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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
9 October 2008 (09.10.2008)

PCT

(10) International Publication Number
WO 2008/121654 A1

(51) International Patent Classification:
H01L 21/3065 (2006.01)

(21) International Application Number:
PCT/US2008/058314

(22) International Filing Date: 26 March 2008 (26.03.2008)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/909,353 30 March 2007 (30.03.2007) US

(71) Applicant *(for all designated States except US)*: **LAM RESEARCH CORPORATION** [US/US]; 4650 Cushing Parkway, Fremont, California 94538 (US).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **DHINDSA, Rajinder** [US/US]; 4650 Cushing Parkway, Fremont, CA 94538 (US). **HUDSON, Eric** [US/US]; 4650 Cushing Parkway, Fremont, CA 94538 (US). **MARAKHTANOV, Alexei** [RU/US]; 4650 Cushing Parkway, Fremont, CA 94538 (US). **FISCHER, Andreas** [US/US]; 4650 Cushing Parkway, Fremont, CA 94538 (US).

(74) Agent: **NGUYEN, Joseph A.**; P.O. Box 700640, San Jose, CA 95170 (US).

(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, 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, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, 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, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:
— *with international search report*
— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

(54) **Title:** METHOD AND APPARATUS FOR INDUCING DC VOLTAGE ON WAFER-FACING ELECTRODE

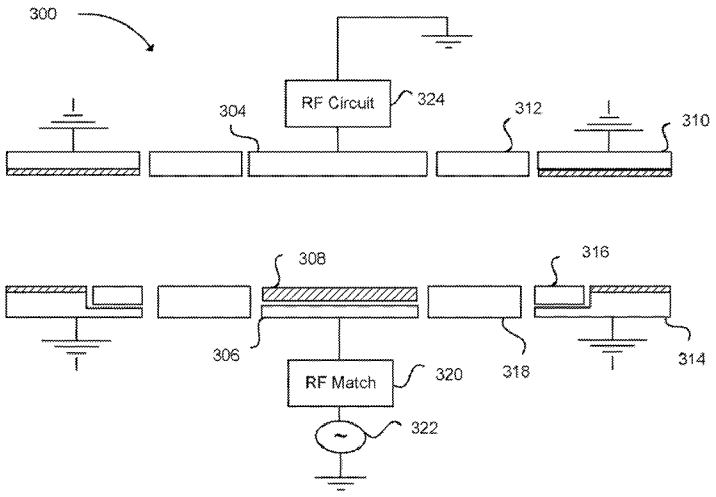


Fig. 3

(57) **Abstract:** A method for processing a substrate is disclosed. The method includes supporting the substrate in the plasma-processing chamber configured with a first electrode and a second electrode. The method also includes coupling a passive radio frequency (RF) circuit to the second electrode, the passive RF circuit being configured to adjust one or more of an RF impedance, an RF voltage potential, and a DC bias potential on the second electrode.

WO 2008/121654 A1