

Title of Article: Facile Route to Synthesize Organically Capped Size Controlled Silver Nanoparticles.

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Abstract: A versatile route to synthesize polymer based and polyol mediated silver nanoparticles with tunable morphological properties was evolved. Novel three dimensional (3D) quasi nanocubes, one dimensional (1D) nanorods and (2D) nanorods were produced by rapid solution phase transformation of silver sol with hot addition of absolute ethanol or toluene. The optical characterization showed existence of plasmon resonance band occurring in all cases. The electron micrographs revealed that the shape, size and size distribution of as prepared silver nanoparticles depended on the stabilizer or capping agent, mole ratio of metal ion sources, temperature and time of reaction.