



INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁶ : C08F 12/04	A1	(11) International Publication Number: WO 99/10394 (43) International Publication Date: 4 March 1999 (04.03.99)
(21) International Application Number: PCT/US98/16789 (22) International Filing Date: 13 August 1998 (13.08.98) (30) Priority Data: 60/057,226 27 August 1997 (27.08.97) US (71) Applicant (for all designated States except US): THE DOW CHEMICAL COMPANY [US/US]; 2030 Dow Center, Midland, MI 48674 (US). (72) Inventor; and (75) Inventor/Applicant (for US only): BEAUDOIN, Daniel, A. [US/US]; 3105 Lois Avenue, Midland, MI 48640 (US). (74) Agent: ZETTLER, Lynn, M.; Patent Dept., P.O. Box 1967, Midland, MI 48641-1967 (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, GM, HR, 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, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, 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, GW, ML, MR, NE, SN, TD, TG). Published <i>With international search report.</i>

(54) Title: SYNDIOTACTIC VINYLAROMATIC POLYMERIZATION USING MULTIPLE REACTORS IN SERIES**(57) Abstract**

A method for making a syndiotactic vinylaromatic polymer. The method includes mixing a first amount of a vinylaromatic monomer with a catalyst in a first back-mixed reaction zone under polymerization conditions such that the vinylaromatic monomer polymerizes to a conversion of from 60 to 85 percent to form a polymer-containing mixture. The polymer-containing mixture is passed to at least one other back-mixed reaction zone where it contacts a second amount of the vinylaromatic monomer under polymerization conditions such that the syndiotactic vinylaromatic polymer is formed.

