

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
15 August 2024 (15.08.2024)



(10) International Publication Number
WO 2024/167963 A1

(51) International Patent Classification:

H01L 21/67 (2006.01) H01L 21/268 (2006.01)
H01L 21/66 (2006.01)

(21) International Application Number:

PCT/US2024/014670

(22) International Filing Date:

06 February 2024 (06.02.2024)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

63/444,158	08 February 2023 (08.02.2023)	US
63/491,170	20 March 2023 (20.03.2023)	US
63/502,447	16 May 2023 (16.05.2023)	US
63/502,448	16 May 2023 (16.05.2023)	US
63/502,452	16 May 2023 (16.05.2023)	US
63/511,414	30 June 2023 (30.06.2023)	US
18/431,884	02 February 2024 (02.02.2024)	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.

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(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,

(54) Title: INFLUENCE FUNCTION-BASED MITIGATION OF SUBSTRATE DEFORMATION WITH FILM DEPOSITION AND ION IMPLANTATION

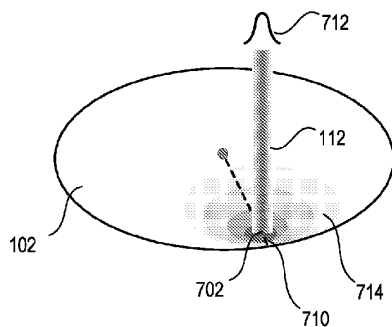


FIG. 7A

(57) Abstract: Disclosed systems and techniques are directed to correcting an out-of-plane (OPD) deformation of a substrate by causing a stress-compensation layer (SCL) to be deposited on the substrate, obtaining, using optical inspection data, a profile of the OPD of the substrate. The techniques further include obtaining a dataset with a representation of an influence function for the substrate, the influence function characterizing a deformation response of the substrate caused by a point-like mechanical influence. The techniques further include performing a regression computation to determine, based at least on the profile of the OPD of the substrate and the influence function, a distribution of a stress-mitigation irradiation of the SCL that mitigate the OPD of the substrate. The techniques further include performing, using the determined distribution of the stress-mitigation irradiation, a stress-mitigation irradiation of the SCL.

[Continued on next page]

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,
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))*