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(54) Title: IMPROVED MEMBRANE ELECTRODE ASSEMBLIES USING IONIC COMPOSITE MEMBRANES

(57) Abstract: A membrane electrode assembly comprising a composite membrane having a first major surface area and a second major surface area comprising a porous polymeric matrix containing ionically conductive solid and ionomeric binder, at least one protective layer disposed adjacent to the porous polymeric matrix membrane comprising an ionomeric binder and an ionically conductive solid, an anode comprising an oxidizing catalyst adjacent said first major surface area of said composite membrane and a cathode comprising a reducing catalyst adjacent said second major surface area of said composite membrane, and a method for manufacturing the same.

INTERNATIONAL SEARCH REPORT

International Application No

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A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 H01M8/10

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 H01M

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,A	US 6 117 581 A (SHELEF MORDECAI) 12 September 2000 (2000-09-12) claims 1-15 ---	1-50
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A	US 5 707 755 A (GROT STEPHEN ANDREAS) 13 January 1998 (1998-01-13) claims 1-9 -----	1-50

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

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- *&* document member of the same patent family

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INTERNATIONAL SEARCH REPORT

Information on patent family members

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