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(54) Title: METHOD AND APPARATUS FOR CLEANING A SUBSTRATE SURFACE

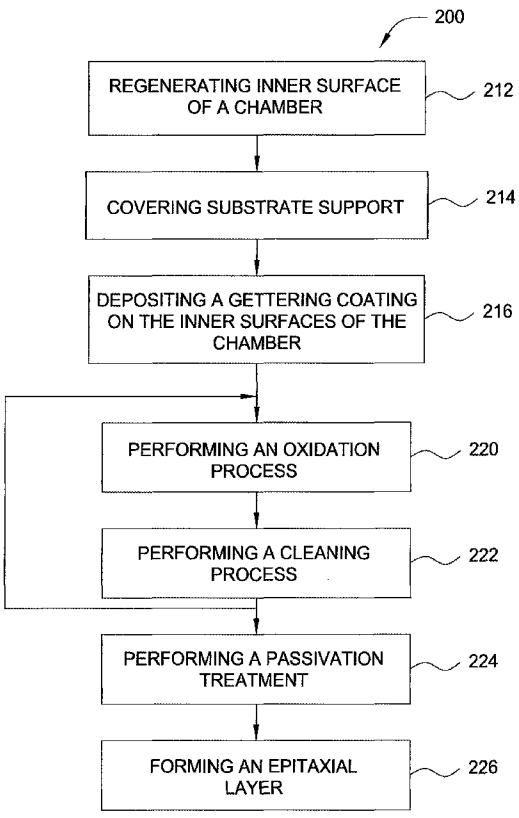

FIG. 3

(57) Abstract: The present invention generally provides apparatus and method for forming a clean and damage free surface on a semiconductor substrate. One embodiment of the present invention provides a system that contains a cleaning chamber that is adapted to expose a surface of substrate to a plasma cleaning process prior to forming an epitaxial layer thereon. In one embodiment, a method is employed to reduce the contamination of a substrate processed in the cleaning chamber by depositing a gettering material on the inner surfaces of the cleaning chamber prior to performing a cleaning process on a substrate. In one embodiment, oxidation and etching steps are repeatedly performed on a substrate in the cleaning chamber to expose or create a clean surface on a substrate that can then have an epitaxial placed thereon. In one embodiment, a low energy plasma is used during the cleaning step.

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