

(10) International Publication Number
WO 2015/009480 A1(43) International Publication Date
22 January 2015 (22.01.2015)

- (51) International Patent Classification:
C08F 4/6592 (2006.01) C08F 10/00 (2006.01)
- (21) International Application Number:
PCT/US2014/045657
- (22) International Filing Date:
8 July 2014 (08.07.2014)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
61/847,464 17 July 2013 (17.07.2013) US
61/847,442 17 July 2013 (17.07.2013) US
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(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, BN, 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, IR, IS, JP, KE, KG, 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, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, 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.

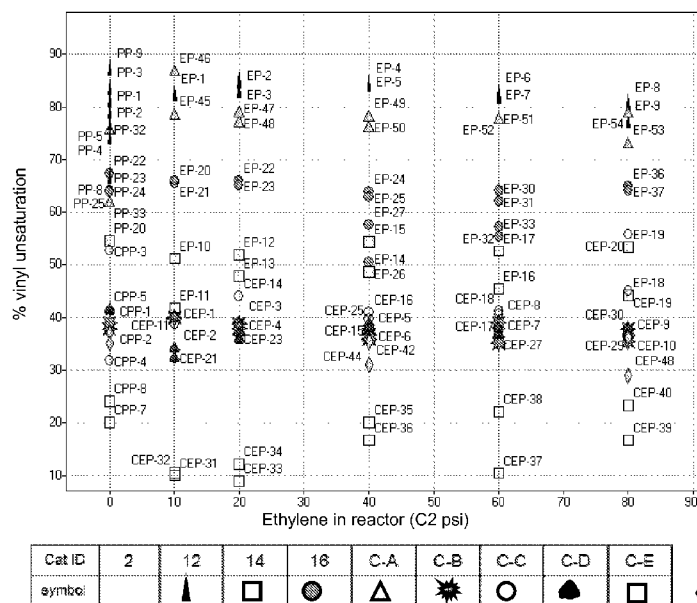
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, 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, KM, ML, MR, NE, SN, TD, TG).

Published:

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

(54) Title: PROCESS USING SUBSTITUTED METALLOCENE CATALYSTS AND PRODUCTS THEREFROM

FIGURE 1



(57) Abstract: This invention relates to a process to produce propylene polymer using a bridged hafnium transition metal metallocene catalyst compounds having two indenyl ligands substituted at the 4 positions with a C₁ to C₁₀ alkyl, where the 3 positions are hydrogen (assuming the bridge position is counted as the one position) and the bridging atom is carbon or silicon which is incorporated into a cyclic group comprising 3, 4, 5, or 6 silicon and/or carbon atoms that make up the cyclic ring, where the propylene polymer has 1) greater than 40% vinyl chain ends, relative to the total unsaturated chain ends, 2) a Tm of 70°C or more; an Mw of 3000 to 300,000 g/mol, and 4) a g'vis of 0.90 or less.