

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

(19) World Intellectual Property
Organization
International Bureau



(10) International Publication Number
WO 2021/252452 A1

(43) International Publication Date
16 December 2021 (16.12.2021)

(51) International Patent Classification:

B01J 21/12 (2006.01) **B01J 37/08** (2006.01)
B01J 23/66 (2006.01) **B01J 37/16** (2006.01)
B01J 35/00 (2006.01) **B01J 37/18** (2006.01)
B01J 37/02 (2006.01)

Published:

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

(21) International Application Number:

PCT/US2021/036344

(22) International Filing Date:

08 June 2021 (08.06.2021)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

63/037,657 11 June 2020 (11.06.2020) US

(71) Applicant: **CELANESE INTERNATIONAL CORPORATION** [US/US]; 222 West Las Colinas Boulevard, Suite 900N, Irving, Texas 75039 (US).

(72) Inventors: **ALEXANDER, Steve R.**; 16010 Mesa Verde Drive, Houston, Texas 77059 (US). **DODSON, Justin**; 4509 Avery Hollow Ct., League City, Texas 77573 (US). **CHEN, Laiyuan**; 4223 Pine Blossom Trail, Houston, Texas 77059 (US).

(74) Agent: **KAISER, Iona N.**; 909 Fannin Street, Suite 2700, Houston, Texas 77010 (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, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, IT, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, 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, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS, 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, ST, 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).

(54) Title: METHODS OF PRODUCING CATALYSTS FOR VINYL ACETATE PRODUCTION

(57) Abstract: Methods of producing gold-palladium catalysts suitable for use in the production of vinyl acetate may include drying the catalyst after the incorporation of a promoter at higher temperatures (e.g., 160°C or greater) to restructure the metals and/or alloys on the catalyst. The restructured catalyst advantageously has increased catalytic activity and improved stability.

WO 2021/252452 A1