



(51) International Patent Classification:

B01J 37/02 (2006.01) *B01J 23/648* (2006.01)
B01J 37/16 (2006.01) *B01J 23/652* (2006.01)
C07C 51/16 (2006.01) *B01J 27/186* (2006.01)
C07C 51/25 (2006.01) *B01J 27/045* (2006.01)
C08F 220/06 (2006.01) *C07C 57/04* (2006.01)
B01J 23/644 (2006.01) *C07C 69/54* (2006.01)

(21) International Application Number:

PCT/US2014/048657

(22) International Filing Date:

29 July 2014 (29.07.2014)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

61/859,526 29 July 2013 (29.07.2013) US

(71) Applicant: **ROHM AND HAAS COMPANY** [US/US];
100 Independence Mall West, Philadelphia, PA 19106
(US).

(72) Inventors: **LIMBACH, Kirk**; 3 Aiman Circle, Dresher,
PA 19025 (US). **KRAPCHETOV, Dmitri A.**; 2034 Ry-
ans Run, Lansdale, PA 19446 (US). **FRICK, Christopher
D.**; 573 Kline Avenue, Pottstown, PA 19465 (US).

(74) Agent: **HAYHURST, Paul**; The Dow Chemical Company,
P.O. Box 1967, Intellectual Property, Midland, Michigan
48641-1967 (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, IR, IS, JP, KE, KG, 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, SA,
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,
TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW,
KM, ML, MR, NE, SN, TD, TG).

Published:

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

(54) Title: OXIDATIVE ESTERIFICATION CATALYST

(57) Abstract: A catalyst comprising palladium, bismuth, and at least one third element X selected from the group consisting of P, S, Sc, V, Ga, Se, Y, Nb, Mo, La, Ce, and Nd, wherein the catalyst further comprises a support.



WO 2015/017430 A1