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(71) Applicant: APPLIED MATERIALS, INC. [US/US]; 3050 Bowers Avenue, Santa Clara, CA 95054 (US).

(72) Inventors: LEET, Michael; 3140 Mosshall Way, San Jose, CA 95135 (US). FORSTER, John, C.; 42 Hallam Place, San Francisco, CA 94103 (US).

(74) Agents: BERNADICOU, Michael, A. et al.; Blakely, Sokoloff, Taylor & Zafman LLP, 7th floor, 12400 Wilshire Boulevard, Los Angeles, CA 90025 (US).

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(54) Title: APPARATUS FOR SPUTTERING IONIZED MATERIAL IN A MEDIUM TO HIGH DENSITY PLASMA

(57) Abstract

An apparatus and method for processing workpieces, which include a chamber having a coil for inductively coupling RF energy through a dielectric window into the chamber to energize a plasma, and a shield positioned between a sputtering target and the dielectric window to reduce or eliminate deposition of sputtered material onto a portion of the dielectric window. In the illustrated embodiment, the window shield is spaced from the dielectric window to define a gap and has at least one opening, which permits RF energy to be coupled through the gap and through the window shield opening to the interior of the chamber. As a consequence, the coil may be positioned exterior to the chamber to simplify construction and operation of the chamber.

