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(71) Applicant: LAM RESEARCH CORPORATION

[US/US]; 4650 Cushing Parkway, Fremont, California
94538 (US).

(72) Inventors: LAI, Chiukin Steven; 4650 Cushing Parkway ,
Fremont, California 94538 (US). NA, Jeong-Seok; 4650
Cushing Parkway, Fremont, California 94538 (US).

(74) Agent: BERGIN, Denise S. et al.; Weaver Austin Vil-
leneuve & Sampson LLP, P. O. Box 70250, Oakland, Cali-
fornia 94612-0250 (US).

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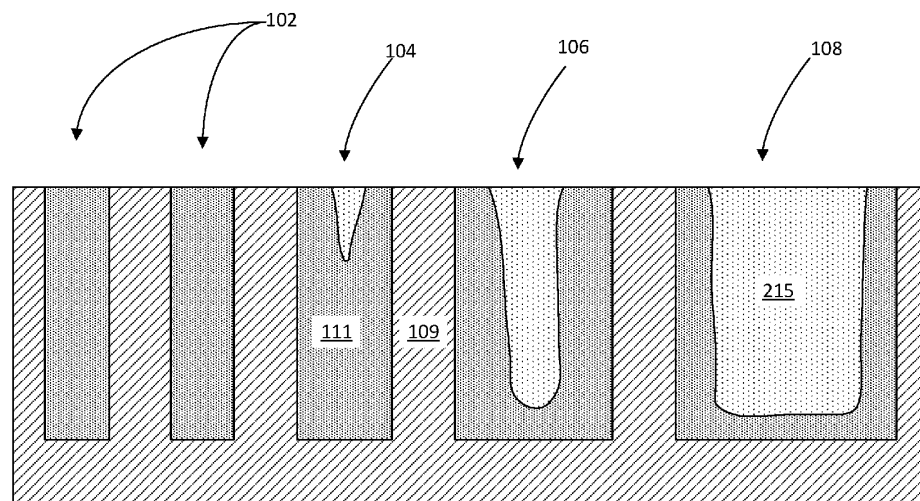


FIG 2

(57) Abstract: Metallization schemes involve atomic layer deposition (ALD) of molybdenum (Mo) and in some embodiments, ALD of Mo in a feature without a barrier layer. In some embodiments, deposition of the ALD Mo film may be followed by chemical vapor deposition (CVD) or physical vapor deposition (PVD) of a Mo film. In some embodiments, the CVD or PVD Mo film is part of the metallization stack. In other embodiments, the CVD or PVD Mo film is deposited as a sacrificial overburden layer. In some embodiments, deposition of the ALD Mo film may be followed by CVD or PVD of another metal such as tungsten (W). In some embodiments, the CVD or PVD W film is part of the metallization stack. In other embodiments, the CVD or PVD W film is deposited as a sacrificial overburden layer.

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