4/12/02
2002076123



162162

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

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
20 December 2001 (20.12.2001)

PCT

(10) International Publication Number
WO 01/96324 A3

(51) International Patent Classification[7]: C07D 301/10, B01J 23/68, C07C 29/10

(21) International Application Number: PCT/US01/18097

(22) International Filing Date: 5 June 2001 (05.06.2001)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
09/591,525 9 June 2000 (09.06.2000) US
09/735,360 12 December 2000 (12.12.2000) US

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(81) Designated States *(national)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, 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, US, 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, GW, ML, MR, NE, SN, TD, TG).

Published:
— *with international search report*

(88) Date of publication of the international search report:
28 March 2002

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 01/96324 A3

(54) Title: PROCESS FOR OPERATING THE EPOXIDATION OF ETHYLENE

(57) Abstract: A process for the vapor phase oxidation of ethylene to ethylene oxide, which process comprises reacting a reaction mixture comprising ethylene and oxygen in the presence of a supported highly selective silver-based catalyst by: operating at an initial operation phase wherein fresh catalyst is used, and operating at a further operation phase when a cumulative ethylene oxide production exceeds 0.01 kT ethylene oxide per m^3 of catalyst, wherein in said further operation phase the concentration of ethylene in the reaction mixture is increased; and a method of using ethylene oxide for making 1,2-ethanediol or a corresponding 1,2-ethanediol ether comprising converting the ethylene oxide into the 1,2-ethanediol or the 1,2-ethanediol ether wherein the ethylene oxide has been obtained by the process for the production of ethylene oxide.



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