



- (51) **International Patent Classification:**
H01L 21/67 (2006.01) *H01L 21/02* (2006.01)
- (21) **International Application Number:**
PCT/IB2015/001287
- (22) **International Filing Date:**
11 June 2015 (11.06.2015)
- (25) **Filing Language:** English
- (26) **Publication Language:** English
- (30) **Priority Data:**
2014-120112 11 June 2014 (11.06.2014) JP
- (71) **Applicants:** **THE CHEMOURS COMPANY FC, LLC** [US/US]; Patent Legal Group, 1007 Market Street, Wilmington, Delaware 19801 (US). **DUPONT-MITSUI FLUOROCHEMICALS CO. LTD** [JP/JP]; 4th Floor, Chiyoda Bldg1-5-18, Sarugaku-Cho 1-Chome, Chiyoda-Ku, Tokyo 101-0064 (JP).
- (72) **Inventors:** **KIKUCHI, Hideaki**; 3600 Miho, Shizimu-ku, Shizuoka-shi, Shizuoka-ken, Shizuoka, Shizuoka 424-8631 (JP). **MATSUMOTO, Takanori**; 3600 Miho, Shizimu-ku, Shizuoka-shi, Shizuoka-ken, Shizuoka, shizuoka 424-8631 (JP). **ITO, Miki**; 3600 Miho, Shizimu-ku, Shizuoka-shi, Shizuoka-ken, Shizuoka 424-8631 (JP).
- (74) **Agent:** **LEACH, Douglas R.**; 1007 Market Street, D7145, Wilmington, Delaware 19898 (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, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JP, KE, KG, KN, KP, KR, 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, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, 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).

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))*

(54) **Title:** DISPLACEMENT LIQUID FOR SEMICONDUCTOR CIRCUIT PATTERN DRYING, AND DRYING METHOD

(57) **Abstract:** Problem: An object of the present invention is to provide a replacement solution for drying a semiconductor pattern and a method for drying a semiconductor pattern, that can prevent breakdown of an intricate semiconductor pattern with a high aspect ratio, when drying after a washing process after edging is completed in a semiconductor manufacturing process. Resolution Means: The present invention provides a replacement solution for drying a semiconductor pattern and method, containing a hydrofluoro ether and/or hydrofluorocarbon, that is completely miscible with isopropyl alcohol, has a boiling point of 70C or higher, and has surface tension under atmospheric conditions of 10 mN/m or lower when heated to a temperature below the boiling point.

