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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
17 March 2011 (17.03.2011)

PCT

(10) International Publication Number
WO 2011/031589 A2

(51) International Patent Classification:
H01L 21/66 (2006.01) *H01L 21/205* (2006.01)
H01L 21/687 (2006.01) *H01L 21/3065* (2006.01)

(21) International Application Number:
PCT/US2010/047380

(22) International Filing Date:
31 August 2010 (31.08.2010)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
12/557,381 10 September 2009 (10.09.2009) US
12/557,387 10 September 2009 (10.09.2009) 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, TH, 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, LR, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, 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, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— *without international search report and to be republished upon receipt of that report (Rule 48.2(g))*

(54) **Title**: METHODS AND ARRANGEMENT FOR DETECTING A WAFER-RELEASED EVENT WITHIN A PLASMA PROCESSING CHAMBER

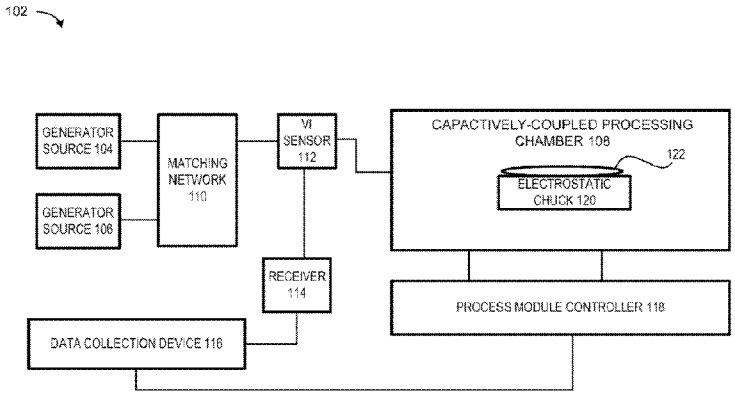


FIG. 1

(57) **Abstract**: A method for identifying an optimal time for mechanically removing a substrate from a lower electrode in a processing chamber of a plasma processing system is provided. The method includes employing a set of sensors to monitor a set of electrical characteristics of a plasma, wherein the plasma is formed over the substrate during a dechuck event. The method also includes sending processing data about the set of electrical characteristics to a data collection device. The method further includes comparing the processing data against a set of threshold values. The method yet also includes, if the processing data traverses the threshold values, removing the substrate from the lower electrode since a substrate-released event has occurred.

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