



## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

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| <b>(51) International Patent Classification <sup>6</sup> :</b><br><b>C07C 4/02, 4/04, 4/06, C10G 35/02, 35/04, 35/06, 35/095, 11/02, 11/04, 11/05, 51/02, 51/04</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <b>A1</b> | <b>(11) International Publication Number:</b> <b>WO 99/57086</b><br><b>(43) International Publication Date:</b> 11 November 1999 (11.11.99)                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>(21) International Application Number:</b> PCT/US99/09113<br><b>(22) International Filing Date:</b> 27 April 1999 (27.04.99)<br><b>(30) Priority Data:</b><br>09/073,085                      5 May 1998 (05.05.98)                      US<br><b>(71) Applicant:</b> EXXON RESEARCH AND ENGINEERING COMPANY [US/US]; 180 Park Avenue, P.O. Box 390, Florham Park, NJ 07932-0390 (US).<br><b>(72) Inventors:</b> LADWIG, Paul, Kevin; 9 Cottonwood Drive, Randolph, NJ 07869 (US). ASPLIN, John, Ernest; 18822 Windward Lane, Houston, TX 77058 (US). STUNTZ, Gordon, Frederick; 12217 Lake Lingham Circle, Baton Rouge, LA 70816 (US). WACHTER, William, Augustine; 14040 Eastridge Avenue, Baton Rouge, LA 70817 (US). HENRY, Brian, Erik; 17846 West Colony Way, Baton Rouge, LA 70810 (US).<br><b>(74) Agents:</b> NAYLOR, Henry, E. et al.; Exxon Research and Engineering Company, P.O. Box 390, Florham Park, NJ 07932-0390 (US). |           | <b>(81) Designated States:</b> AL, AU, BA, BB, BG, BR, CA, CN, CU, CZ, EE, GE, HR, HU, ID, IL, IN, IS, JP, KP, KR, LC, LK, LR, LT, LV, MG, MK, MN, MX, NO, NZ, PL, RO, SG, SI, SK, SL, TR, TT, UA, UZ, VN, YU, ZA, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, 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).<br><br><b>Published</b><br><i>With international search report.</i> |
| <b>(54) Title:</b> PROCESS FOR SELECTIVELY PRODUCING LIGHT OLEFINS IN A FLUID CATALYTIC CRACKING PROCESS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>(57) Abstract</b><br><br>A process for selectively producing C <sub>2</sub> -C <sub>4</sub> olefins from a catalytically cracked or thermally cracked naphtha stream. The naphtha stream is contacted with a catalyst containing from about 10 to 50 wt.% of a crystalline zeolite having an average pore diameter less than about 0.7 nanometers at reaction conditions which include temperatures from about 500 to 650 °C and a hydrocarbon partial pressure from about 10 to 40 psia.                                                                                                                                                                                                                                                                                                                                                                                                                                                |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |