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One pot synthesis of gold nanoparticles using chitosan with varying degree of deacetylation and molecular weight

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Highlights

- Molecular parameter of chitosan influenced the size and shape of synthesized Au nanoparticles (AuNPs).
- Lower degree of deacetylation (DD) chitosan is conducive to form Anisotropic AuNPs.
- Lower molecular weight (MW) chitosan showed higher reducing ability.
- The growth of polygonal AuNPs was promoted using higher concentration chitosan.
- Chitosan DD was more important than MW in the size and shape of synthesized AuNPs.

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