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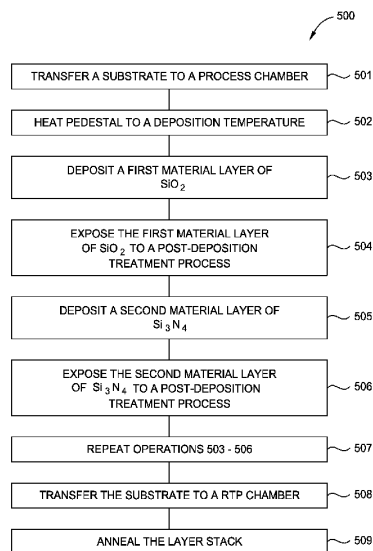


FIG. 5

(57) Abstract: Embodiments described herein relate to manufacturing layer stacks of oxide/nitride (ON) layers with minimized in-plane distortion (IPD) and lithographic overlay errors. A method of forming a layer stack ON layers includes flowing a first silicon-containing gas, an oxygen-containing gas, and a first dilution gas. A RF power is symmetrically applied to form a first material layer of SiO₂. A second silicon-containing gas, a nitrogen-containing gas, and a second dilution gas are flowed. A second RF power is symmetrically applied to form a second material layer of Si₃N₄. The flowing the first silicon-containing gas, the oxygen-containing gas, and the first dilution gas, the symmetrically applying the first RF power, the flowing the second silicon-containing gas, the nitrogen-containing gas, and the second dilution gas, and the symmetrically applying the second RF power is repeated until a desired number of first material layers and second material layers make up a layer stack.

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