

Preparation of thiol capped silver nanoparticles using sodium alginate and 1-butyl-3-methylimidazolium nitrate

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Nano-size silver particles have been attracted for last decades as an efficient electrochemical substances of conductive inks, pastes and adhesives for various electronic devices due to their high conductivity. Nowadays many researchers have also focused on the studies related to the preparation of nano-sized silver particles using Room temperature ionic liquids (RTILs). In this study, nano-size silver particles were prepared by the chemical reduction method using 1-butyl-3-methylimidazolium nitrate and sodium alginate as a surfactant. Dodecanethiol capped silver particles were obtained by the ligand exchange extraction to organic solvent and were highly stable and densely packed.