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(54) Title: INTEGRATED METHOD AND TOOL FOR HIGH QUALITY SELECTIVE SILICON NITRIDE DEPOSITION

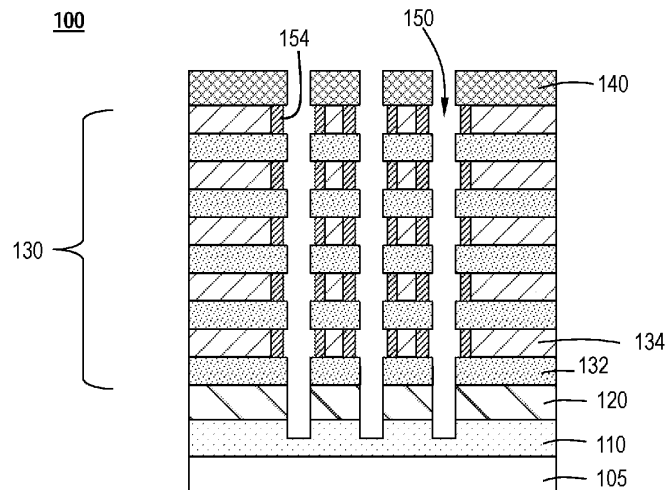


FIG. 5

(57) Abstract: Methods of manufacturing memory devices are provided. The method comprises pre-cleaning a top surface of a film stack, the film stack comprising alternating layers of a first material layer and a second material layer and having one or more of a memory hole and a slit pattern opening extending through the film stack; exposing the top surface of the film stack to a growth inhibitor; selectively depositing a silicon-containing dielectric layer in a region of the film stack; and densifying the silicon-containing dielectric layer. The processing method is performed in a processing tool without breaking vacuum.

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