

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
09 January 2025 (09.01.2025)



(10) International Publication Number
WO 2025/010195 A1

(51) International Patent Classification:
C08G 77/388 (2006.01) C08L 83/04 (2006.01)
C08G 77/442 (2006.01)

(21) International Application Number:
PCT/US2024/036073

(22) International Filing Date:
28 June 2024 (28.06.2024)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
63/511,642 01 July 2023 (01.07.2023) US

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

(72) Inventor: SUN, Lixin; 230 Abner Jackson Parkway, Lake
Jackson, Texas 77566 (US).

(74) Agent: BECKMAN, Karen; The Dow Chemical Compa-
ny, P.O. Box 1967, Midland, Michigan 48641-1967 (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,
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,

(54) Title: SILOXANE MODIFIED AND SILANE MODIFIED POLYMERS VIA DIRECT INSERTION OF SILYL VINYL
GROUPS INTO METAL-CARBON BONDS

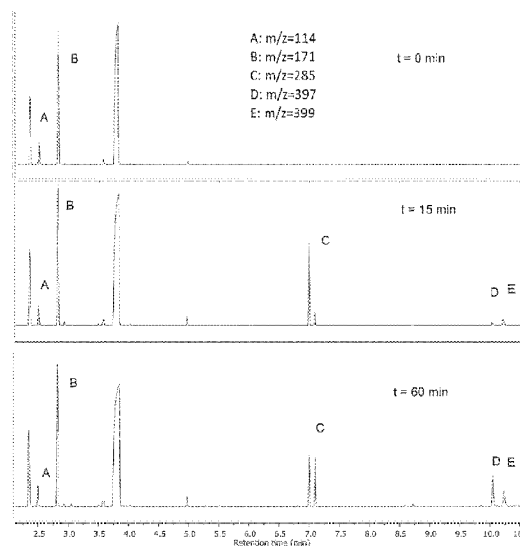


FIGURE 1

(57) Abstract: Processes, and related compositions, to form a siloxane modified olefin-based polymer, a silane modified olefin-based polymer, or a silane, each process, as described herein. Each process forms an Si-C bond through insertion of silyl vinyl into a metal carbon bond. The silyl vinyl double bond directly inserts into the metal-carbon bond to form a new, for example, alkyl-Si linkage.

[Continued on next page]

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))*
- *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))*