

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
21 September 2023 (21.09.2023)



(10) International Publication Number
WO 2023/178216 A1

(51) International Patent Classification:

H01L 21/02 (2006.01) C23C 16/02 (2006.01)
C23C 16/34 (2006.01) C23C 16/455 (2006.01)

(21) International Application Number:

PCT/US2023/064491

(22) International Filing Date:

15 March 2023 (15.03.2023)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

63/269,597 18 March 2022 (18.03.2022) US
63/375,447 13 September 2022 (13.09.2022) 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, 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, 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,

(54) Title: LOW-K DIELECTRIC PROTECTION DURING PLASMA DEPOSITION OF SILICON NITRIDE

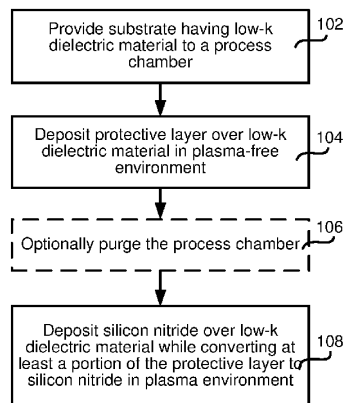


FIG. 1A

(57) Abstract: Methods and apparatuses for depositing silicon nitride using a plasma over low-k dielectric material while protecting the low-k dielectric material are provided. The methods comprise providing a substrate having a dielectric material deposited thereon, depositing a protective layer on the dielectric material in a plasma-free environment, and after depositing the protective layer, exposing the substrate to a first plasma to deposit a first silicon nitride while converting at least a portion of the protective layer to second silicon nitride.

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[Continued on next page]

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))*