

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

(19) World Intellectual Property  
Organization  
International Bureau

(43) International Publication Date  
25 June 2020 (25.06.2020)



(10) International Publication Number  
**WO 2020/131249 A1**

(51) International Patent Classification:

H01L 21/768 (2006.01) H01L 21/311 (2006.01)  
H01L 21/02 (2006.01) H01L 21/324 (2006.01)

(21) International Application Number:

PCT/US2019/060785

(22) International Filing Date:

11 November 2019 (11.11.2019)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

62/783,200 20 December 2018 (20.12.2018) US  
16/673,943 04 November 2019 (04.11.2019) US

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(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,

(54) Title: OXIDATION REDUCTION FOR SIOC FILM

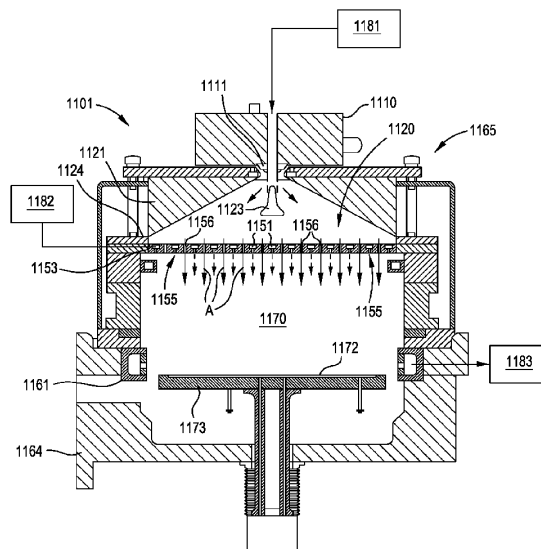


FIG. 3A

(57) Abstract: Embodiments described herein generally related to methods for forming a flowable low-k dielectric layer over a trench formed on a surface of a patterned substrate. The methods include delivering a silicon and carbon containing precursor into a substrate processing region of a substrate processing chamber for a first period of time and a second period of time, flowing an oxygen-containing precursor into a remote plasma region of a plasma source while igniting a remote plasma to form a radical-oxygen precursor, flowing the radical-oxygen precursor into the substrate processing region at a second flow rate after the first period of time has elapsed and during the second period of time, and exposing the silicon and carbon containing dielectric precursor to electromagnetic radiation for a third period of time after the second period of time has elapsed.

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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))