

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

(19) World Intellectual Property  
Organization  
International Bureau

(43) International Publication Date  
28 November 2024 (28.11.2024)



(10) International Publication Number  
**WO 2024/240866 A1**

(51) International Patent Classification:  
*C09D 183/14* (2006.01) *C09D 183/16* (2006.01)

(21) International Application Number:  
PCT/EP2024/064198

(22) International Filing Date:  
23 May 2024 (23.05.2024)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
2023-086318 25 May 2023 (25.05.2023) JP

(71) Applicant: MERCK PATENT GMBH [DE/DE]; Frank-  
furter Strasse 250, 64293 Darmstadt (DE).

(72) Inventor: SAKURAI, Issei; c/o Merck Electronics Ltd.,  
3330 Chihama, Kakegawa-shi, SHIZUOKA, 437-1412  
(JP).

(74) Agent: MERCK PATENT ASSOCIATION; c/o Merck  
Patent GmbH, 64271 Darmstadt (DE).

(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,

(54) Title: METHOD FOR MANUFACTURING SILICON CONTAINING CONFORMAL CURED FILM

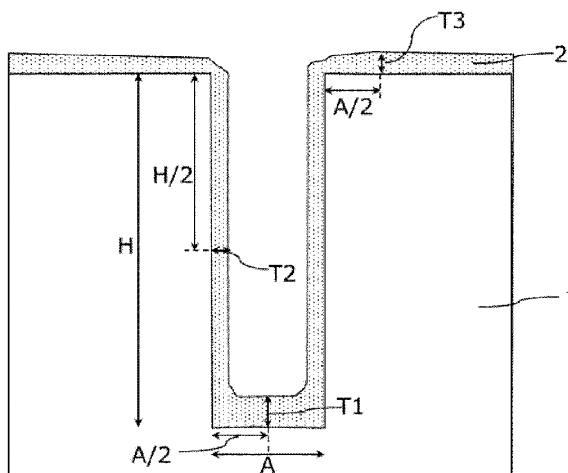


Fig. 1

(57) Abstract: [Problem] To provide a method for manufacturing a silicon containing conformal cured film. [Means for Solution] To provide a method for manufacturing a silicon containing conformal cured film, comprising the following steps: (a) applying to a substrate a cured film forming composition comprising a silicon containing polymer (I) and a solvent (II); (b) forming a conformal film by drying the composition; and (c) curing the conformal film by heating the substrate and/or irradiating the substrate with energy rays; wherein, the solvent (II) comprises a solvent (II-A) with a relative evaporation rate S1 and a solvent (II-B) with a relative evaporation rate S2; wherein  $S1 > S2$ ; and  $S1/S2$  is in the range from 3.0 to 35.0.

[Continued on next page]

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))