

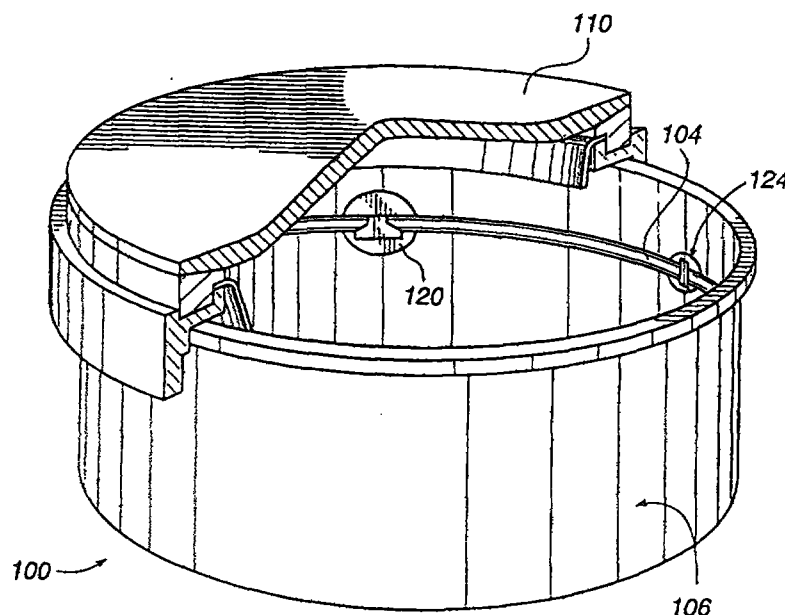


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INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁶: H01J 37/34, 37/32, C23C 14/38, 14/40	A1	(11) International Publication Number: WO 99/14792 (43) International Publication Date: 25 March 1999 (25.03.99)
(21) International Application Number: PCT/US98/18898 (22) International Filing Date: 9 September 1998 (09.09.98) (30) Priority Data: 08/929,829 15 September 1997 (15.09.97) US (71) Applicant: APPLIED MATERIALS, INC. [US/US]; 3050 Bowers Avenue, Santa Clara, CA 95054 (US). (72) Inventors: GOPALRAJA, Praburam; Apartment 277, 1235 Wildwood Avenue, Sunnyvale, CA 94089 (US). NARASHIMHAN, Murali; 1771 Valhalla Court, San Jose, CA 95132 (US). (74) Agents: BERNADICOU, Michael, A. et al.; Blakely, Sokoloff, Taylor & Zafman LLP, 7th floor, 12400 Wilshire Boulevard, Los Angeles, CA 90025 (US).		(81) Designated States: JP, KR, SG, European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE). Published <i>With international search report.</i> <i>Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i>

(54) Title: ADJUSTMENT OF DEPOSITION UNIFORMITY IN AN INDUCTIVELY COUPLED PLASMA SOURCE**(57) Abstract**

A plasma chamber in a semiconductor fabrication system uses a two step process to sputter deposit material onto a substrate. The first step provides a power ratio of RF power to DC power optimized to increase uniformity of deposition of material onto a workpiece from a first target. A second step involves applying little to no DC power to the target, while an RF power is coupled into a plasma generation region to sputter material from a second target onto the workpiece. It has been found that material from the second target provides greater sidewall coverage of channels located on the workpiece, as well as increasing the uniformity of the deposit on the surface of the workpiece.