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(54) Title: SURFACE MODIFIED DEPTH CONTROLLED DEPOSITION FOR PLASMA BASED DEPOSITION

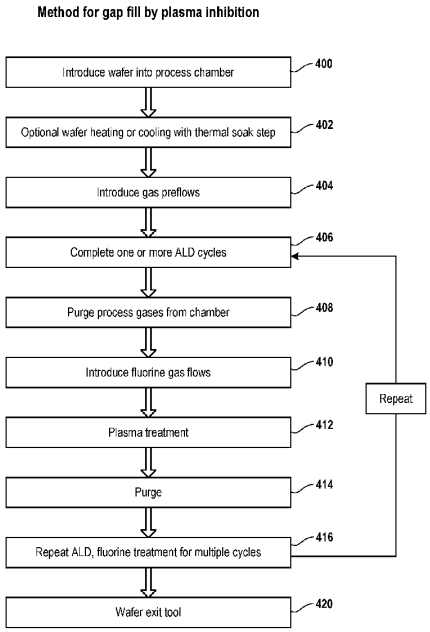

Fig. 4

(57) Abstract: A method for performing gap fill of a feature on a substrate includes the following operations: (a) moving the substrate into a process chamber; (b) performing a plurality of cycles of an ALD process; (c) purging process gases from the ALD process from the process chamber; (d) performing a plasma treatment on the substrate by introducing a fluorine- containing gas into the process chamber and applying RF power to the fluorine-containing gas to generate a fluorine plasma in the process chamber; (e) purging process gases from the plasma treatment from the process chamber; (f) repeating operations (b) through (e) until a predefined number of cycles has been performed.

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