

## Palladium and gold nanoparticles stabilized by ionic liquids

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Thiol-functionalized ionic liquid (TFIL: 1,3-di(2', 3'-dimercaptoacetoxypropyl) imidazolium, 3''-mercapto-1'-propanesulfonic acid) and 1-butyl-3-methyl imidazolium tetrafluoroborate were used for the preparation of palladium nanoparticles. In addition alcohol ionic liquid (AIL: 1-(2-hydroxyethyl)-3-methyl imidazolium tetrafluoroborate)-stabilized gold nanoparticles were prepared in analogous manner. TFIL, AIL and dialkyl imidazolium IL acted as the effective stabilizer in water phase. In particular, AIL serve as both a stabilizer and reductant, and thus the reducing agent such as sodium borohidride was not required to reduction of Pd ions.