



(51) International Patent Classification:

H01L 21/66 (2006.01) *H01L 21/205* (2006.01)
H01L 21/3065 (2006.01)

(21) International Application Number:

PCT/US2009/049757

(22) International Filing Date:

7 July 2009 (07.07.2009)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

61/078,739 7 July 2008 (07.07.2008) 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, 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, PE, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, 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, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (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, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, 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))

(88) Date of publication of the international search report:

22 April 2010

(54) Title: CAPACITIVELY-COUPLED ELECTROSTATIC (CCE) PROBE ARRANGEMENT FOR DETECTING STRIKE STEP IN A PLASMA PROCESSING CHAMBER AND METHODS THEREOF

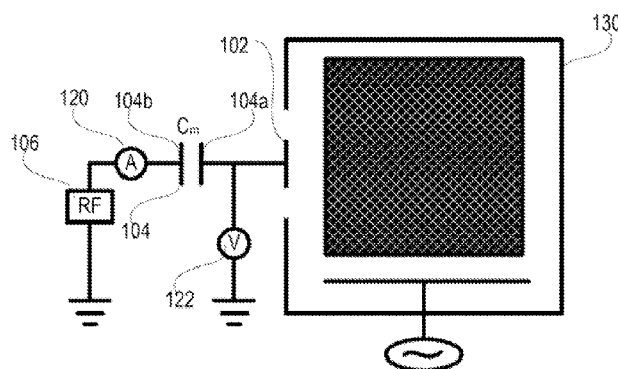


FIG. 1

(57) Abstract: A method for identifying a stabilized plasma within a processing chamber of a plasma processing system is provided. The method includes executing a strike step within the processing chamber to generate a plasma. The strike step includes applying a substantially high gas pressure within the processing chamber and maintaining a low radio frequency (RF) power within the processing chamber. The method also includes employing a probe head to collect a set of characteristic parameter measurements during the strike step, the probe head being on a surface of the processing chamber, wherein the surface is within close proximity to a substrate surface. The method further includes comparing the set of characteristic parameter measurements against a pre-defined range. If the set of characteristic parameter measurements is within the pre-defined range, the stabilized plasma exists.

