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(54) **Title**: VARIABLE-DENSITY PLASMA PROCESSING OF SEMICONDUCTOR SUBSTRATES

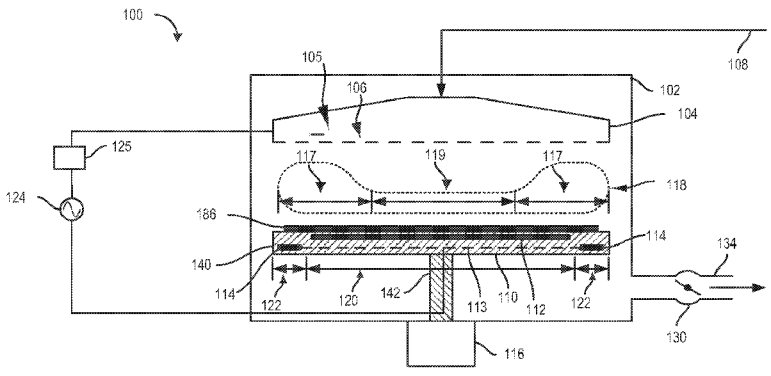



FIG. 1

(57) **Abstract**: Methods and hardware for generating variable-density plasmas are described. For example, in one embodiment, a process station comprises a showerhead including a showerhead electrode and a substrate holder including a mesa configured to support a substrate, wherein the substrate holder is disposed beneath the showerhead. The substrate holder includes an inner electrode disposed in an inner region of the substrate holder and an outer electrode being disposed in an outer region of the substrate holder. The process station further comprises a plasma generator configured to generate a plasma in a plasma region disposed between the showerhead and the substrate holder, and a controller configured to control the plasma generator, the inner electrode, the outer electrode, and the showerhead electrode to effect a greater plasma density in an outer portion of the plasma region than in an inner portion of the plasma region.

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