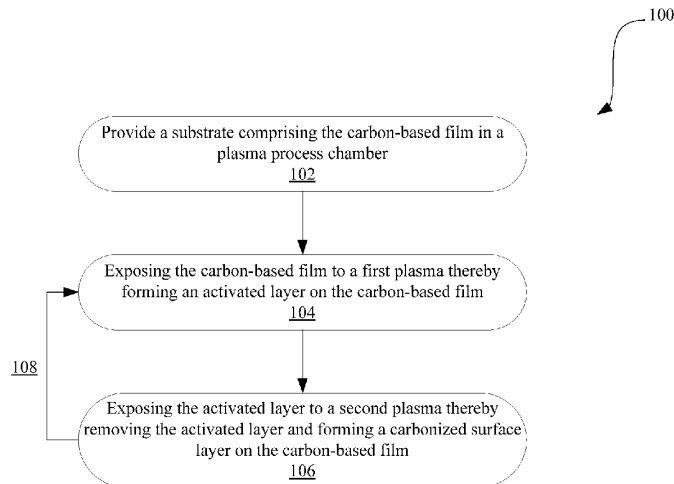




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(54) **Title:** SELF-LIMITING CYCLIC ETCH METHOD FOR CARBON-BASED FILMS

FIG. 1



(57) **Abstract:** Embodiments of the disclosure describe a cyclic etch method for carbon-based films. According to one embodiment, the method includes providing a substrate containing the carbon-based film, exposing the carbon-based film to an oxidizing plasma thereby forming an oxidized layer on the carbon-based film, thereafter, exposing the oxidized layer to a non-oxidizing inert gas plasma thereby removing the oxidized layer and forming a carbonized surface layer on the carbon-based film, and repeating the exposing steps at least once.

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