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(54) **Title**: RELEASE AGENT PARTITION CONTROL IN IMPRINT LITHOGRAPHY

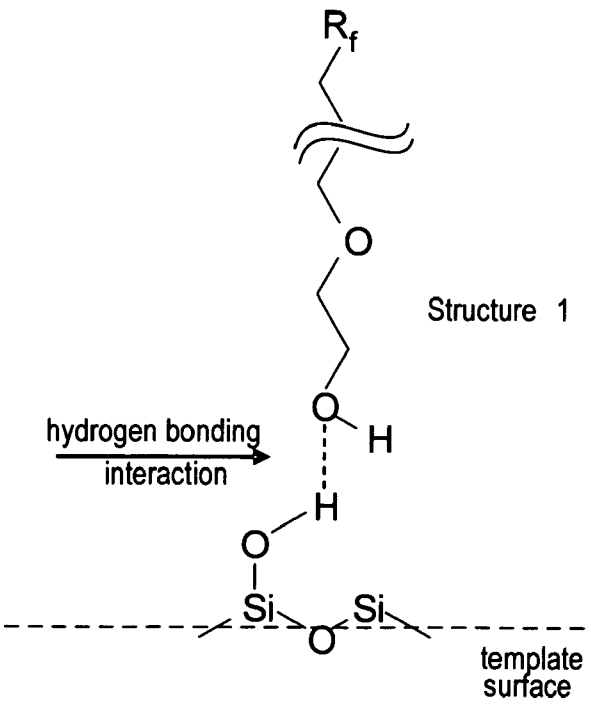


FIG. 6

(57) **Abstract**: Release agents with increased affinity toward nano-imprint lithography template surfaces interact strongly with the template (18) during separation of the template from the solidified resist (46) in a nano-imprint lithography process. The strong interaction between the surfactant and the template surface reduces the amount of surfactant pulled off the template surface during separation of a patterned layer from the template in an imprint lithography cycle. Maintaining more surfactant associated with the surface of the template after the separation of the patterned layer (46) from the template (18) may reduce the amount of surfactant needed in a liquid resist to achieve suitable release of the solidified resist from the template during an imprint lithography process. Strong association of the release agent with the surface of the template (18) facilitates the formation of ultra-thin residual layers (48) and dense fine features (50) in nano-imprint lithography.

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