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(54) Title: METHOD FOR FORMING NANOPARTICLES HAVING PREDETERMINED SHAPES

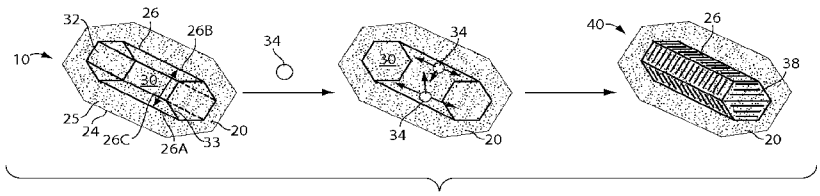

Fig. 1A

(57) Abstract: Articles and methods for forming nanostructures having unique and/or predetermined shapes are provided. The methods and articles may involve the use of nucleic acid containers as structural molds. For instance, a pre-designed nucleic acid container including a cavity may be used to control the shape- specific growth of nanoparticles. Growth of the nanoparticles within the cavities may be confined by the specific shape of the nucleic acid container. In some embodiments, the resulting nucleic acid-nanoparticle structures can be used to control the orientation and numbers of surface ligands on the surface of nanoparticles. The addressability of the surface ligands can be used to form higher ordered assemblies of the structures.

WO 2013/006411 A1