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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
5 April 2007 (05.04.2007)

PCT

(10) International Publication Number
WO 2007/038030 A3

(51) International Patent Classification:
H01J 7/24 (2006.01) *H01L 21/302* (2006.01)

(21) International Application Number:
PCT/US2006/036139

(22) International Filing Date:
15 September 2006 (15.09.2006)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
11/237,477 27 September 2005 (27.09.2005) US

(71) Applicant *(for all designated States except US)*: **LAM RESEARCH CORPORATION** [US/US]; 4650 Cushing Parkway, P1420pct, Fremont, California 94538 (US).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **YOON, Hyungsuk Alexander** [US/US]; 4650 Cushing Parkway, -, Fremont, California 94538 (US). **BOYD, John** [CA/US]; 4650 Cushing Parkway, -, Fremont, California 94538 (US). **KUTHI, Andras** [US/US]; 4650 Cushing Parkway, -, Fremont, California 94538 (US). **BAILEY III, Andrew, D.** [US/US]; 4650 Cushing Parkway, -, Fremont, California 94538 (US).

(74) Agent: **NGUYEN, Joseph, A**; IPSG, PC, Po Box 700640, San Jose, California 95170 (US).

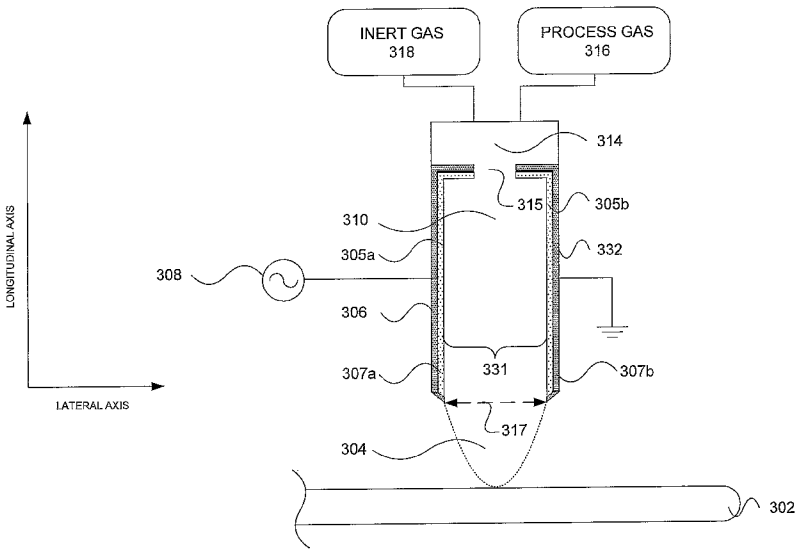
(81) Designated States *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, 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, HU, IE, IS, IT, LT, LU, LV, MC, NL, 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*

[Continued on next page]

(54) **Title:** APPARATUS FOR THE REMOVAL OF A FLUORINATED POLYMER FROM A SUBSTRATE AND METHODS THEREFOR



(57) **Abstract:** An apparatus generating a plasma for removing fluorinated polymer from a substrate is disclosed. The embodiment includes a powered electrode assembly, including a powered electrode, a first dielectric layer, and a first wire mesh disposed between the powered electrode and the first dielectric layer. The embodiment also includes a grounded electrode assembly disposed opposite the powered electrode assembly so as to form a cavity wherein the plasma is generated, the first wire mesh being shielded from the plasma by the first dielectric layer when the plasma is present in the cavity, the cavity having an outlet at one end for providing the plasma to remove the fluorinated polymer.

WO 2007/038030 A3

— *with amended claims and statement*

(88) Date of publication of the international search report:
6 December 2007

Date of publication of the amended claims and statement:
24 January 2008

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.