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(51) International Patent Classification ⁶: C07C 15/08, 2/86, B01J 29/80	A1	(11) International Publication Number: WO 97/45387 (43) International Publication Date: 4 December 1997 (04.12.97)																		
(21) International Application Number: PCT/US97/09609 (22) International Filing Date: 29 May 1997 (29.05.97) (30) Priority Data: <table border="0" style="width: 100%;"><tr><td style="width: 40%;">60/018,390</td><td style="width: 40%;">29 May 1996 (29.05.96)</td><td style="width: 20%;">US</td></tr><tr><td>60/018,546</td><td>29 May 1996 (29.05.96)</td><td>US</td></tr><tr><td>60/018,547</td><td>29 May 1996 (29.05.96)</td><td>US</td></tr><tr><td>60/018,550</td><td>29 May 1996 (29.05.96)</td><td>US</td></tr><tr><td>60/018,551</td><td>29 May 1996 (29.05.96)</td><td>US</td></tr><tr><td>60/018,583</td><td>29 May 1996 (29.05.96)</td><td>US</td></tr></table> (71) Applicant: EXXON CHEMICAL PATENTS INC. [US/US]; 5200 Bayway Drive, Baytown, TX 77520-5200 (US). (72) Inventors: MOHR, Gary, D.; 2018 Caravel Drive, League City, TX 77573 (US). SMITH, Robert, S.; 1018 Buoy, Houston, TX 77062 (US). (74) Agents: SHERER, Edward, F. et al.; Exxon Chemical Com- pany, P.O. Box 2149, Baytown, TX 77522-2149 (US).		60/018,390	29 May 1996 (29.05.96)	US	60/018,546	29 May 1996 (29.05.96)	US	60/018,547	29 May 1996 (29.05.96)	US	60/018,550	29 May 1996 (29.05.96)	US	60/018,551	29 May 1996 (29.05.96)	US	60/018,583	29 May 1996 (29.05.96)	US	(81) Designated States: AL, AU, BA, BB, BG, BR, CA, CN, CU, CZ, EE, GE, GH, HU, IL, IS, JP, KP, KR, LC, LK, LR, LT, LV, MG, MK, MN, MX, NO, NZ, PL, RO, <u>SG</u> , SI, SK, TR, TT, UA, UZ, VN, YU, ARIPO patent (GH, KE, LS, MW, SD, SZ, UG), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG). Published <i>With international search report.</i>
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(54) Title: METHYLATION OF TOLUENE TO PARA-XYLENE (57) Abstract A process is provided for the production of paraxylene by the methylation of toluene in the presence of a zeolite bound zeolite catalyst. The catalyst comprises first zeolite crystals which are bound together by second zeolite crystals. When used to methylate toluene to para-xylene, the zeolite bound zeolite catalyst has a para-xylene selectivity greater than thermodynamic equilibrium. This selectivity can be enhanced by selectivating the catalyst.																				