

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
23 April 2009 (23.04.2009)

PCT

(10) International Publication Number
WO 2009/051368 A3

(51) International Patent Classification:
H01M 4/86 (2006.01)

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(21) International Application Number:
PCT/KR2008/005899

(22) International Filing Date: 8 October 2008 (08.10.2008)

(25) Filing Language: Korean

(26) Publication Language: English

(30) Priority Data:
10-2007-0104206 16 October 2007 (16.10.2007) KR

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(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

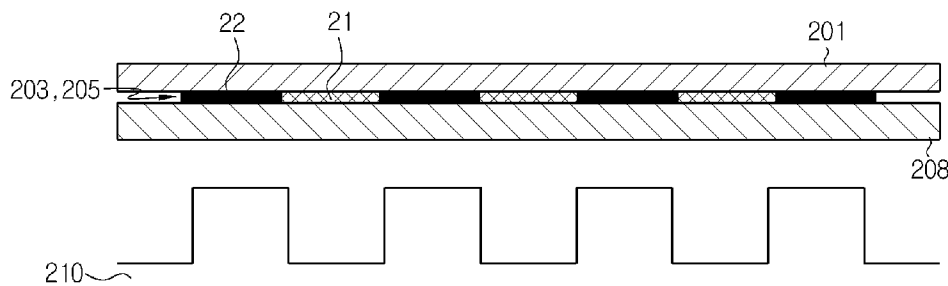
Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(88) Date of publication of the international search report:
16 July 2009

(54) Title: CATHODE FOR FUEL CELL HAVING TWO KINDS OF WATER-REPELLENCY AND METHOD OF PREPARING THE SAME AND MEMBRANE ELECTRODE ASSEMBLY AND FUEL CELL COMPRISING THE SAME

[Fig. 5]



(57) Abstract: A cathode for a fuel cell includes a gas diffusion layer contacting with a separator having a channel and a catalyst layer interposed between the gas diffusion layer and an electrolyte membrane. The catalyst layer of the cathode has two portions with different water-repelling properties, and a portion of the catalyst layer that does not face a channel has a higher water-repelling property than a portion that faces a channel. This cathode controls water-repelling property of the catalyst layer differently according to locations, so it is possible to keep an amount of moisture in an electrode in a suitable way and to restrain generation of flooding, thereby improving the performance of the cell.

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/KR2008/005899**A. CLASSIFICATION OF SUBJECT MATTER****H01M 4/86(2006.01)i**

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 H01M 4/86

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 practicable, search terms used)
eKIPASS (KIPO internal) "fuel cell & catalyst & water repelling & ionomer and similar terms"**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2002-0192530 A1(KABUMOTO et al.)19.DEC.2002 See the abstract, paragraph <11>~<27>, <46>~<64>, <80>~<96>, <118>~<235>, whole claims	1-8,21,22
A	See the whole document	9-20
A	JP 15-197203 A(NISSAN MOTOR CO.)11.JUL.2003 See the whole document	1-22
A	JP 17-293867 A(DAINIPPON PRINTING CO., LTD.)20.DEC.2005 See the whole document	1-22

☐ Further documents are listed in the continuation of Box C.☒ See patent family annex.

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Date of the actual completion of the international search

27 MAY 2009 (27.05.2009)

Date of mailing of the international search report

28 MAY 2009 (28.05.2009)

Name and mailing address of the ISA/KR

Korean Intellectual Property Office
Government Complex-Daejeon, 139 Seonsa-ro, Seo-
gu, Daejeon 302-701, Republic of Korea

Facsimile No. 82-42-472-7140

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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/KR2008/005899

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2002-0192530 A1	19.12.2002	JP 2002-124270 A	26.04.2002
JP 15-197203 A	11.07.2003	None	None
JP 17-293867 A	20.10.2005	None	None