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(54) Title: HIGH CONDUCTIVE PASSIVATION LAYERS AND METHOD OF FORMING THE SAME DURING HIGH ASPECT
RATIO PLASMA ETCHING

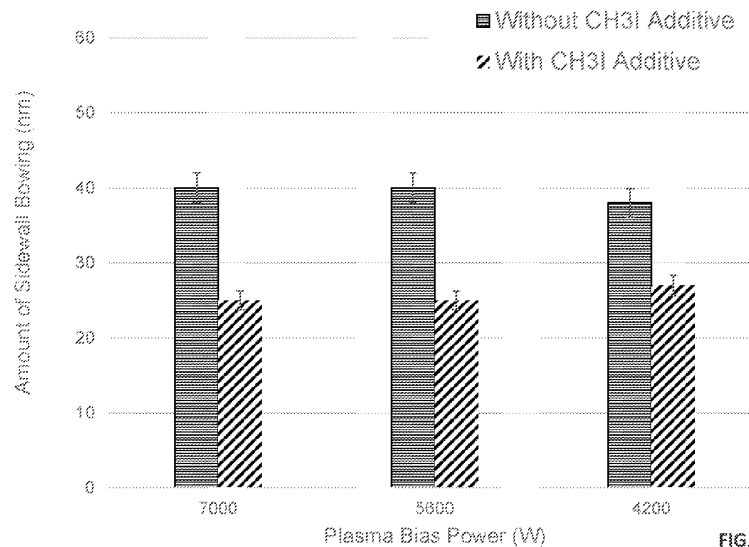


FIG. 5

(57) Abstract: Disclosed are methods for forming a high aspect ratio (HAR) structure during a HAR etch process in a substrate in a reaction chamber, the method comprising: sequentially or simultaneously exposing the substrate to a vapor of an etchant including a hydrofluorocarbon or fluorocarbon compound and an additive compound, the substrate having a film disposed thereon and a patterned mask layer disposed on the film; activating a plasma to produce an activated hydrofluorocarbon or fluorocarbon compound and an activated additive compound; and allowing an etching reaction to proceed between the film uncovered by the patterned mask layer and the activated hydrofluorocarbon or fluorocarbon compound and the activated additive compound to selectively etch the film from the patterned mask layer, thereby forming the HAR patterned structure.

[Continued on next page]

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