

Exhibit 3

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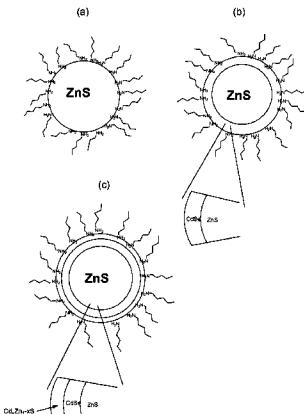
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(57) ABSTRACT

Method for producing a nanoparticle comprised of core, first shell and second shell semiconductor materials. Effecting conversion of a core precursor composition comprising separate first and second precursor species to the core material and then depositing said first and second shells. The conversion is effected in the presence of a molecular cluster compound under conditions permitting seeding and growth of the nanoparticle core. Core/multishell nanoparticles in which at least two of the core, first shell and second shell materials incorporate ions from groups 12 and 15, 14 and 16, or 11, 13 and 16 of the periodic table. Core/multishell nanoparticles in which the second shell material incorporates at least two different group 12 ions and group 16 ions. Core/multishell nanoparticles in which at least one of the core, first and second semiconductor materials incorporates group 11, 13 and 16 ions and the other semiconductor material does not incorporate group 11, 13 and 16 ions.

17 Claims, 12 Drawing Sheets



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