



(51) International Patent Classification:

C07F 7/00 (2006.01) *C08F* 4/64 (2006.01)
B01J 21/06 (2006.01) *C08F* 10/00 (2006.01)
C07D 409/14 (2006.01)

(21) International Application Number:

PCT/US2024/030813

(22) International Filing Date:

23 May 2024 (23.05.2024)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

63/471,818 08 June 2023 (08.06.2023) US

(71) Applicant: DOW GLOBAL TECHNOLOGIES LLC

[US/US]; 2211 H.H. Dow Way, Midland, Michigan 48674 (US).

(72) Inventors: CAMELIO, Andrew M.; 1776 Building, 633

Washington Street, Midland, Michigan 48667 (US). BAIL-

LIE, Rhett A.; 230 Abner Jackson Parkway, Lake Jackson, Texas 77566 (US). KRAUSE, Matthew L.; 693 Washington Street, Midland, Michigan 48640 (US).

(74) Agent: TWILLEY, Mark; 2211 H.H. Dow Way, Midland, Michigan 48674 (US).

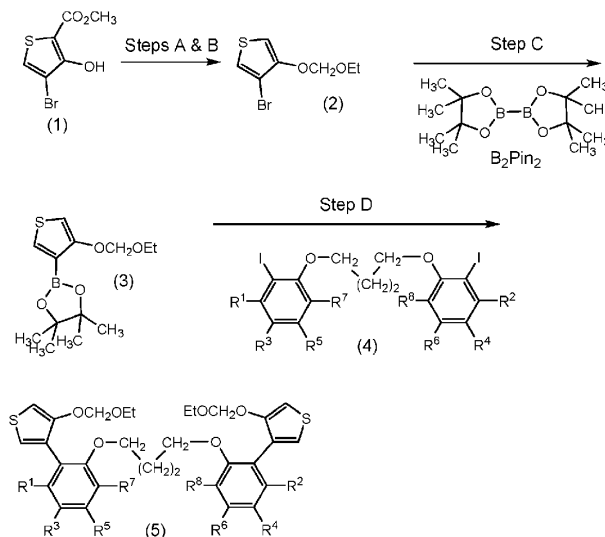
(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CV, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IQ, IR, IS, IT, JM, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, MG, MK, MN, MU, 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, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, CV,

(54) Title: SUPPORTED OLEFIN POLYMERIZATION CATALYSTS COMPRISING SUBSTITUTED 2-HYDROXYTHIOPHENE COMPOUNDS

FIG. 1

Scheme 1:



(57) Abstract: Disclosed are a supported catalyst system comprising a substituted 2-hydroxythiophene compound and a support material; and a method of making the supported catalyst system; Also disclosed are a gas phase or slurry phase polymerization process employing the supported catalyst system; and a polyolefin made by the gas phase or slurry phase polymerization process. Also disclosed are the substituted 2-hydroxythiophene compound and a precatalyst comprising the substituted 2-hydroxythiophene compound, a metal atom, and a leaving group. Also disclosed are methods of making the precatalyst and the substituted 2-hydroxythiophene compound.

[Continued on next page]

GH, GM, KE, LR, LS, MW, MZ, NA, RW, SC, SD, SL, ST, 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, ME, 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))