

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

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
23 June 2011 (23.06.2011)

(10) International Publication Number
WO 2011/075278 A1

PCT

(51) International Patent Classification:

B01J 21/06 (2006.01) **C04B 38/06** (2006.01)
B01J 23/44 (2006.01) **C04B 35/46** (2006.01)
B01J 23/52 (2006.01) **B01J 37/00** (2006.01)
C04B 35/636 (2006.01) **C07C 67/055** (2006.01)

(21) International Application Number:

PCT/US2010/057373

(22) International Filing Date:

19 November 2010 (19.11.2010)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

12/653,592 16 December 2009 (16.12.2009) US
12/653,563 16 December 2009 (16.12.2009) US

(71) Applicant: **LYONDELL CHEMICAL TECHNOLOGY, L.P.** [US/US]; Two Greenville Crossing, 4001 Kennett Pike, Suite 220, Greenville, Delaware 19807 (US).

(72) Inventor: **SHAY, Daniel, Travis**; 38 Wharton Drive, Glen Mills, Pennsylvania 19342 (US).

(74) Agents: **HAN, Yuanzhang** et al.; LyondellBasell Industries, 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, 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, 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, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, 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, 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))

Published:

— with international search report (Art. 21(3))

(54) Title: PREPARATION OF PALLADIUM-GOLD CATALYST

(57) Abstract: A method for preparing a palladium-gold catalyst containing a titania extrudate is disclosed. The titania extrudate is produced by using a carboxyalkyl cellulose and a hydroxyalkyl cellulose as extrusion aids. The titania extrudate has improved processibility and/or mechanical properties. After calcination, the extrudate is used as a carrier for the palladium-gold catalyst. The catalyst is useful in producing vinyl acetate by oxidizing ethylene with oxygen in the presence of acetic acid.



WO 2011/075278 A1