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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
2 May 2013 (02.05.2013)

WIPO | PCT

(10) International Publication Number
WO 2013/062831 A2

(51) International Patent Classification:
H01L 21/3065 (2006.01) *H01L 21/311* (2006.01)

(21) International Application Number:
PCT/US2012/060668

(22) International Filing Date:
17 October 2012 (17.10.2012)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
61/552,183 27 October 2011 (27.10.2011) US
13/651,074 12 October 2012 (12.10.2012) 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, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, 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, 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, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ,

[Continued on next page]

(54) Title: PROCESS CHAMBER FOR ETCHING LOW K AND OTHER DIELECTRIC FILMS

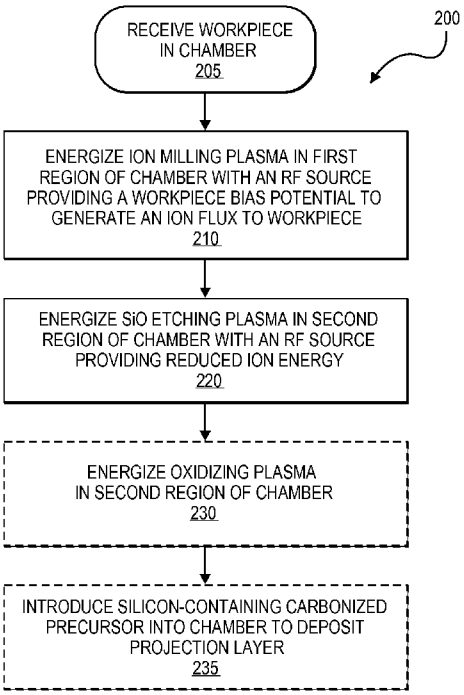


FIG. 2

(57) Abstract: Methods and process chambers for etching of low-k and other dielectric films are described. For example, a method includes modifying portions of the low-k dielectric layer with a plasma process. The modified portions of the low-k dielectric layer are etched selectively over a mask layer and unmodified portions of the low-k dielectric layer. Etch chambers having multiple chamber regions for alternately generating distinct plasmas are described. In embodiments, a first charge coupled plasma source is provided to generate an ion flux to a workpiece in one operational mode, while a secondary plasma source is provided to provide reactive species flux without significant ion flux to the workpiece in another operational mode. A controller operates to cycle the operational modes repeatedly over time to remove a desired cumulative amount of the dielectric material.

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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, ML, MR, NE, SN, TD, TG).

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