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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
9 January 2003 (09.01.2003)

PCT

(10) International Publication Number
WO 03/003449 A2

(51) International Patent Classification[7]: H01L 21/68

(21) International Application Number: PCT/US02/18093

(22) International Filing Date: 10 June 2002 (10.06.2002)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
09/892,634 28 June 2001 (28.06.2001) US

(63) Related by continuation (CON) or continuation-in-part (CIP) to earlier application:
US 09/892,634 (CON)
Filed on 28 June 2001 (28.06.2001)

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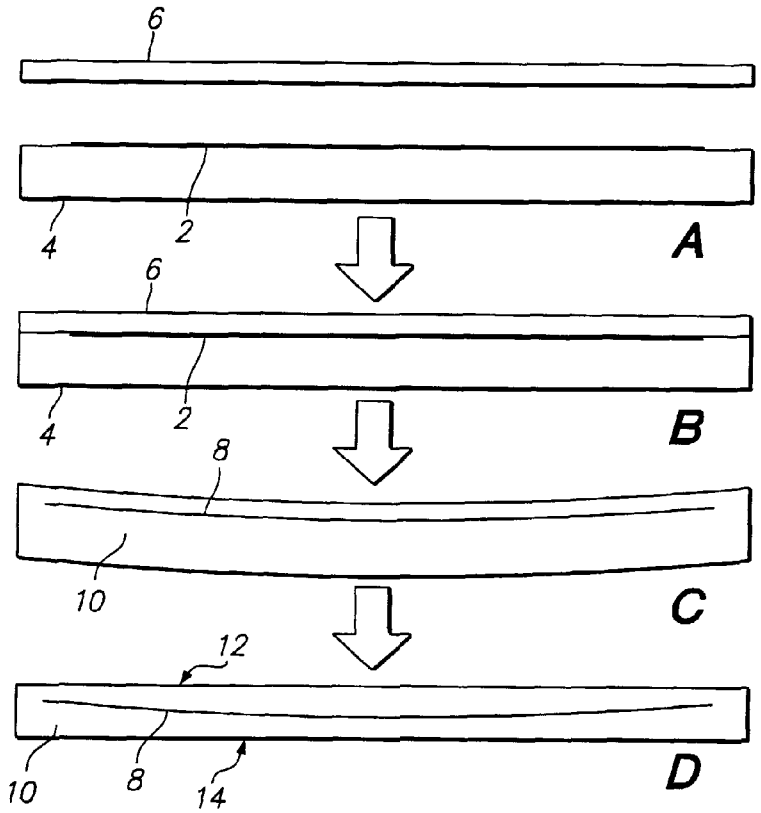
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(81) Designated States *(national)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW.

(84) Designated States *(regional)*: ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),

*[Continued on next page]*

(54) Title: CERAMIC ELECTROSTATIC CHUCK ASSEMBLY AND METHOD OF MAKING




(57) Abstract: A sintered ceramic electrostatic chucking device (ESC) which includes a patterned electrostatic clamping electrode embedded in a ceramic body wherein the clamping electrode includes at least one strip of a sintered electrically conductive material arranged in a fine pattern. Due to the fineness of the electrode pattern employed, stresses induced during manufacture of the ESC are reduced such that the clamping electrode remains substantially planar after the sintering operation. The resulting ESC allows for improved clamping uniformity. Another ESC includes an insulating or semi-conducting body and a clamping electrode having a high resistivity and or a high lateral impedance. The electrostatic chucking device provides improved RF coupling uniformity when RF energy is coupled thorough the clamping electrode from an underlying RF electrode. The RF electrode can be a separate baseplate or it can be a part of the chuck. The ESC's may be used to support semiconductor substrates such as semiconductor wafers in plasma processing equipment.

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Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (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*

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