

(43) International Publication Date
18 September 2014 (18.09.2014)

(51) International Patent Classification:

H01M 8/12 (2006.01) *H01M 8/02* (2006.01)
H01M 8/00 (2006.01)

(21) International Application Number:

PCT/US2014/028159

(22) International Filing Date:

14 March 2014 (14.03.2014)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

61/799,914 15 March 2013 (15.03.2013) US

(71) Applicant: **LG FUEL CELL SYSTEMS, INC.** [US/US];
6065 Strip Ave. NW, North Canton, Ohio 44720 (US).(72) Inventors: **XING, Zhengliang**; 7263 Bentham Circle NW,
North Canton, Ohio 44720 (US). **LIU, Zhien**; 6763 Canter
Hill Circle NE, Canton, Ohio 44721 (US). **GOETTLER,**
Richard W.; 4030 Dan Rd, Medina, Ohio 44256 (US).(74) Agents: **WILFORD, Jeffrey D.** et al.; Shumaker & Sief-
fert, P.A., 1625 Radio Drive, Suite 300, Woodbury, Min-
nesota 55125 (US).(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, BN, BR, BW, BY,
BZ, CA, CH, CL, 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, IR, IS, JP, KE, KG, KN, KP, KR,
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, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA,
SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, 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, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ,
UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ,
TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK,
EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV,
MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM,
TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW,
KM, ML, MR, NE, SN, TD, TG).

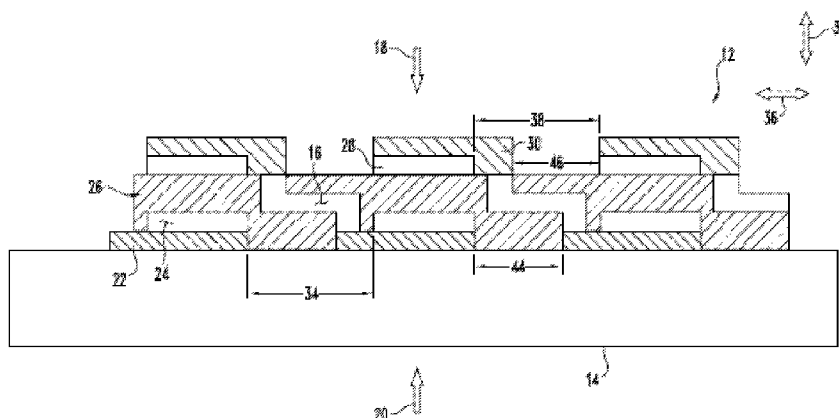
Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))

Published:

- with international search report (Art. 21(3))
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))

(54) Title: FUEL CELL SYSTEM CONFIGURED TO CAPTURE CHROMIUM

**FIG. 2**

(57) Abstract: In some examples, a fuel cell comprising a cathode, a cathode conductor layer adjacent the cathode, an electrolyte separated from the cathode conductor layer by the cathode, and an anode separated from the cathode by the electrolyte, wherein the anode, cathode conductor layer, cathode, and electrolyte are configured to form an electrochemical cell, and wherein at least one of cathode or the cathode conductor layer includes an exsolute oxide configured to capture Cr vapor species present in the fuel cell system.