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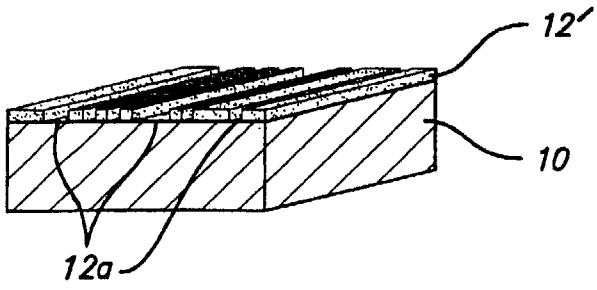
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(54) Title: A POLYMER SOLUTION FOR NANOPRINT LITHOGRAPHY TO REDUCE IMPRINT TEMPERATURE AND PRESSURE



(57) Abstract: A method of forming features on substrates (10) by imprinting is provided. The method comprises: (a) forming a polymer solution comprising at least one polymer dissolved in at least one polymerizable monomer; and (b) depositing the polymer solution on the substrate (10) to form a liquid film (12) thereon; and then either: (c) curing the liquid film (12) by causing the monomer(s) to polymerize and optionally cross-linking the polymer(s) to thereby form a polymer film (12'), the polymer film (12') having a glass transition temperature (T_g); and imprinting the polymer film (12') with a mold (16) having a desired pattern (16a) to form a corresponding negative pattern (12a) in the polymer film (12'), or (d) imprinting the liquid film (12') with the mold (16) and curing it to form the polymer film (12') having the negative pattern (12a). The temperature of imprinting is as little as 10°C above the T_g, or even less if the film (12) is in the liquid state. The pressure (20) of the imprinting can be within the range of 100 to 500 psi.

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