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(54) **Title**: METHOD FOR TUNABLY REPAIRING LOW-K DIELECTRIC DAMAGE

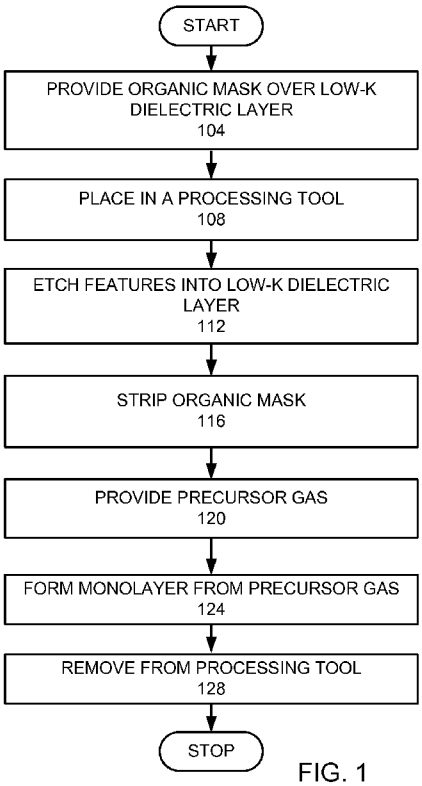


FIG. 1

(57) **Abstract**: A method for providing a tuned repair for damage to a silicon based low-k dielectric layer with organic compounds, where damage replaces a methyl attached to silicon with a hydroxyl attached to silicon is provided. A precursor gas is provided, comprising a first repair agent represented as Si-(R)x(OR')y, where y?1 and x+y=4, and wherein R is an alkyl or aryl group and R' is an alkyl or aryl group and a second repair agent represented as Si-(R)x(OR')yR", where y?1 and x+y=3, and wherein R is an alkyl or aryl group and R' is an alkyl or aryl group, and R" is of a group that reduces interfacial surface tension between a wet clean chemical and the low-k dielectric. Some of the first repair agent and second repair agent are bonded to the low-k dielectric to form a monolayer of the first repair agent and the second repair agent.

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