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[Continued on next page]

(54) **Title**: ULTRA LOW SILICON LOSS HIGH DOSE IMPLANT STRIP

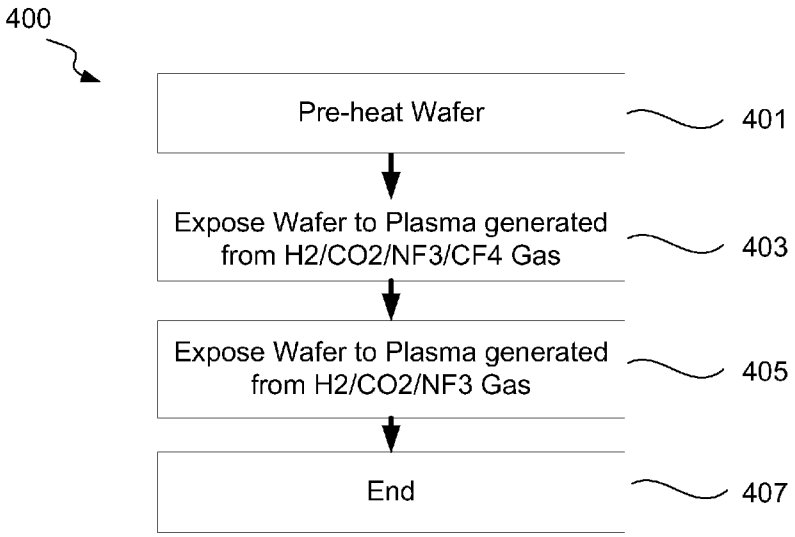


FIG. 4

(57) **Abstract**: Improved methods for stripping photoresist and removing ion implant related residues from a work piece surface are provided. According to various embodiments, plasma is generated using elemental hydrogen, a fluorine-containing gas and a protectant gas. The plasma-activated gases reacts with the high-dose implant resist, removing both the crust and bulk resist layers, while simultaneously protecting exposed portions of the work piece surface. The work piece surface is substantially residue free with low silicon loss.

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