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(54) Title: METHODS AND APPARATUS FOR CLEANING SUBSTRATE SURFACES WITH ATOMIC HYDROGEN

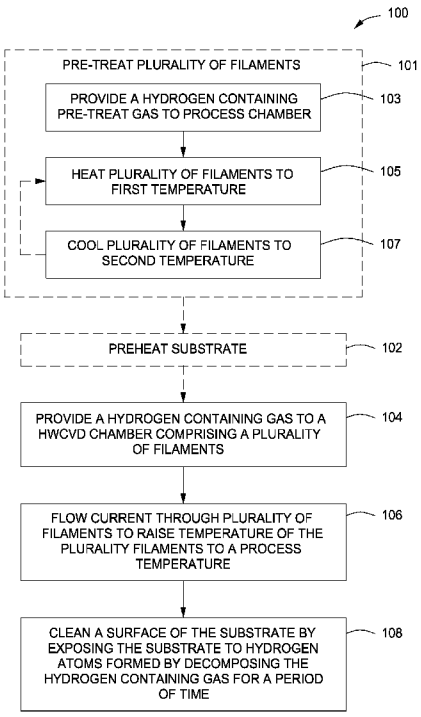


FIG. 1

(57) Abstract: Methods and apparatus for cleaning substrate surfaces are provided herein. In some embodiments, a method of cleaning a surface of a substrate may include providing a hydrogen containing gas to a first chamber having a plurality of filaments disposed therein; flowing a current through the plurality of filaments to raise a temperature of the plurality of filaments to a process temperature sufficient to decompose at least some of the hydrogen containing gas; and cleaning the surface of the substrate by exposing the substrate to hydrogen atoms formed from the decomposed hydrogen containing gas for a period of time.

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