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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
12 September 2025 (12.09.2025)

WIPO | PCT

(10) International Publication Number
WO 2025/188517 A1

(51) International Patent Classification:
H01L 21/683 (2006.01) *H02N 13/00* (2006.01)
B23Q 3/15 (2006.01)

(21) International Application Number:
PCT/US2025/017279

(22) International Filing Date:
26 February 2025 (26.02.2025)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
18/596,262 05 March 2024 (05.03.2024) 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, UY, 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, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

(54) Title: ARC CURRENT REDUCTION FROM AN ELECTROSTATIC CHUCK

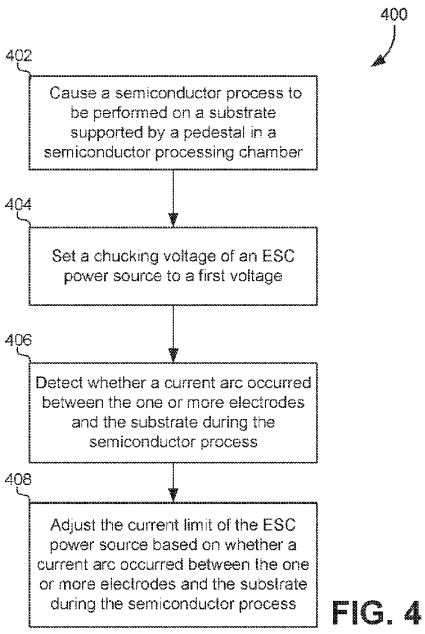


FIG. 4

(57) Abstract: A semiconductor processing chamber may include an electrostatic chuck (ESC) with one or more electrodes that may deliver a chucking voltage to the pedestal. The pedestal can support a substrate while a semiconductor process occurs in the semiconductor processing chamber. The one or more electrodes may be coupled to an ESC power source that may provide the chucking voltage and may have an adjustable current limit. The adjustable current limit may be set based on certain characteristics of a semiconductor process that may be occurring in the semiconductor processing chamber. The ESC power source can prevent the supplied current from exceeding the adjustable current limit, thereby preventing current arcs from discharging into the substrate.

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Published:
— *with international search report (Art. 21(3))*