08J 5/2262** (2013.01 - US); **C25B 13/08** (2013.01 - EP US); **H01M 8/1018** (2013.01 - EP US); **H01M 8/1027** (2013.01 - EP US); **H01M 8/103** (2013.01 - EP US); **H01M 8/1032** (2013.01 - EP US); **H01M 8/1034** (2013.01 - EP US); **H01M 8/1039** (2013.01 - EP US); **H01M 8/1081** (2013.01 - EP US); **H01M 8/1088** (2013.01 - EP US); **H01M 50/403** (2021.01 - EP US); **H01M 50/414** (2021.01 - EP US); **H01M 50/426** (2021.01 - EP US); **H01M 50/489** (2021.01 - EP US); **B01D 2325/40** (2013.01 - US); **B01D 2325/42** (2013.01 - EP US); **C08J 2371/10** (2013.01 - US); **C08J 2371/12** (2013.01 - US); **C08J 2379/04** (2013.01 - US); **C08J 2379/08** (2013.01 - EP US); **C08J 2381/06** (2013.01 - US); **C08J 2425/04** (2013.01 - EP US); **C08J 2471/10** (2013.01 - EP US); **C08J 2471/12** (2013.01 - US); **C08J 2479/04** (2013.01 - US); **C08J 2481/06** (2013.01 - US); **Y02E 60/10** (2013.01 - EP); **Y02E 60/50** (2013.01 - EP); **Y02P 70/50** (2015.11 - EP US)

Citation (search report)  
See references of WO 2015188806A2

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 2015188806 A2 20151217**; **WO 2015188806 A3 20160204**; DE 102014009170 A1 20151217; EP 3155674 A2 20170419; JP 2017528579 A 20170928; US 2017114196 A1 20170427

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**DE 2015000294 W 20150612**; DE 102014009170 A 20140612; EP 15763190 A 20150612; JP 2017517177 A 20150612; US 201515318225 A 20150612