

Title (en)
PROTON CONDUCTING POLYMER MEMBRANE COMPRISING PHOSPHONIC ACID GROUPS CONTAINING POLYAZOLES AND THE USE THEREOF IN FUEL CELLS

Title (de)
PROTONENLEITENDE POLYMERMEMBRAN UMFASSEND PHOSPHONSÄUREGRUPPEN ENTHALTENDE POLYAZOLE UND DEREN ANWENDUNG IN BRENNSTOFFZELLEN

Title (fr)
MEMBRANE POLYMERES CONDUCTRICE DE PROTONS COMPRENANT DES POLYAZOLES CONTENANT DES GROUPES ACIDE PHOSPHONIQUE ET UTILISATION DE CETTE MEMBRANE DANS DES PILES A COMBUSTIBLE

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Abstract (en)
[origin: WO2004033079A2] The invention relates to proton-conducting polymer membranes comprising phosphonic acid groups containing polyazoles, which can be obtained according to a method comprising the following steps: A) one or several aromatic and/or heteroaromatic tetra amino compounds are mixed with one or several aromatic and/or heteroaromatic carboxylic acids or the derivatives thereof containing at least two acidic groups per carboxylic monomer, wherein at least one part of the tetra amino compounds and/or carboxylic acids comprises at least one phosphonic acid group, or one or several aromatic and/or heteroaromatic diaminocarboxylic acids, of which at least one part comprises phosphonic acid groups, are mixed in polyphosphonic acid to form a solution and/or dispersion, B) the solution and/or dispersion obtained according to step A is heated in an inert gas to temperatures of up to 350 DEG C to form polyazole polymers, C) a layer is applied to a carrier, using the mixture according to step A and/or B, the membrane formed in step C is treated until it becomes self-supporting.

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