

The Preparation of Silver Nanoparticles via Solvent Exchange Method

서두원, 윤원중, 김종성*

경원대학교

(jskim@kyungwon.ac.kr*)

We have prepared silver nanoparticles capped by oleic acid via solvent exchange method. AgNO_3 was reduced by NaBH_4 to produce Ag nanoparticles, and oleic acid was used as stabilizer. Hydrophobic silver nanoparticles were prepared by adding H_3PO_4 to induce phase transfer in hydrosol-organic solvent. The prepared silver nanoparticles were characterized by X-ray Diffraction (XRD), Fourier Transfer Infrared Spectrometer (FTIR), Electrophoretic Lighting Scattering (ELS), Scanning electron microscopy (SEM) and Turbiscan. The particle size and the dispersion stability were dependent on pH of solution.