

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
14 July 2005 (14.07.2005)

PCT

(10) International Publication Number
WO 2005/063622 A2

(51) International Patent Classification⁷: **C01B 39/00**

(21) International Application Number:
PCT/US2004/042737

(22) International Filing Date:
20 December 2004 (20.12.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/532,595 23 December 2003 (23.12.2003) US

(71) Applicant (for all designated States except US): **EXXON-MOBIL CHEMICAL PATENTS INC.** [US/US]; 5200 Bayway Drive, Baytown, TX 77520-2101 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **MERTENS, Machteld, M.** [BE/BE]; Beringstraat 72, B-3190 Boortmeerbeek (BE). **CAO, Guang** [US/US]; 528 Woodside Lane, Branchburg, NJ 08876 (US). **LI, Hailian** [CN/US]; 130 Pasito Terrace, Apt. 409, Sunnyvale, CA 94086 (US).

GURAM, Anil, S. [US/US]; 1044 Arlington Lane, San Jose, CA 95129 (US). **SAXTON, Robert, J.** [US/US]; 5168 Independence Drive, Pleasanton, CA 94566 (US). **MURAOKA, Mark, T.** [US/US]; 2047 Montecito Avenue, #5, Mountain View, CA 94043 (US). **YODER, Jeffrey, C.** [US/US]; 5401 Mary Jo Way, San Jose, CA 95124 (US).

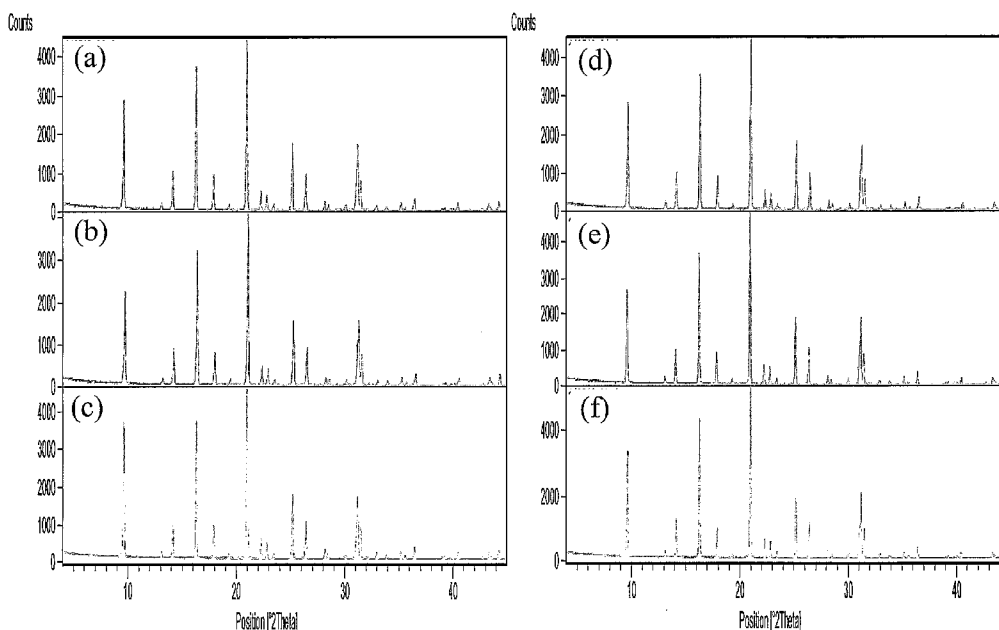
(74) Agent: **REID, Frank, E.**; ExxonMobil Chemical Company, P.O. Box 2149, Baytown, TX 77522-2149 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, 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, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),

[Continued on next page]

(54) Title: CHABAZITE-TYPE MOLECULAR SIEVE, ITS SYNTHESIS AND ITS USE IN THE CONVERSION OF OXYGENATES TO OLEFINS



(57) Abstract: The synthesis of a crystalline material, in particular a high silica zeolite, having a chabazite-type framework is aided by the addition to the synthesis mixture of seeds of an AEI framework-type material. The chabazite-type product has a relatively small crystal size and exhibits activity and selectivity in the conversion of methanol to lower olefins, especially ethylene and propylene.

WO 2005/063622 A2



European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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.

Published:

- *without international search report and to be republished upon receipt of that report*