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- (71) **Applicant: APPLIED MATERIALS, INC.** [US/US];
3050 Bowers Avenue, Santa Clara, California 95054 (US).
- (72) **Inventor: PARKHE, Vijay D.;** c/o Applied Materials, Inc.,
Law Dept., M/s 1269, 3050 Bowers Avenue, Santa Clara,
California 95054 (US).
- (74) **Agent: PATTERSON, B. Todd et al.;** Patterson + Sheri-
dan LLP, 24 Greenway Plaza, Suite 1600, Houston, Texas
77046 (US).
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(54) **Title:** POROUS PLUG BONDING

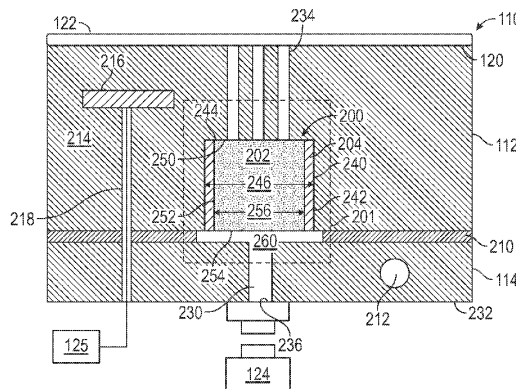


FIG. 2

(57) **Abstract:** Embodiments described herein generally relate to porous plugs having sealing layers for use in substrate support pedestals and methods for forming the same. In one or more embodiments, the sealing layer can be formed in-situ by applying a fluoroelastomer composition to at least one of the porous plug and the walls of a cavity of an electrostatic chuck. The fluoroelastomer composition can be cured in-situ to form the sealing layer between the porous plug and the wall of the cavity. The porous plug is positioned within the cavity to control the flow of gas through a gas flow passage. The sealing layer is positioned adjacent to the porous plug and is capable of forming one or more of a radial seal between the porous plug and the wall of the cavity and an axial seal between the porous plug and a cooling base.

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