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(54) Title: CYCLIC ETCH/DEPOSITION PLASMA PROCESSES USING TUNGSTEN BASED PRECURSOR GAS

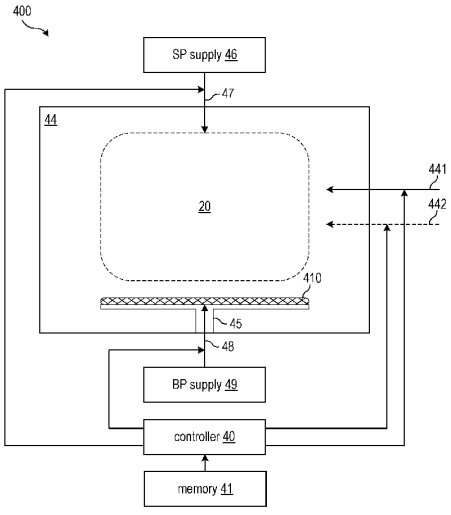


Fig. 4

(57) Abstract: A method of plasma etching a substrate includes cyclically performing a first etch step to etch a target material, the substrate including a patterned mask disposed over the target material and having openings in the patterned mask, performing the first etch step including generating a first plasma from a carbon containing precursor gas and exposing the substrate to the first plasma to form a first passivation layer and etch the target material, the first passivation layer including a polymer material over sidewalls of the openings. And the method further includes cyclically performing a second etch step to remove a portion of the first passivation layer, performing the second etch step including generating a second plasma from a tungsten containing precursor gas and exposing the substrate to the second plasma.

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