

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
13 October 2022 (13.10.2022)



(10) International Publication Number
WO 2022/216416 A1

(51) International Patent Classification:

H01L 21/265 (2006.01) H01L 21/683 (2006.01)
H01L 21/02 (2006.01)

(21) International Application Number:

PCT/US2022/020337

(22) International Filing Date:

15 March 2022 (15.03.2022)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

17/226,277 09 April 2021 (09.04.2021) 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, IT, JM, JO, JP, KE, KG, KH,
KN, KP, KR, KW, 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, 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, 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))

(54) Title: IMPROVED HANDLING FOR HIGH RESISTIVITY SUBSTRATES

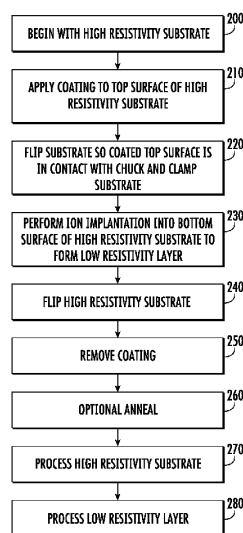


FIG. 2

(57) Abstract: A method of modifying a high-resistivity substrate so that the substrate may be electrostatically clamped to a chuck is disclosed. The bottom surface is implanted with a resistivity-reducing species. In this way, resistivity of the bottom surface of the substrate may be greatly reduced. In some embodiments, to implant the bottom surface, a coating is applied to the top surface. After application of the coating, the substrate is flipped so that the front surface contacts the top surface of the chuck. The ions are then implanted into the exposed bottom surface to create the low resistivity layer. The resistivity of the low resistivity layer proximate the bottom surface after implant may be less than 1000 ohm-cm. Once the bottom surface has been implanted, the substrate may be processed conventionally. The low resistivity layer may later be removed by wafer backside thinning processes.

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