

Title (en)  
PROTON CONDUCTING ELECTROLYTE MEMBRANE FOR USE IN HIGH TEMPERATURES AND THE USE THEREOF IN FUEL CELLS

Title (de)  
PROTONENLEITENDE ELEKTROLYTMEMBRAN FÜR HOCHTEMPERATURANWENDUNGEN UND DEREN ANWENDUNG IN BRENNSTOFFZELLEN

Title (fr)  
MEMBRANE ELECTROLYTIQUE CONDUCTRICE DE PROTONS POUR DES APPLICATIONS A HAUTES TEMPERATURES ET UTILISATION DESDITES MEMBRANES DANS DES PILES A COMBUSTIBLE

Publication  
**EP 1483314 A1 20041208 (DE)**

Application  
**EP 03711950 A 20030304**

Priority  
• DE 10209419 A 20020305  
• EP 0302399 W 20030304

Abstract (en)  
[origin: WO03074596A1] The invention relates to a proton-conducting electrolyte membrane obtained by means of a method comprising the following steps A) swelling a polymer film with a liquid containing a phosphonic acid containing vinyl and B) polymerisation of the phosphonic acid containing vinyl present in the liquid introduced in step A). The inventive membrane can be applied in a varied manner on account of the excellent chemical and thermal properties thereof and is particularly suitable for use as a polymer-electrolyte-membrane (PEM) in the PEM-fuel cells.

IPC 1-7  
**C08J 5/22**; **C08K 5/5317**

IPC 8 full level  
**C08J 5/22** (2006.01); **H01B 1/06** (2006.01); **H01M 4/88** (2006.01); **H01M 8/02** (2006.01); **H01M 8/10** (2006.01); **H01M 4/86** (2006.01); **H01M 4/92** (2006.01)

CPC (source: EP KR US)  
**B01D 71/82** (2013.01 - KR); **C08J 5/22** (2013.01 - KR); **C08J 5/2218** (2013.01 - EP US); **C08K 5/5317** (2013.01 - KR); **H01M 8/1023** (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 8/1044** (2013.01 - EP US); **H01M 8/1048** (2013.01 - EP US); **H01M 8/1067** (2013.01 - EP US); **H01M 8/1086** (2013.01 - EP US); **H01M 4/8605** (2013.01 - EP US); **H01M 4/92** (2013.01 - EP US); **H01M 8/1004** (2013.01 - EP US); **Y02E 60/50** (2013.01 - EP); **Y02P 70/50** (2015.11 - EP US)

Citation (search report)  
See references of WO 03074596A1

Designated contracting state (EPC)  
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PT RO SE SI SK TR

DOCDB simple family (publication)  
**WO 03074596 A1 20030912**; CA 2477864 A1 20030912; CN 100408616 C 20080806; CN 1649944 A 20050803; DE 10209419 A1 20030925; EP 1483314 A1 20041208; JP 2005527073 A 20050908; KR 101016931 B1 20110225; KR 20050002840 A 20050110; KR 20100065402 A 20100616; US 2005084727 A1 20050421; US 7846983 B2 20101207

DOCDB simple family (application)  
**EP 0302399 W 20030304**; CA 2477864 A 20030304; CN 03810121 A 20030304; DE 10209419 A 20020305; EP 03711950 A 20030304; JP 2003573058 A 20030304; KR 20047013866 A 20030304; KR 20107011047 A 20030304; US 50688004 A 20041208