

CORRECTED VERSION

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
22 August 2013 (22.08.2013)



(10) International Publication Number
WO 2013/122777 A8

(51) International Patent Classification:
A61L 2/00 (2006.01)

(21) International Application Number:
PCT/US2013/024728

(22) International Filing Date:
5 February 2013 (05.02.2013)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
13/396,121 14 February 2012 (14.02.2012) US

(71) Applicant: **CHEVRON U.S.A. INC.** [US/US]; 6001 Bollinger Canyon Road, San Ramon, California 94583 (US).

(72) Inventors: **TIMKEN, Hye-Kyung Cho**; 6001 Bollinger Canyon Road, San Ramon, California 94583 (US). **HEALY, Shawn Stephen**; 6001 Bollinger Canyon Road, San Ramon, California 94583 (US). **WINTER, Shawn Shlomo**; 6001 Bollinger Canyon Road, San Ramon, California 94583 (US).

(74) Agents: **ABERNATHY, Susan M.** et al.; Chevron Corporation, Law Department, Post Office Box 6006, San Ramon, California 94583-0806 (US).

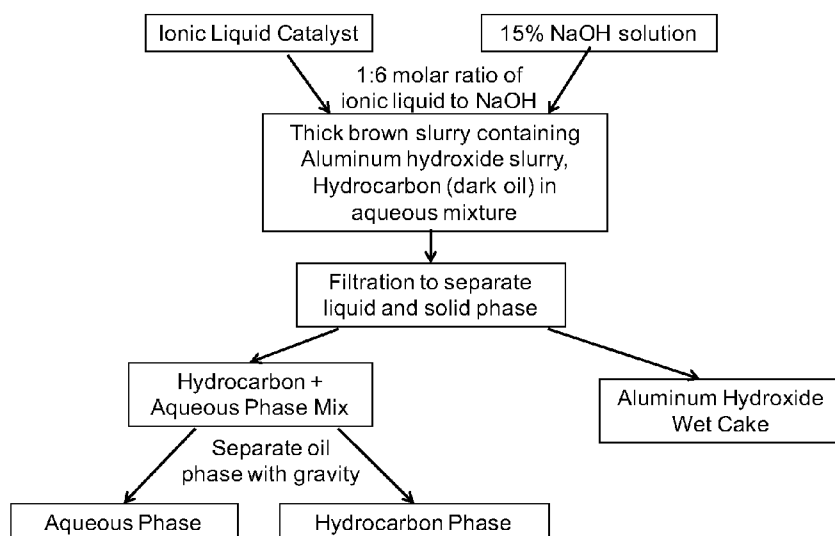
(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, 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, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, 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,

[Continued on next page]

(54) Title: HYDROLYSIS OF USED IONIC LIQUID CATALYST FOR DISPOSAL

Figure 1
Hydrolysis of Ionic Liquid Catalyst



(57) Abstract: We provide a process and apparatus for preparing a used catalyst for disposal, comprising: a. hydrolyzing a used ionic liquid catalyst comprising an anhydrous metal halide to produce a hydrolyzed product; and b. separating the hydrolyzed product into a liquid phase and a solid phase; wherein the liquid phase comprises a non-water-reactive aqueous phase and a hydrocarbon phase; and wherein the solid phase comprises a solid portion of the hydrolyzed product, that is not water reactive. A vessel is used for the hydrolyzing and a separator is used for the separating.



TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report (Art. 21(3))
- with amended claims (Art. 19(1))

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))

(48) Date of publication of this corrected version:

7 November 2013

(15) Information about Correction:

see Notice of 7 November 2013