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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
10 September 2010 (10.09.2010)

PCT

(10) International Publication Number
WO 2010/101736 A3

(51) International Patent Classification:
B01J 31/18 (2006.01) *B01J 31/16* (2006.01)
B01J 31/24 (2006.01) *C10G 45/40* (2006.01)

(21) International Application Number:
PCT/US2010/025038

(22) International Filing Date:
23 February 2010 (23.02.2010)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
61/157,491 4 March 2009 (04.03.2009) US

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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, 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, PE, PG, PH, PL, PT, RO, RS, RU, 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.

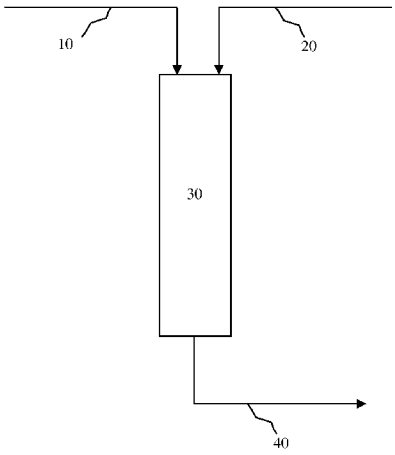
(84) Designated States *(unless otherwise indicated, for every kind of regional protection available)*: ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS,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

Declarations under Rule 4.17:

[Continued on next page]

(54) Title: SELECTIVE HYDROGENATION CATALYST AND METHODS OF MAKING AND USING SAME

FIG. 1



(57) Abstract: A composition comprising a supported hydrogenation catalyst comprising palladium and an organophosphorous compound, the supported hydrogenation catalyst being capable of selectively hydrogenating highly unsaturated hydrocarbons to unsaturated hydrocarbons. A method of making a selective hydrogenation catalyst comprising contacting a support with a palladium-containing compound to form a palladium supported composition, contacting the palladium supported composition with an organophosphorus compound to form a catalyst precursor, and reducing the catalyst precursor to form the catalyst. A method of selectively hydrogenating highly unsaturated hydrocarbons to an unsaturated hydrocarbon enriched composition comprising contacting a supported catalyst comprising palladium and an organophosphorous compound with a feed comprising highly unsaturated hydrocarbon under conditions suitable for hydrogenating at least a portion of the highly unsaturated hydrocarbon feed to form the unsaturated hydrocarbon enriched composition.

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— *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))*

(88) Date of publication of the international search report:
13 January 2011