



(51) International Patent Classification:

C07C 33/26 (2006.01) **C07F 9/40** (2006.01)
C07C 43/13 (2006.01) **C08F 297/00** (2006.01)
C07C 43/23 (2006.01) **C08L 53/00** (2006.01)
C07C 69/92 (2006.01) **C09D 125/00** (2006.01)
C07C 205/37 (2006.01) **G03F 7/00** (2006.01)
C07C 217/84 (2006.01) **H01L 21/00** (2006.01)
C07C 255/54 (2006.01)

(21) International Application Number:

PCT/EP2022/074549

(22) International Filing Date:

05 September 2022 (05.09.2022)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

63/241,305 07 September 2021 (07.09.2021) US

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

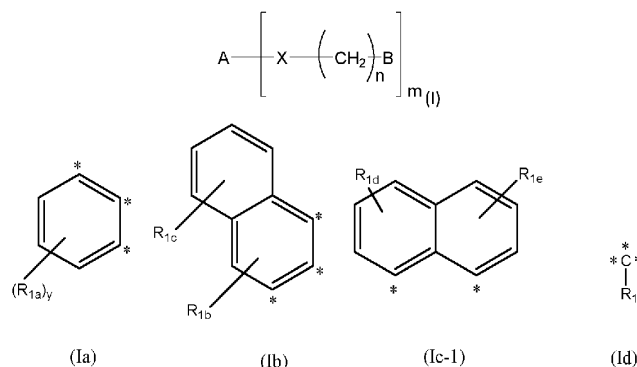
(72) Inventors: **BOBADE, Sachin**; 70 Meister Avenue, Branchburg, New Jersey 08876 (US). **BASKARAN, Durairaj**; 70 Meister Avenue, Branchburg, New Jersey 08876 (US).

(74) Agent: **RIPPEL, Hans Christoph**; Patentanwälte Isenbruck Bösl Hörschler PartG mbB, Seckenheimer Landstraße 4, 68163 Mannheim (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, 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: SELECTIVE SELF-ASSEMBLED MONOLAYERS VIA SPIN-COATING METHOD FOR USE IN DSA



(57) Abstract: The present invention relates to a compound of structure (I), wherein A is a core moiety which is selected from structure (Ia), (Ib), (Ic) and (Id), to which is attached through X, a direct valence bond or a divalent linking group, m number of linear alkylene moieties of chain length n where each said linear alkylene moiety has a terminal B reactive moiety, and further wherein * designates possible attachment point of said linear alkylene moieties in each structure, B is selected from -OH, -CH=CH₂, -O-(P=O)(OR)₂, -O-(P=O)(OR)R_s, -N₃ and -SH, where n ranges from 8 to 12. The invention also pertains to composition comprising these compounds and the use these compositions to form self-assembled monolayers (SAM) the use of these in DSA processing as neutral or directing layers which can be removed selectively from metal substrates and the remover solution to accomplish this selective removal.

[Continued on next page]

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))*