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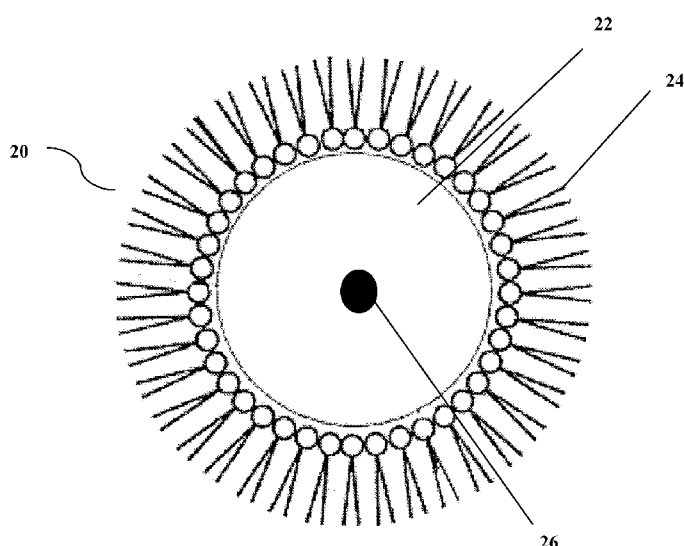


FIGURE 1

(57) Abstract: Metal nanoparticles and compositions derived therefrom can be used in a number of different applications. Methods for making metal nanoparticles can include providing a first metal salt in a solvent; converting the first metal salt into an insoluble compound that constitutes a plurality of nanoparticle seeds; and after forming the plurality of nanoparticle seeds, reacting a reducing agent with at least a portion of a second metal salt in the presence of at least one surfactant and the plurality of nanoparticle seeds to form a plurality of metal nanoparticles. Each metal nanoparticle can include a metal shell formed around a nucleus derived from a nanoparticle seed, and the metal shell can include a metal from the second metal salt. The methods can be readily scaled to produce bulk quantities of metal nanoparticles.