

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
29 March 2001 (29.03.2001)

PCT

(10) International Publication Number
WO 01/21561 A1

(51) International Patent Classification: C07C 1/20

(21) International Application Number: PCT/US00/25901

(22) International Filing Date:
21 September 2000 (21.09.2000)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
09/401,078 23 September 1999 (23.09.1999) US

(71) Applicant: MOBIL OIL CORPORATION [US/US];
3225 Gallows Road, Fairfax, VA 22037 (US).

(72) Inventors: BROWN, Stephen, H.; 20 Fairview Avenue,
Princeton, NJ 08540 (US). SHINNAR, Reuel; 110 Ash
Drive, Great Neck, NY 11021 (US). WEBER, William,
A.; 331 Somerset Lane Bldg. #16, Marlton, NJ 08053 (US).

(74) Agents: KELLER, Bradley, A. et al.; ExxonMobil Chem-
ical Company, P.O. Box 2149, Baytown, TX 77522-2149
(US).

(81) Designated States (*national*): 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, IL, 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, 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), 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 receipt of amendments.

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 01/21561 A1

(54) Title: PROCESS FOR CONVERTING METHANOL OR DIMETHYL ETHER TO OLEFINS

(57) Abstract: There is provided a process for converting methanol or dimethyl ether to a product containing C₂ to C₄ olefins, which comprises the step of contacting a feed containing methanol or dimethyl ether with a catalyst which comprises a zeolite having 10-ring intersecting channels, such as ZSM-5, and which has a Diffusion Parameter for 2,2-dimethylbutane of less than 100 sec⁻¹ when measured at a temperature of 120 °C and a 2,2-dimethylbutane pressure of 60 torr (8 kPa). The contacting step is conducted at a temperature of 370 to 480 °C, a methanol partial pressure of 30 to 150 psia and a methanol conversion per pass of less than 95 %.