



(51) International Patent Classification:
C08F 10/00 (2006.01)

(21) International Application Number:
PCT/US2011/062984

(22) International Filing Date:
2 December 2011 (02.12.2011)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
12/974,402 21 December 2010 (21.12.2010) US

(71) Applicant (for all designated States except US): **DOW GLOBAL TECHNOLOGIES LLC** [US/US]; 2040 Dow Center, Midland, MI 48674 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **CHEN, Linfeng** [US/US]; 4015 Tuscan Shores Drive, Missouri City, TX 77459 (US). **LEUNG, Tak, W.** [US/US]; 3823 Canary Grass Lane, Houston, TX 77059 (US). **TAO, Tao** [CN/US]; 1721 Potomac Drive C, Houston, TX 77057 (US).

(74) Agent: **BARTHEL, Ted, J.**; Whyte Hirschboeck Dudek S.C., 555 East Wells Stret, Suite 1900, Milwaukee, WI 53202 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report (Art. 21(3))

(54) Title: CATALYST COMPOSITION WITH HALO-MALONATE INTERNAL ELECTRON DONOR AND POLYMER FROM SAME

(57) Abstract: Disclosed herein are procatalyst compositions, catalyst compositions and polymers, i.e., propylene-based polymers, produced therefrom. The present procatalyst compositions contain a halo-malonate and a 2-fluoro-malonate in particular. The present catalyst compositions improve catalyst selectivity, improve catalyst activity, and also improve hydrogen response during polymerization. Propylene-based polymer produced from the present catalyst composition has a melt flow rate greater than 50 g/10 min.

