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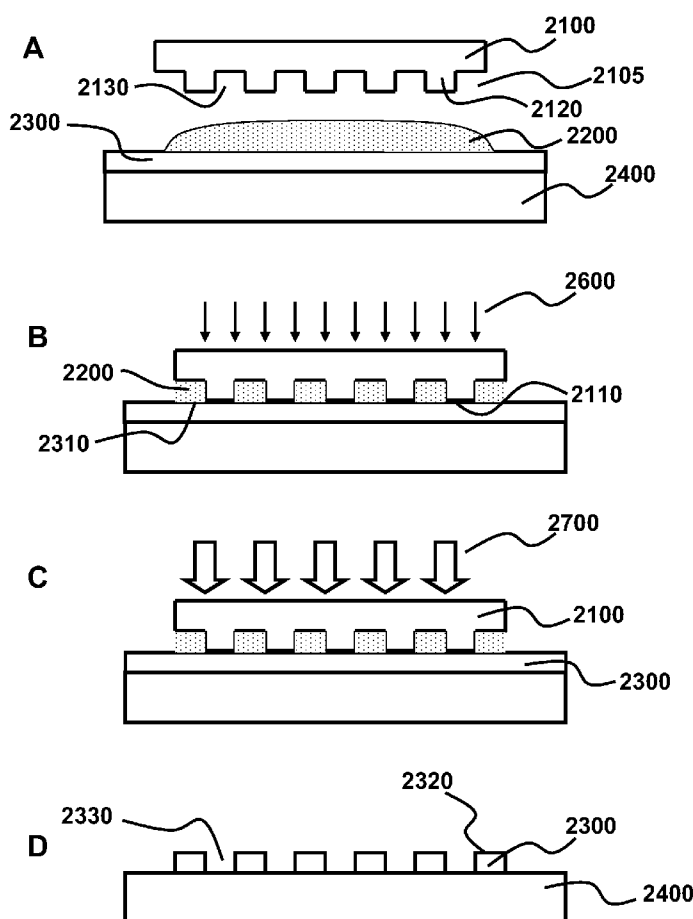
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(54) Title: DEVICES AND METHODS FOR PATTERN GENERATION BY INK LITHOGRAPHY



(57) Abstract: The present invention provides methods, devices and device components for fabricating patterns on substrate surfaces, particularly patterns comprising structures having micro-sized and/or nano-sized features of selected lengths in one, two or three dimensions and including relief and recess features with variable height, depth or height and depth. Composite patterning devices comprising a plurality of polymer layers each having selected mechanical and thermal properties and physical dimensions provide high resolution patterning on a variety of substrate surfaces and surface morphologies. Gray-scale ink lithography photomasks for gray-scale pattern generation or molds for generating embossed relief features on a substrate surface are provided. The particular shape of the fabricated patterned can be manipulated by varying the three-dimensional recess pattern on an elastomeric patterning device which is brought into conformal contact with a substrate to localize patterning agent to the recess portion of the pattern.

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