

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
13 July 2006 (13.07.2006)

PCT

(10) International Publication Number
WO 2006/073585 A3

(51) International Patent Classification:
C23C 4/12 (2006.01) *C23C 30/00* (2006.01)

(21) International Application Number:
PCT/US2005/041862

(22) International Filing Date:
18 November 2005 (18.11.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
10/996,883 24 November 2004 (24.11.2004) US

(71) Applicant (for all designated States except US): **APPLIED MATERIALS, INC.** [US/US]; Patent Department, M/S 2061, Santa Clara, California 95052 (US).

(71) Applicants and

(72) Inventors: **LIN, Yixing** [CN/US]; 18026 King Court, Saratoga, California 95070 (US). **XU, Daijiang** [US/US]; 1031 Sandalwood Lane, Milpitas, California 95035 (US). **STOW, Clifford** [US/US]; 480 N. Winchester Blvd. #5, Santa Clara, California 95128 (US).

(74) Agent: **JANAH, Ashok, K.**; JANAH & ASSOCIATES, P.C., 650 Delancey Street, Suite 106, San Francisco, California 94107 (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, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, 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).

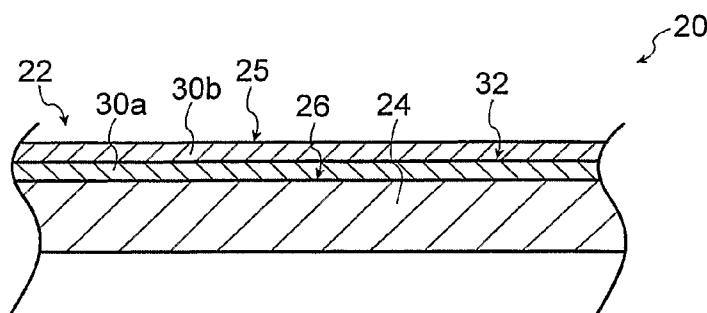
Published:

— with international search report

(88) Date of publication of the international search report:
8 September 2006

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.

(54) Title: PROCESS CHAMBER COMPONENT WITH LAYERED COATING AND METHOD



(57) Abstract: A substrate processing chamber component (20) is capable of being exposed to an energized gas in a process chamber. The component has an underlying structure (24) and first (30a) and second coating (30b) layers. The first coating (30a) layer is formed over the underlying structure, and has a first surface (32) with an average surface roughness of less than about 25 micrometers. The second coating layer (30b) is formed over the first coating layer, and has a second surface (25) with an average surface roughness of at least about 50 micrometers. Process residues can adhere to the surface of the second coating layer (30b) to reduce the contamination of processed substrates.



WO 2006/073585 A3