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(54) **Title:** METHODS FOR MODIFYING PHOTORESIST PROFILES AND TUNING CRITICAL DIMENSIONS

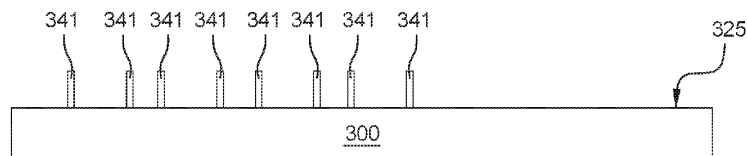


FIG. 3G

(57) **Abstract:** Embodiments for processing a substrate are provided and include a method of trimming photoresist to provide photore-
sist profiles with smooth sidewall surfaces and to tune critical dimensions for the patterned features and/or a subsequently deposited
dielectric layer. The method can include depositing a sacrificial structure layer on the substrate, depositing a photoresist on the sacrifi-
cial structure layer, and patterning the photoresist to produce a crude photoresist profile on the sacrificial structure layer. The method
also includes trimming the photoresist with a plasma to produce a refined photoresist profile covering a first portion of the sacrificial
structure layer while a second portion of the sacrificial structure layer is exposed, etching the second portion of the sacrificial structure
layer to form patterned features disposed on the substrate, and depositing a dielectric layer on the patterned features.

[Continued on next page]

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