

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
24 January 2002 (24.01.2002)

PCT

(10) International Publication Number
WO 02/06192 A1

(51) International Patent Classification⁷: **C07C 2/32**

(21) International Application Number: PCT/US01/22628

(22) International Filing Date: 18 July 2001 (18.07.2001)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/218,888 18 July 2000 (18.07.2000) US

(71) Applicant (*for all designated States except US*): **E.I. DUPONT DE NEMOURS AND COMPANY** [US/US];
1007 Market Street, Wilmington, DE 19898 (US).

(72) Inventors; and

(75) Inventors/Applicants (*for US only*): **CULVER, David, A.** [US/US]; 84 Pointers-Auburn Road, Salem, NJ 08079 (US). **SCHIFFINO, Rinaldo, S.** [US/US]; 4809 Thread-needle Road, Wilmington, DE 19807 (US). **CITRON, Joel, David** [US/US]; 2003 Ferndale Drive, Wilmington, DE 19810 (US).

(74) Agent: **LERMAN, Bart, E.**; E.I. Dupont De Nemours and Company, Legal Patent Records Center, 1007 Market Street, Wilmington, DE 19898 (US).

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, 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, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.

(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, 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, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- *with international search report*
- *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: MANUFACTURING PROCESS FOR α -OLEFINS

(57) Abstract: An efficient manufacturing process for α -olefins using certain iron containing ethylene oligomerization catalysts, comprises one or more liquid full reactors which are ap-proximately at the bubble point of reacting ethylene, and optionally a final reactor which is at a lower pressure than the first reactor, both operating under other specified conditions. This process minimizes both the capital and operating costs for the plant. The α -olefins produced are useful as monomers for polymers and as chemical intermediates, for exa α ple for making detergents.

WO 02/06192 A1