

(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 2020/182636 A1

(51) International Patent Classification:

C08G 77/26 (2006.01) C09D 183/08 (2006.01)

Published:

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

(21) International Application Number:

PCT/EP2020/055952

(22) International Filing Date:

06 March 2020 (06.03.2020)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

19161650.7 08 March 2019 (08.03.2019) EP

(71) Applicant: **MERCK PATENT GMBH** [DE/DE]; Frankfurter Strasse 250, 64293 Darmstadt (DE).

(72) Inventors: **KOPPE, Karsten**; Borsdorffstrasse 2a, 64289 Darmstadt (DE). **EICHHORN, Jens**; Dilshofer Strasse 13, 64354 Reinheim (DE). **JEFFERY, Ben**; 19 Tuckers Lane, Poole BH15 4BT (GB). **DAVIS, Alex**; 16 Hemlock Way, Eastleigh SO53 4LT (GB). **MITCHELL, William**; 55 Donnington Drive, Chandler's Ford SO53 3PE (GB). **MISKIEWICZ, Pawel**; Bahnhofstrasse 64, 63263 Neu-Isenburg (DE). **NONAKA, Toshiaki**; Narusegaoka 1-25-10, Machida-City 194-0011 (JP).

(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).

(54) Title: **CROSSLINKABLE SILOXANE COMPOUNDS FOR THE PREPARATION OF DIELECTRIC MATERIALS**

(57) Abstract: The present invention relates to novel siloxane oligomer and polymers and crosslinkable compositions, which may be used for the preparation of dielectric materials having excellent barrier, passivation and/or planarization properties. There is also provided a monomer composition from which the siloxane oligomers or polymers may be obtained and a method for preparing said siloxane oligomers or polymers. Beyond that, the present invention relates to a manufacturing method for preparing a microelectronic structure, wherein a crosslinkable composition is applied to a surface of a substrate and then cured, and to an electronic device comprising a microelectronic structure which is obtained by said manufacturing method.



WO 2020/182636 A1