

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

(19) World Intellectual Property
Organization

International Bureau

(43) International Publication Date
17 September 2020 (17.09.2020)



(10) International Publication Number
WO 2020/185494 A1

(51) International Patent Classification:
C08F 110/06 (2006.01) *C08F 4/659* (2006.01)

(21) International Application Number:
PCT/US2020/021121

(22) International Filing Date:
05 March 2020 (05.03.2020)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
62/815,567 08 March 2019 (08.03.2019) US

(71) Applicant: **DOW GLOBAL TECHNOLOGIES LLC**
[US/US]; 2040 Dow Center, Midland, Michigan 48674
(US).

(72) Inventors: **CAMELIO, Andrew M.**; c/o Dow Global
Technologies LLC, 633 Washington Street, 1776 Building,
Midland, Michigan 48667 (US). **BAILEY, Brad
C.**; c/o Dow Global Technologies LLC, 633 Washing-
ton Street, 1776 Building, Midland, Michigan 48667 (US).
CHRISTIANSON, Matthew D.; c/o Dow Global Tech-
nologies LLC, 633 Washington Street, 1776 Building, Mid-
land, Michigan 48667 (US). **FROESE, Robert DJ**; c/o
Dow Global Technologies LLC, 633 Washington Street,
1776 Building, Midland, Michigan 48667 (US). **DEVORE,
David D.**; c/o Dow Global Technologies LLC, 633 Wash-
ington Street, 1776 Building, Midland, Michigan 48667
(US).

(74) Agent: **LUNN, Jennifer H.** et al.; c/o Dinsmore and Shohl
LLP, One South Main Street, Fifth Third Center, Suite 1300,
Dayton, Ohio 45402 (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, CZ, DE, DJ, DK, DM, DO,
DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN,
HR, HU, ID, IL, IN, IR, IS, JO, JP, KE, KG, KH, KN, KP,
KR, KW, KZ, LA, LC, LK, LR, LS, 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, 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, GH,
GM, KE, LR, LS, MW, MZ, NA, RW, 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, 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).

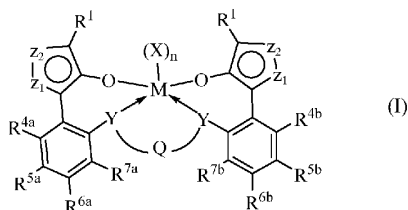
Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a
patent (Rule 4.17(ii))
- as to the applicant's entitlement to claim the priority of the
earlier application (Rule 4.17(iii))

Published:

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

(54) Title: BIARYL HYDROXYTHIOPHENE GROUP IV TRANSITION METAL POLYMERIZATION WITH CHAIN
TRANSFER CAPABILITY



(57) Abstract: Embodiments of this disclosure include polymerization
processes that include contacting propylene and/or one or more (C4-
C12) α -olefins in a reactor including a catalyst system. The catalyst sys-
tem comprises a metal-ligand complex according to formula (I).

WO 2020/185494 A1