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(54) Title: SYSTEM AND METHOD FOR ADJUSTING ETCH SELECTIVITY OF ETCHANT SOLUTION

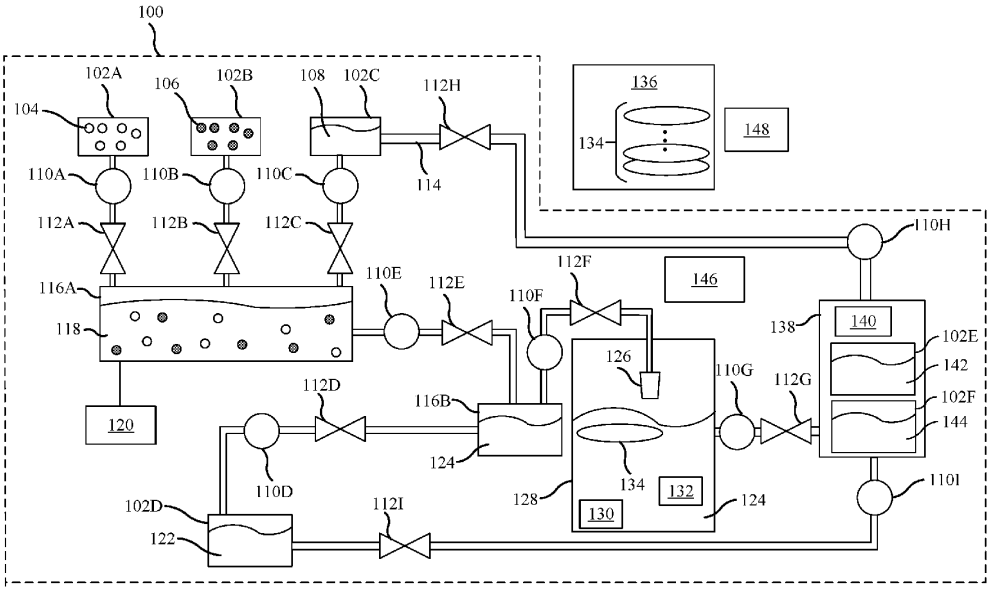


Figure 1

(57) Abstract: An apparatus includes a first holding tank holding first nanoparticles, a second holding tank holding second nanoparticles, a third holding tank holding water, a fourth holding tank holding an acid, and a first mixing tank operably coupled to the first holding tank, the second holding tank, and the third holding tank. First mixing tank mixes and holds a nanoparticle-water mixture of portions of the water, the first nanoparticles, and the second nanoparticles. Apparatus further includes a second mixing tank operably coupled to the first mixing tank and the fourth holding tank, an etch bath operably coupled to the second mixing tank, and a sensor operably coupled to the etch bath. Second mixing tank mixes and holds an etchant solution including a mixture of a portion of the acid and the nanoparticle-water mixture. Etch bath holds the etchant solution. Sensor monitors an etch selectivity of the etchant solution.

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