9905361-4
IPOS

PCT WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 6 : C10G 11/00 — A1

(11) International Publication Number: **WO 98/56874**

(43) International Publication Date: 17 December 1998 (17.12.98)

(21) International Application Number: PCT/US98/11999

(22) International Filing Date: 8 June 1998 (08.06.98)

(30) Priority Data:
08/872,808 10 June 1997 (10.06.97) US

(71) Applicant: EXXON CHEMICAL PATENTS INC. [US/US]; 5200 Bayway Drive, Baytown, TX 77520–5200 (US).

(72) Inventor: BRENNEK, A.; 1714 Trinity Crescent, Sarnia, Ontario N7S 5K2 (CA).

(74) Agents: ZBORAY, James, A. et al.; Exxon Chemical Company, P.O. Box 2149, Baytown, TX 77522–2149 (US).

(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, ID, IL, 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, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ARIPO patent (GH, GM, KE, LS, MW, SD, 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, ML, MR, NE, SN, TD, TG).

Published
With international search report.

(54) Title: ENHANCED OLEFIN YIELD AND CATALYTIC PROCESS WITH DIOLEFINS

(57) Abstract

The invention provides a process for improving the conversion of a hydrocarbon feedstock to light olefins comprising mixing a hydrocarbon feedstock with a diolefin to form a mixture; and thereafter contracting the mixture with a zeolite cracking catalyst. Preferably the catalyst is contacted at a reaction temperature within the range of about 500 °C to about 750 °C and the feedstock flows at a weight hourly space velocity in the range of about 0.1 Hr^{-1} WHSV to about 100 Hr^{-1} WHSV. The diolefin can be a straight, branched, or cyclic hydrocarbon having at least two II bonds. Preferably diolefin is a hydrocarbon of 4 to 20 carbons.