

[54] PROCESSES DEPENDING ON PLASMA GENERATION USING A HELICAL RESONATOR

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[58] Field of Search 437/225, 228, 229, 233, 437/235, 238; 204/192.12, 192.15, 192.25, 192.32, 192.35; 427/38, 39, 50, 51; 330/56; 315/39.51, 39.71; 156/643, 646, 657, 659.1, 662

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[57] ABSTRACT

Anisotropic plasma etching is accomplished utilizing a helical resonator operated at relatively low gas pressure. The use of this combination yields an extremely high flux of ionic species with resulting rapid anisotropic etching. A helical resonator in conjunction with suitable precursors is also quite useful for plasma induced deposition.

38 Claims, 4 Drawing Sheets

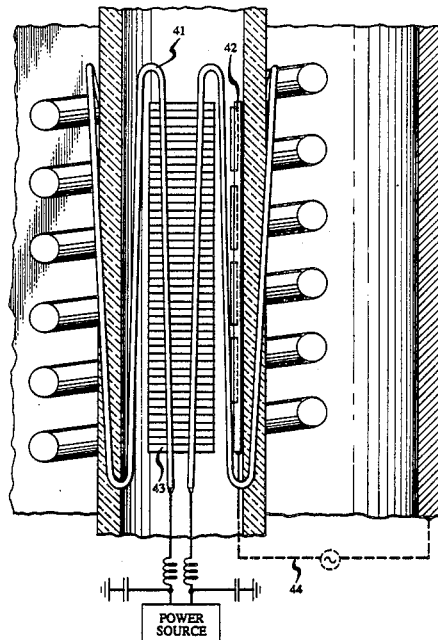


FIG. 1

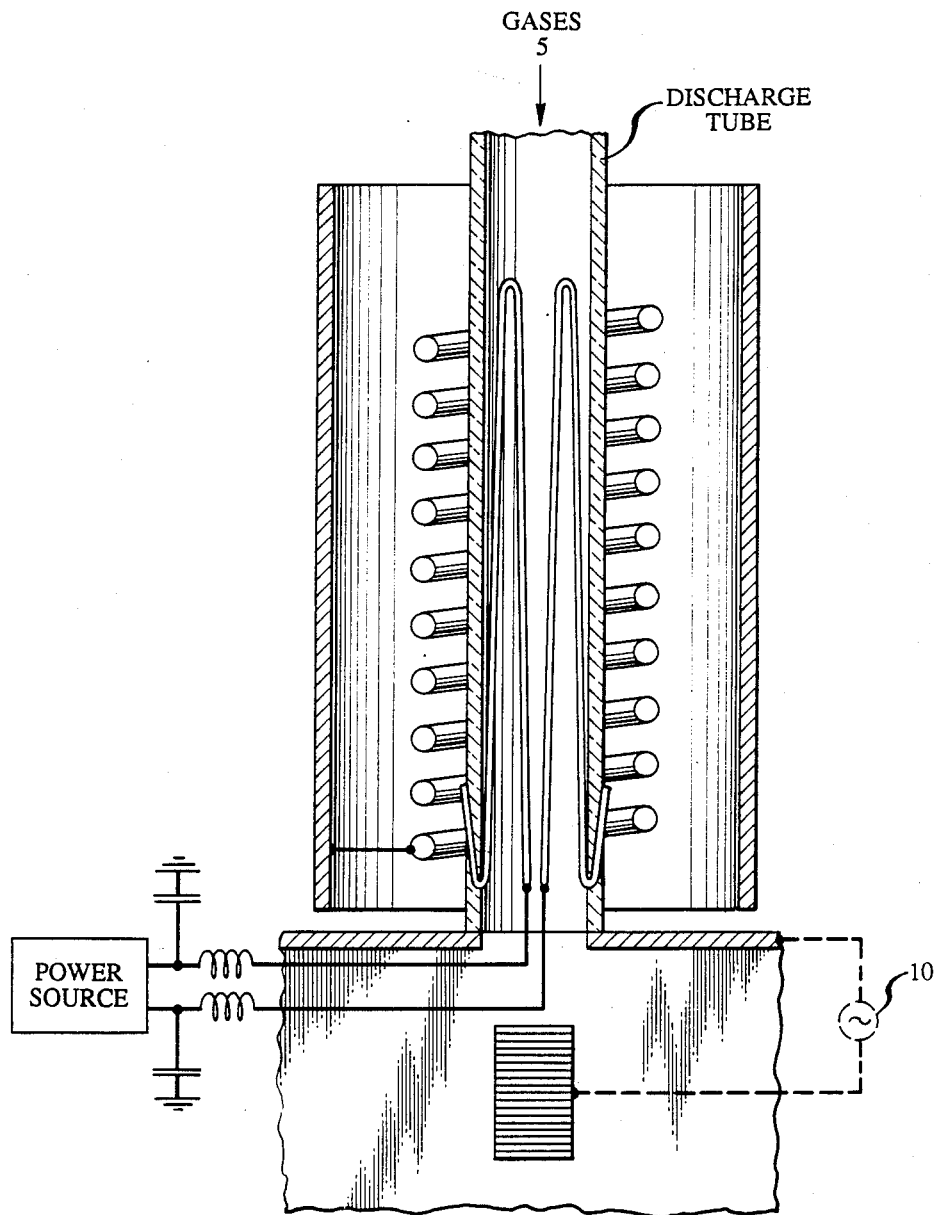


FIG. 2

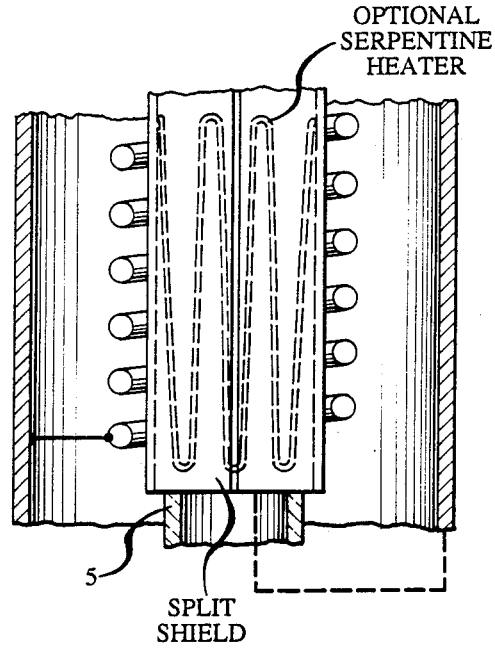


FIG. 3

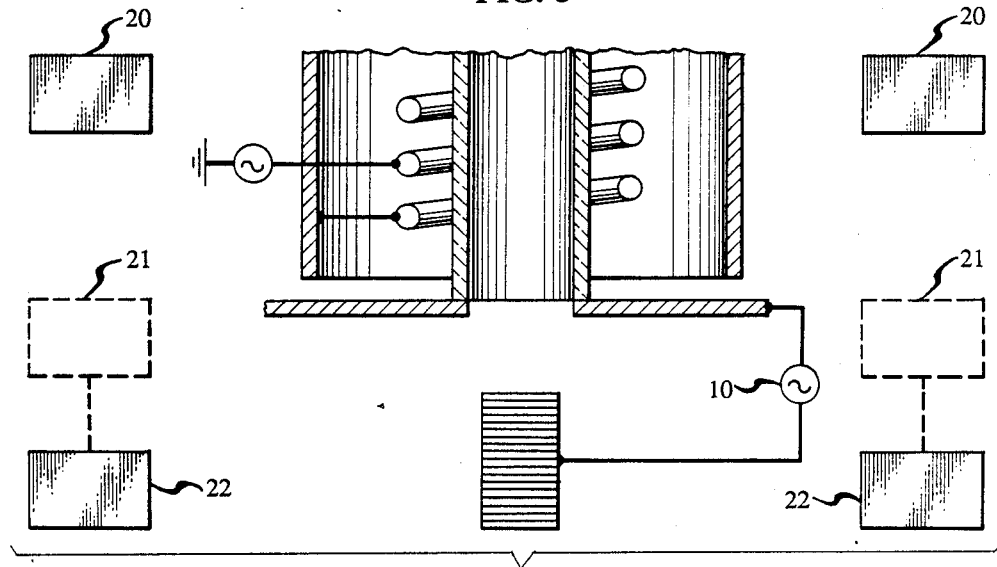
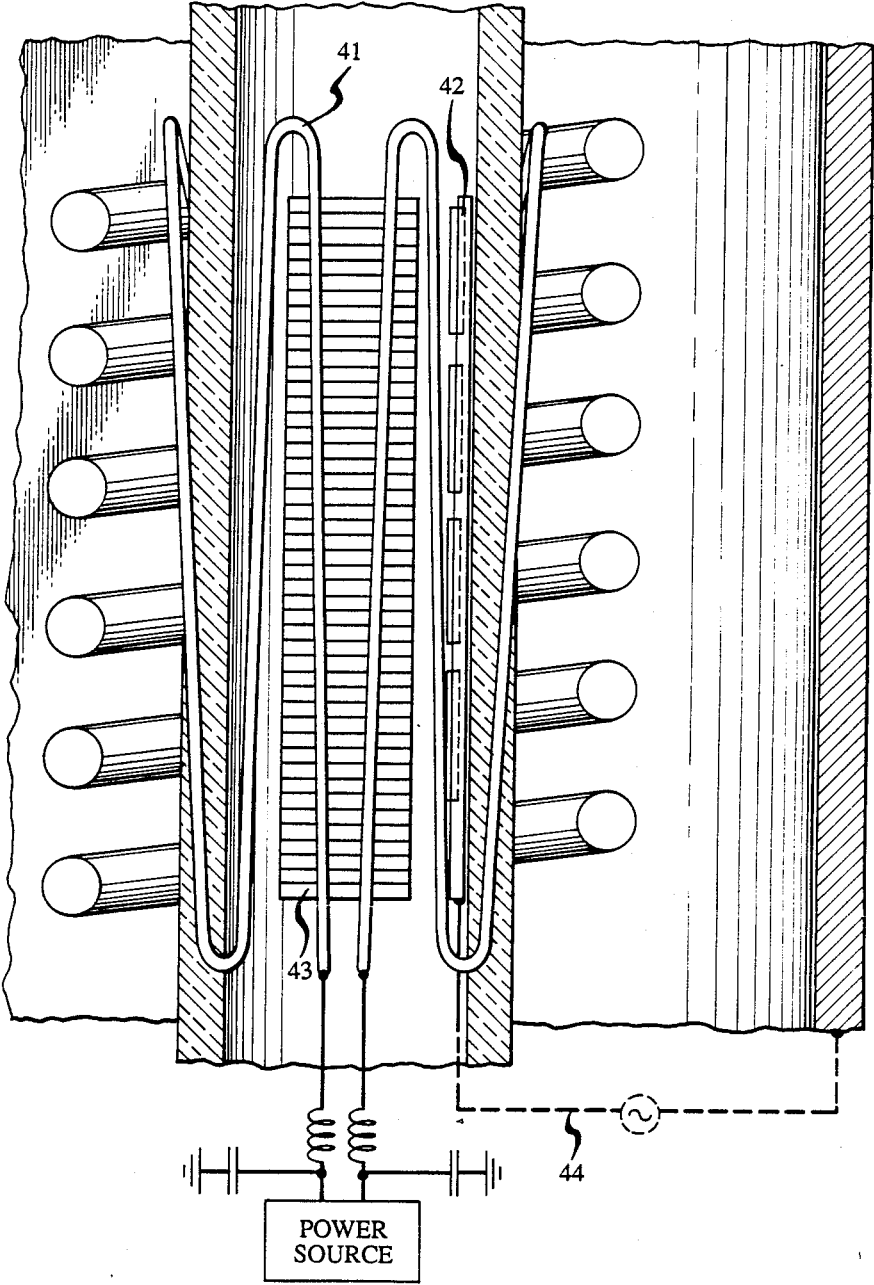


FIG. 4



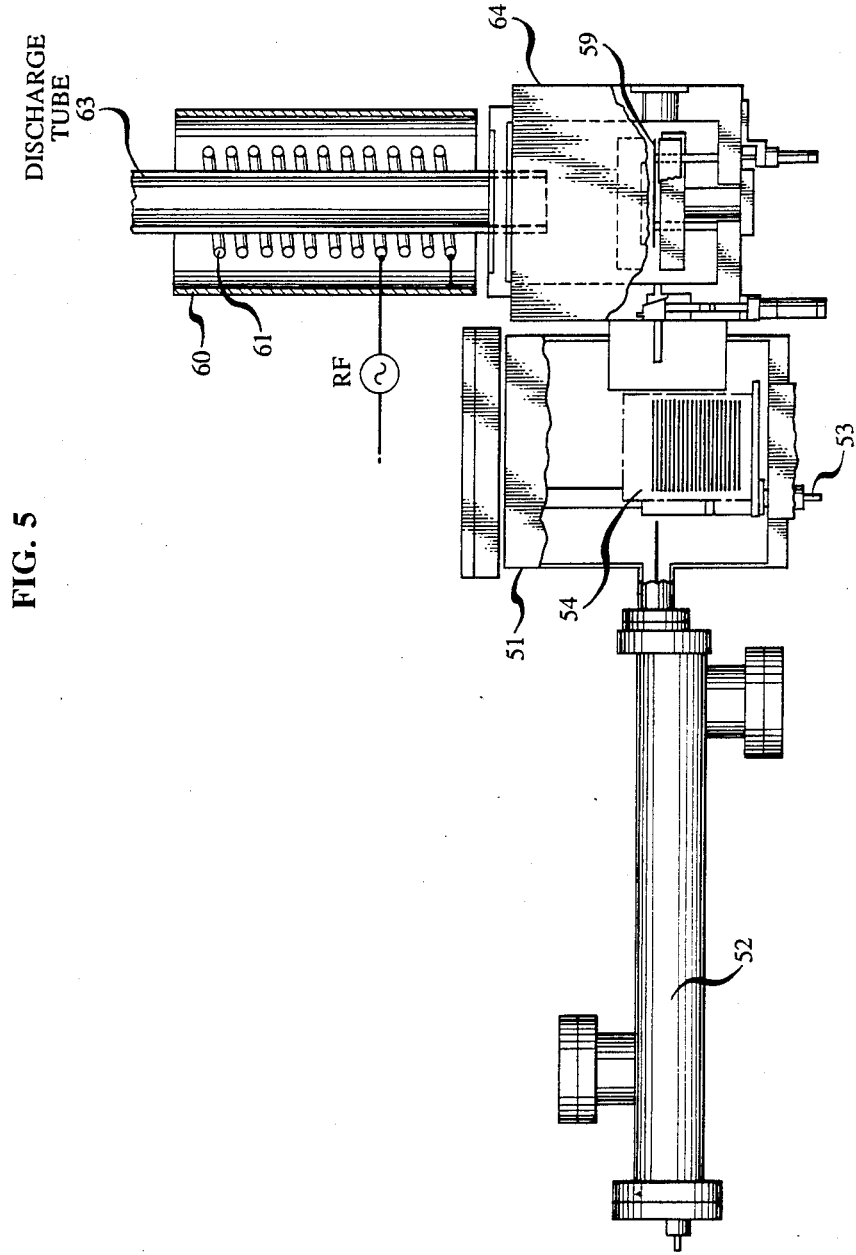


FIG. 5

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