

Exhibit 1

(12) **United States Patent**
Mushtaq et al.

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(54) **PREPARATION OF NANOPARTICLE MATERIALS**

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 428/406; 427/212

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 See application file for complete search history.

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(57) **ABSTRACT**

Nanoparticles including a molecular cluster compound incorporating ions from groups 12 and 16 of the periodic table, as well as a core semiconductor material incorporating ions from groups 13 and 15 of the periodic table, are fabricated. The core semiconductor material is provided on the molecular cluster compound.

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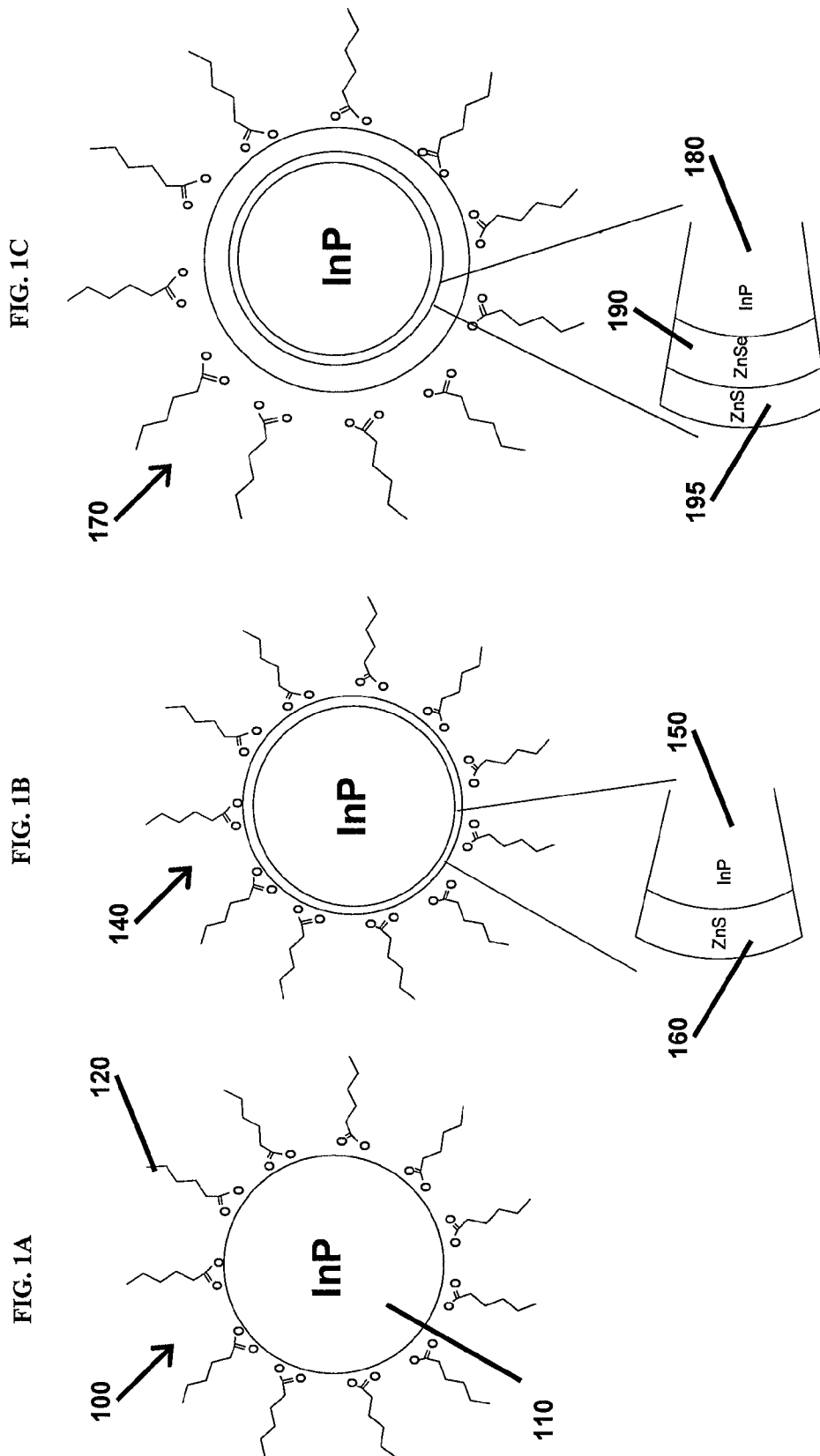
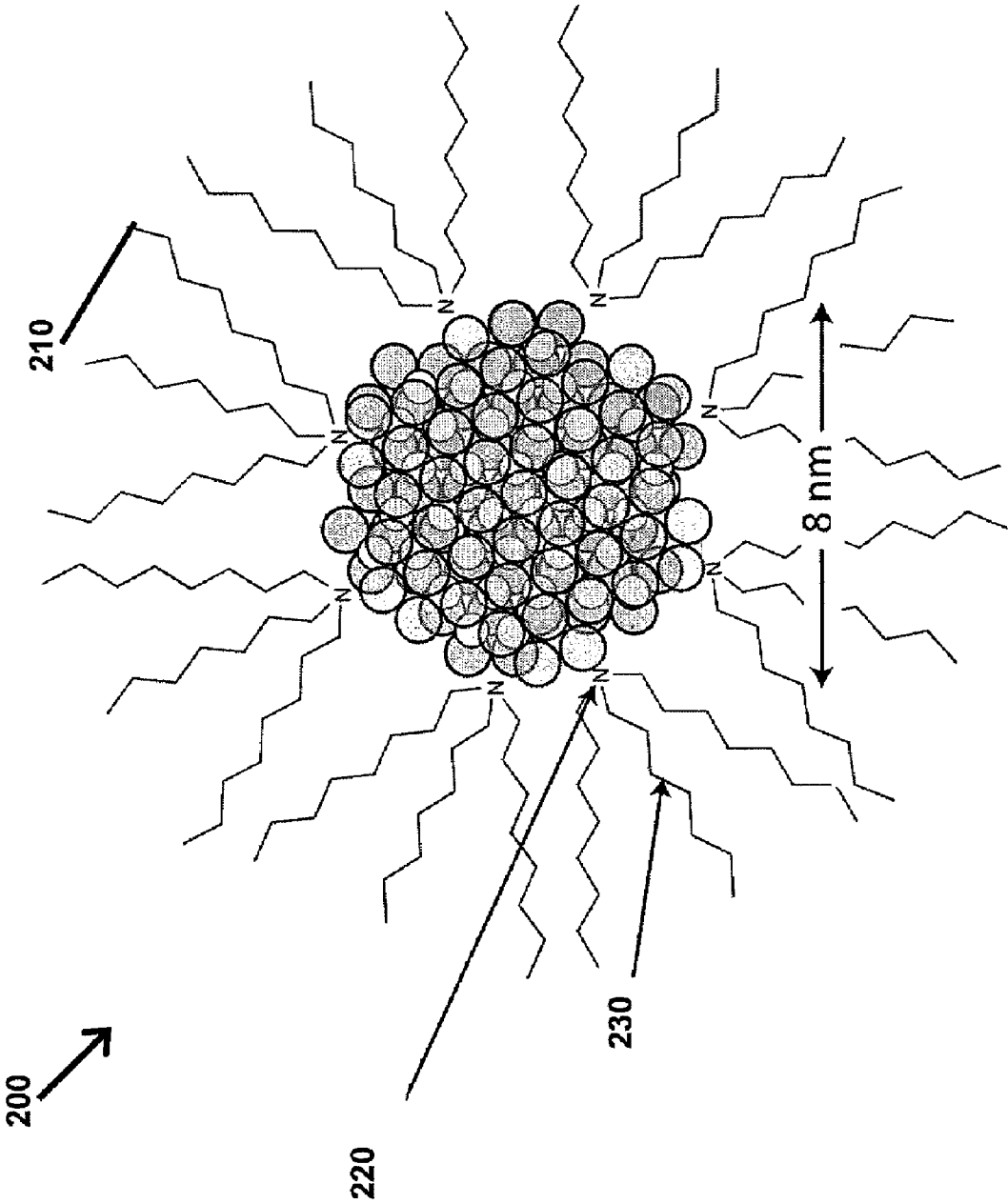


FIG. 2



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