200005347-0

PCT WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 6 : B01J 23/68, 23/652, C07C 51/25, 51/215 — A1

(11) International Publication Number: WO 99/51339

(43) International Publication Date: 14 October 1999 (14.10.99)

(21) International Application Number: PCT/GB99/00996

(22) International Filing Date: 31 March 1999 (31.03.99)

(30) Priority Data:
9807142.6 2 April 1998 (02.04.98) GB

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(81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published
With international search report.
Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.

(54) Title: CATALYST AND PROCESS FOR THE OXIDATION OF ETHANE AND/OR ETHYLENE

(57) Abstract

A catalyst composition for the selective oxidation of ethane and/or ethylene to acetic acid which composition comprises in combination with oxygen the elements: $Mo_a.W_b.Ag_c.Ir_d.X_e.Y_f$ (I) wherein X is the elements Nb and V; Y is one or more elements selected from the group consisting of: Cr, Mn, Ta, Ti, B, Al, Ga, In, Pt, Zn, Cd, Bi, Ce, Co, Rh, Cu, Au, Fe, Ru, Os, K, Rb, Cs, Mg, Ca, Sr, Ba, Zr, Hf, Ni, P, Pb, Sb, Si, Sn, Tl, U, Re and Pd; a, b, c, d, e and f represent the gram atom ratios of the elements such that $0 < a \leq 1$, $0 \leq b < 1$ and $a + b = 1$; $0 < (c+d) \leq 0.1$; $0 < e \leq 2$; and $0 \leq f \leq 2$. The catalyst composition may be used in the production of acetic acid and in an integrated process for the production of acetic acid and/or vinyl acetate.