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(54) Title: LOSS PREVENTION DURING ATOMIC LAYER DEPOSITION

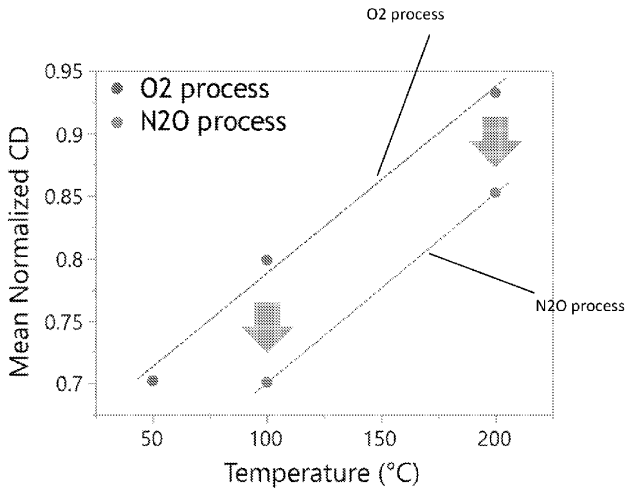


FIG. 8

(57) Abstract: Methods of depositing silicon oxide on carbon-based films on a substrate involve adsorbing a silicon-containing reactant on the substrate surfaces, generating oxygen radicals from N2O, and exposing the adsorbed silicon-containing reactant to the oxygen radicals to form a silicon oxide film. In some embodiments, the carbon-based films form features having sidewalls. The methods result in low carbon loss and substantially vertical sidewalls. Embodiments of the methods are performed at high temperatures that facilitate high quality deposition.

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