

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
3 January 2008 (03.01.2008)

PCT

(10) International Publication Number
WO 2008/002364 A3

(51) International Patent Classification:
C01B 15/029 (2006.01) **C07D 301/12** (2006.01)
B01J 37/02 (2006.01)

(21) International Application Number:
PCT/US2007/011890

(22) International Filing Date: 18 May 2007 (18.05.2007)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
11/476,343 28 June 2006 (28.06.2006) US

(71) Applicant (for all designated States except US): **LYON-DELL CHEMICAL TECHNOLOGY, L.P.** [US/US];
Two Greenville Crossing, 4001 Kennett Pike, Suite238,
Greenville, Delaware 19807 (US).

(72) Inventor: **LE-KHAC, Bi**; 1210 Birmingham Road, West
Chester, Pennsylvania 19382 (US).

(74) Agents: **HAN, Yuanzhang** et al.; Lyondell Chemical
Company, 3801 West Chester Pike, Newtown Square,
Pennsylvania 19073 (US).

(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH,
CN, CO, CR, CU, CZ, DE, DK, DM, 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, 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, PG, PH, PL, PT, RO,
RS, RU, SC, SD, SE, SG, SK, SL, SM, 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, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, 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:
7 February 2008

(54) Title: PROCESS FOR PRODUCING HYDROGEN PEROXIDE

(57) Abstract: A process for producing hydrogen peroxide from hydrogen and oxygen in the presence of a noble metal and a cationic polymer comprising a halogen-containing anion is disclosed. The cationic polymer improves hydrogen peroxide yield, and it can be easily recycled.



WO 2008/002364 A3