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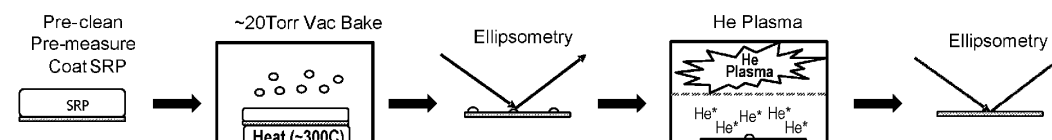
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(54) Title: RESIDUE-FREE REMOVAL OF STIMULUS RESPONSIVE POLYMERS FROM SUBSTRATES

Metastable - aided Residue Removal Efficiency



Controls (Surface Modification Evaluation)

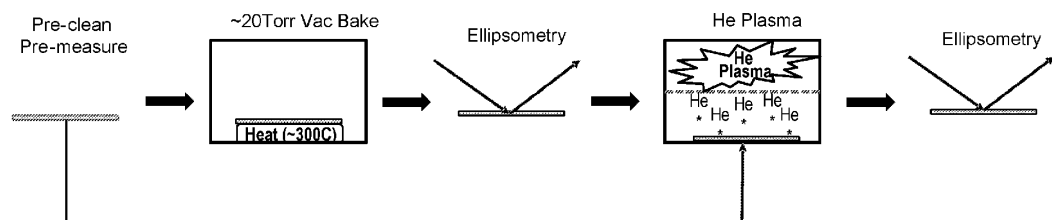


FIG. 4

(57) Abstract: Removing stimulus responsive polymers (SRPs) includes exposure to high energy metastable species, generated in a noble gas plasma, at an elevated temperature. The metastable species have sufficient energies and lifetimes to scission bonds on the polymer or other residues. At temperatures greater than the ceiling temperature of the SRP, there is a strong thermodynamic driving force to revert to volatile monomers once bond scissioning has occurred. The metastable species are not chemically reactive and do not appreciably affect the underlying surface. The high energy metastable species are effective at removing residues that remain after exposure to other stimuli such as heat.

[Continued on next page]

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