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(21) International Application Number: PCT/US97/18079 (22) International Filing Date: 2 October 1997 (02.10.97) (30) Priority Data: 08/725,277 2 October 1996 (02.10.96) US (71) Applicant (for all designated States except US): MOBIL OIL CORPORATION [US/US]; 3225 Gallows Road, Fairfax, VA 22037 (US). (72) Inventors; and (75) Inventors/Applicants (for US only): BROWN, Stephen, Harold [US/US]; 20 Fairview Avenue, Princeton, NJ 08540 (US). MATHIAS, Mark, Fischer [US/US]; 7 Polaris Court, Turnersville, NJ 08012 (US). OLSON, David, Harold [US/US]; 11 Morningside Drive, Hopewell TWP, Pennnington, NJ 08534 (US). WARE, Robert, Adams [US/US]; 8055 Stenton Avenue, Wyndmoor, PA 19038 (US). (74) Agents: ROBERTS, Peter, W. et al.; Mobil Oil Corporation, 3225 Gallows Road, Fairfax, VA 22037 (US).		(81) Designated States: AU, BR, CA, CN, ID, JP, KR, MX, NZ, RO, RU, <u>(SG)</u> TR, US, European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE). Published <i>With international search report.</i> <i>Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i>
(54) Title: SELECTIVE PARA-XYLENE PRODUCTION BY TOLUENE METHYLATION (57) Abstract There is provided a process for the selective production of para-xylene which comprises reacting toluene with methanol in the presence of a catalyst comprising a porous crystalline material having a Diffusion Parameter for 2,2 dimethylbutane of about 0.1–15 sec⁻¹ when measured at a temperature of 120 °C and a 2,2 dimethylbutane pressure of 60 torr (8kPa). The porous crystalline material is preferably a medium-pore zeolite, particularly ZSM-5, which has been severely steamed at a temperature of at least 950 °C. The porous crystalline material is preferably combined with at least one oxide modifier, preferably including phosphorus, to control reduction of the micropore volume of the material during the steaming step.		