

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
02 December 2021 (02.12.2021)



(10) International Publication Number
WO 2021/242800 A1

(51) International Patent Classification:
C08F 110/14 (2006.01) C08F 4/659 (2006.01)

TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW,
KM, ML, MR, NE, SN, TD, TG).

(21) International Application Number:
PCT/US2021/034139

Published:

- with international search report (Art. 21(3))
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))

(22) International Filing Date:
26 May 2021 (26.05.2021)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
63/031,638 29 May 2020 (29.05.2020) US

(71) Applicant: **DOW GLOBAL TECHNOLOGIES LLC**
[US/US]; 2211 H.H. Dow Way, Midland, Michigan 48674 (US).

(72) Inventors: **NEILSON, Bethany M.**; 230 Abner Jackson Parkway, Lake Jackson, Texas 77566 (US). **KUHLMAN, Roger L.**; 117 Dewberry, Lake Jackson, Texas 77566 (US). **BAILLIE, Rhett A.**; 230 Abner Jackson Parkway, Lake Jackson, Texas 77566 (US). **SZUL, John F.**; 1840 Union Carbide Drive, South Charleston, West Virginia 25303 (US).

(74) Agent: **PURCHASE, Claude**; P.O. Box 1967, Midland, Michigan 48641 (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, IT, 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,

(54) Title: ATTENUATED POST-METALLOCENE CATALYSTS

(57) Abstract: A method of making an attenuated-light-off post-metallocene catalyst ("attenuated post- metallocene catalyst" or "attenuated P-M catalyst"), the method comprising combining a faster- light-off catalyst with an effective amount of a kinetics modifier compound of formula (A1), (B¹), or (C¹): R⁵-C≡C-R⁶ (A¹), (R⁵)₂C=C=C(R⁶)₂ (B¹), or (R⁵)(R⁷)C=C(R⁶)(R⁷) (C¹) as defined herein under effective reaction conditions to give an attenuated post-metallocene catalyst that exhibits an attenuated light-off kinetics profile (relative to that of the faster-light- off catalyst); wherein the faster-light-off catalyst has been made by activating a post- metallocene precatalyst (i.e., an unactivated "coordination entity" or "ligand-metal complex") of structural formula (I): (D)_dM(T)_t(Q)_q(X)_x (I) as defined herein; and related methods, compositions and uses.



WO 2021/242800 A1