



(51) International Patent Classification:

H05H 1/34 (2006.01) *H01L 21/265* (2006.01)
H01L 21/3065 (2006.01) *H01L 21/205* (2006.01)

(21) International Application Number:

PCT/US2009/033060

(22) International Filing Date:

4 February 2009 (04.02.2009)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

12/050,195 18 March 2008 (18.03.2008) US

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(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM,

AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))

Published:

- with international search report (Art. 21(3))
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))

(54) Title: ELECTRODE ASSEMBLY AND PLASMA PROCESSING CHAMBER UTILIZING THERMALLY CONDUCTIVE GASKET

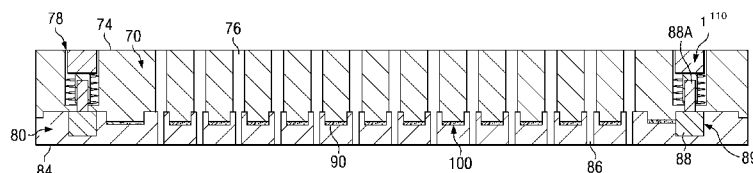


FIG. 4

(57) Abstract: The present invention relates generally to plasma processing and, more particularly, to plasma processing chambers and electrode assemblies used therein. According to one embodiment of the present invention, an electrode assembly is provided comprising a thermal control plate, a silicon-based showerhead electrode, and a thermally conductive gasket, wherein respective profiles of a frontside of the thermal control plate and a backside of the showerhead electrode cooperate to define a disjointed thermal interface comprising portions proximal to showerhead passages of the showerhead electrode and portions displaced from the showerhead passages. The displaced portions are recessed relative to the proximal portions and are separated from the showerhead passages by the proximal portions of the thermal interface. The gasket is positioned along the displaced portions such that the gasket is isolated from the showerhead passages and may facilitate heat transfer across the thermal interface from the showerhead electrode to the thermal control plate.

