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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
25 July 2002 (25.07.2002)

PCT

(10) International Publication Number
WO 02/057245 A1

(51) International Patent Classification[7]: C07D 301/10, 301/06, 301/08

(21) International Application Number: PCT/US01/26440

(22) International Filing Date: 24 August 2001 (24.08.2001)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
09/765,812 19 January 2001 (19.01.2001) US

(71) Applicant: ARCO CHEMICAL TECHNOLOGY, L.P. [US/US]; Two Greenville Crossing, 4001 Kennett Pike, Suite 238, Greenville, DE 19807 (US).

(72) Inventor: GREY, Roger, A.; 111 Piedmont Road, West Chester, PA 19382 (US).

(74) Agents: CARROLL, Kevin, M. et al.; Lyondell Chemical Company, 3810 West Chester Pike, Newtown Square, PA 19073 (US).

(81) Designated States *(national)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW.

(84) Designated States *(regional)*: ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, 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, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:
— *with international search report*
— *entirely in electronic form (except for this front page) and available upon request from the International Bureau*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

WO 02/057245 A1

(54) Title: EPOXIDATION CATALYST AND PROCESS

(57) Abstract: In a process for the production of an oxirane compound by reaction of olefins, oxygen and hydrogen using a noble metal on titanium or vanadium silicalite catalyst the improvement wherein the catalyst is doped with a substantially non-reduced metal dopand.