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WO 2025/207989 A1

(54) Title: INTEGRATED LOW K RECOVERY AND ALD METAL DEPOSITION PROCESS FOR ADVANCED TECHNOLOGY NODE

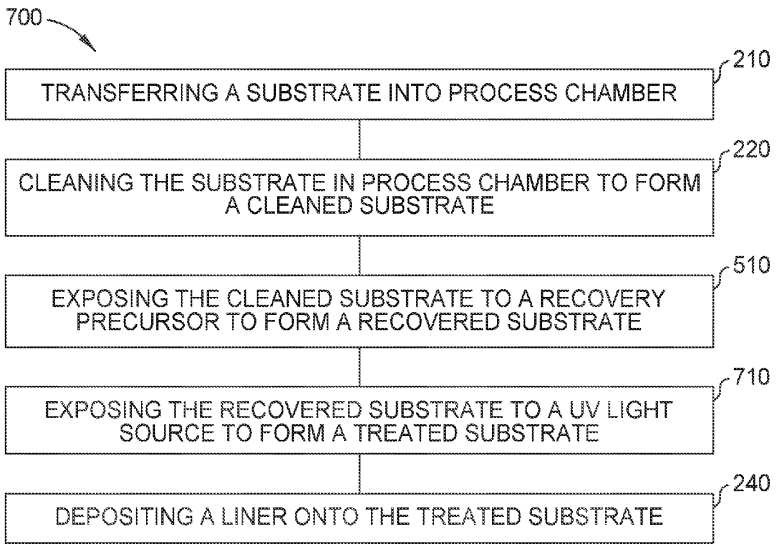


FIG. 7

(57) Abstract: In some embodiments, a method includes positioning a substrate within a processing chamber. The substrate includes a first low-k film having a first water contact angle. The first low-k film is disposed over an interconnect structure. The method further includes cleaning the substrate within the processing chamber to form a cleaned substrate. The cleaned substrate includes a damaged low-k film having a second water contact angle. The method further includes exposing the cleaned substrate to a recovery precursor to form a recovered substrate. The recovered substrate includes a recovered low-k film. The method further includes exposing the recovered substrate to a UV light source to form a treated substrate. The treated substrate includes a treated low-k film having a third water contact angle. The method further includes depositing a liner layer over the treated substrate via atomic layer deposition (ALD).

[Continued on next page]

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