(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
31 December 2014 (31.12.2014)

WIPO | PCT

(10) International Publication Number
WO 2014/209797 A3

(51) International Patent Classification:
C25B 1/14 (2006.01) *C25B 9/18* (2006.01)
C25B 1/22 (2006.01) *C25B 15/08* (2006.01)
C25B 1/26 (2006.01)

(21) International Application Number:
PCT/US2014/043433

(22) International Filing Date:
20 June 2014 (20.06.2014)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
61/839,324 25 June 2013 (25.06.2013) US
13/950,147 24 July 2013 (24.07.2013) US
14/143,327 30 December 2013 (30.12.2013) US

(71) Applicant: **BLUE EARTH LABS LLC** [US/US]; 5055 West Patrick Lane, Suite 101, Las Vegas, NV 89118 (US).

(72) Inventors: **PETERS, Jason**; 21303 W 54th Terrace, Shawnee, KS 66218 (US). **O'CONNOR, Stephen**; 2906 West 92nd Terrace, Leawood, KS 66206 (US). **YU, Chang-jun**; 118 S. Berkeley Ave, Pasadena, CA 91107 (US).

(74) Agent: **GUSTAFSON, Vincent, K.**; 100 Regency Forest Drive, Suite 160, Cary, NC 27518 (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).

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))*

(88) Date of publication of the international search report:
26 February 2015

(54) Title: METHODS AND STABILIZED COMPOSITIONS FOR REDUCING DEPOSITS IN WATER SYSTEMS

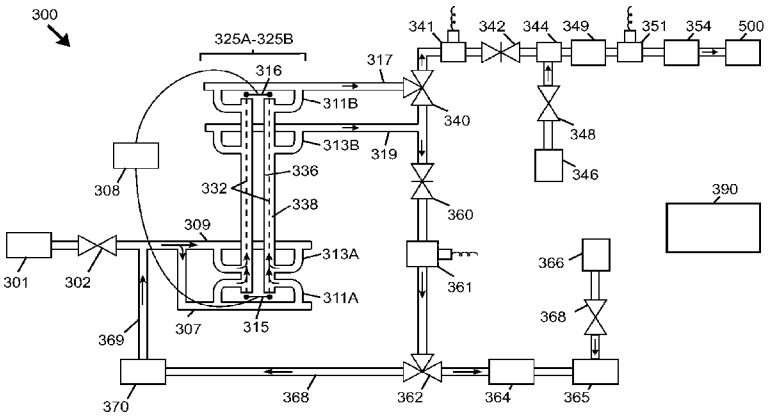


FIG._3

(57) Abstract: A stabilized mixed oxidant solution may be produced by flowing a starting solution (e.g., salt brine, hypochlorous acid, and/or sodium hypochlorite) through a flow-through electrochemical module including first and second passages separated by an ion permeable membrane while electric power is applied between an anode and cathode in electrical communication with the first and second passages, respectively. An initially acidic anolyte solution received from the first (anode) passage is stabilized by elevating pH to yield a stabilized mixed oxidant solution. Methods of using the mixed oxidant solution are further provided.

WO 2014/209797 A3