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(71) Applicant *(for all designated States except US)*: **LAM RESEARCH CORPORATION** [US/US]; 4650 Cushing Parkway, Fremont, California CA-94538 (US).

(71) Applicant *(for BZ only)*: **LAM RESEARCH AG** [AT/AT]; SEZ-Strasse 1, A-9500 Villach (AT).

(72) Inventors; and
(71) Applicants *(for US only)*: **GAFF, Keith, William** [AU/US]; 5363 Granville Court, Fremont, CA 94536 (US). **COMENDANT, Keith** [US/US]; 4350 Glidden Way, Fremont, California 94536 (US). **RICCI, Anthony** [US/US]; 1513 Yukon Drive, Sunnyvale, CA 94087 (US).

(74) Agent: **KONTRUS, Gerhard**; SEZ-Strasse 1, A-9500 Villach (AT).

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[Continued on next page]

(54) Title: THERMAL PLATE WITH PLANAR THERMAL ZONES FOR SEMICONDUCTOR PROCESSING

(57) Abstract: A thermal plate for a substrate support assembly in a semiconductor plasma processing apparatus, comprises multiple independently controllable planar thermal zones arranged in a scalable multiplexing layout, and electronics to independently control and power the planar heater zones. Each planar thermal zone uses at least one Peltier device as a thermoelectric element. A substrate support assembly in which the thermal plate is incorporated includes an electrostatic clamping electrode layer and a temperature controlled base plate. Methods for manufacturing the thermal plate include bonding together ceramic or polymer sheets having planar thermal zones, positive, negative and common lines and vias.

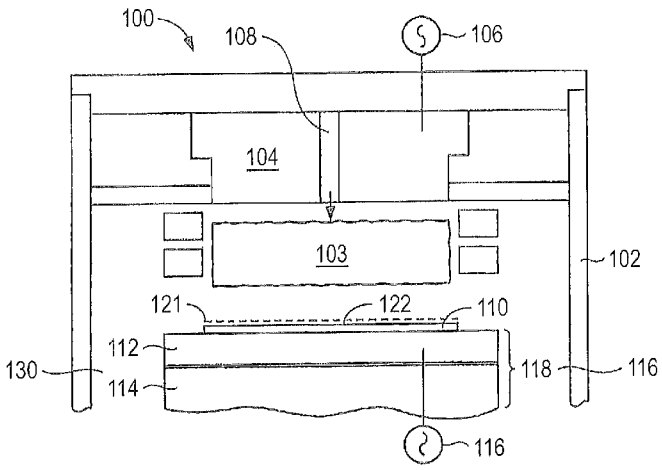


FIG. 1

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— *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

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