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(54) Title: EXTREME ULTRAVIOLET (EUV) LITHOGRAPHY USING AN INTERVENING LAYER OR A MULTI-LAYER STACK WITH VARYING MEAN FREE PATHS FOR SECONDARY ELECTRON GENERATION

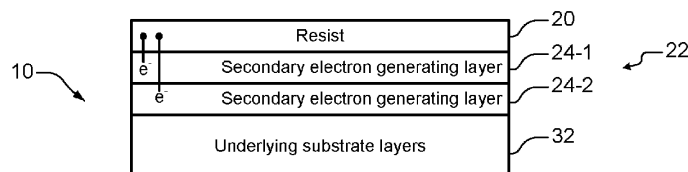


FIG. 1

(57) Abstract: A method for patterning a substrate includes providing a substrate, and depositing a multi-layer stack including N layers on the substrate. N is an integer greater than one. The N layers include N mean free paths for secondary electrons, respectively. The method includes depositing a photoresist layer on the multi-layer stack, wherein the N mean free paths converge in the photoresist layer. Another method for patterning a substrate includes providing a substrate and depositing a layer on the substrate. The layer includes varying mean free paths for secondary electrons. The method includes depositing a photoresist layer on the layer. The varying mean free paths for secondary electrons converge in the photoresist layer.

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