



INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁷ : C07C 15/08, 2/86	A1	(11) International Publication Number: WO 00/69796 (43) International Publication Date: 23 November 2000 (23.11.00)
(21) International Application Number: PCT/US00/12996 (22) International Filing Date: 11 May 2000 (11.05.00) (30) Priority Data: 09/312,104 14 May 1999 (14.05.99) US (71) Applicant: EXXON CHEMICAL PATENTS INC. [US/US]; 5200 Bayway Drive, Baytown, TX 77520-5200 (US). (72) Inventors: OU, John; 15415 Bay Green Court, Houston, TX 77059 (US). HONG, Zonxuan; 4043 Elm Crest Trail, Houston, TX 77059 (US). JANDA, Gary; 14815 Redwood Bend Trail, Houston, TX 77062 (US). SELLEN, Russell; 504 Hillhurst, Baytown, TX 77521 (US). (74) Agents: LOO, Blossom, E. et al.; Exxon Chemical Company, P.O. Box 2149, Baytown, TX 77522-2149 (US).		(81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, 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, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, 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.
(54) Title: DIRECT SELECTIVE SYNTHESIS OF PARA-XYLENE (57) Abstract It has been discovered that para-xylene (PX) can be synthesized with improved selectivity by reacting an aromatic compound such as toluene and/or benzene with a reactant(s) such as a combination of hydrogen and carbon monoxide and/or carbon dioxide and/or methanol or methylating agents produced therefrom. Catalytic reaction systems are employed, such as crystalline or amorphous aluminosilicates having one dimensional channel structure, para-alkyl selectivated crystalline or amorphous aluminosilicates, para-alkyl selectivated substituted aluminosilicates, crystalline or amorphous substituted silicates having one-dimensional channel structure, para-alkyl selectivated substituted silicates, crystalline or amorphous aluminophosphates, para-alkyl selectivated crystalline or amorphous aluminophosphates, para-alkyl selectivated zeolite-bound zeolite and para-alkyl selectivated substituted aluminophosphates, and mixtures thereof. The catalytic reaction systems may be selectivated with organometallic compounds, compounds of elements selected from Groups 1 through 16, coke and mixtures thereof. Using this process, catalyst stability and life is improved.		