

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

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
17 May 2001 (17.05.2001)

PCT

(10) International Publication Number
WO 01/34661 A1

- (51) International Patent Classification⁷: C08F 4/62, (US). BENHAM, Elizabeth, A. [US/US]; 431 Shannon, Bartlesville, OK 74006 (US).
4/24, 210/00, 10/14
- (21) International Application Number: PCT/US00/42023 (74) Agents: RICHARDS, John; Ladas & Parry, 26 West 61st Street, New York, NY 10023 et al. (US).
- (22) International Filing Date: 9 November 2000 (09.11.2000) (81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, 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.
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data: 09/440,366 12 November 1999 (12.11.1999) US (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, GW, ML, MR, NE, SN, TD, TG).
- (63) Related by continuation (CON) or continuation-in-part (CIP) to earlier application: US 09/440,366 (CON) Filed on 12 November 1999 (12.11.1999)
- (71) Applicant (*for all designated States except US*): PHILLIPS PETROLEUM COMPANY [US/US]; 4th and Keeler, Bartlesville, OK 74004 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (*for US only*): MCDANIEL, Max, P. [US/US]; 1601 Melmart Drive, Bartlesville, OK 74006
- 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.*



WO 01/34661 A1

(54) Title: POLYMERIZATION CATALYST AND PROCESS

(57) Abstract: An olefin polymerization process is provided comprising contacting an olefin monomer with chromium oxide on a titanium containing silica support having less than about 3 weight percent titanium in combination with an organoboron promoter. Polymers thus produced are useful for blow molding applications.