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FIG. 2

form the photoresist by mixing a sol-gel acrylic polymer-nanoparticles resin with a nanoparticles-dispersed acrylic resin

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(57) Abstract: Various embodiments may relate to a method of forming a photoresist. The method may include forming the photoresist by mixing a sol-gel acrylic polymer-nanoparticles resin with a nanoparticles-dispersed acrylic resin. The sol-gel acrylic polymer-nanoparticles resin may be formed by mixing a monomer, a nanoparticle precursor, a coupling agent, a crosslinker and a photoinitiator in a sol-gel process. Each nanoparticle of a plurality of nanoparticles included in the photoresist may have a diameter selected from a range from 10 nm to 20 nm such that the photoresist is ultra-violet curable.