PRODUCTION OF GOLD AND SILVER NANOPARTICLES IN CLEAN LIQUID AMBIENCE BY LASER ABLATION

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TÓM TẮT:

We present experimental results related to laser ablation-based nanofabrication in clean aqueous solution. This method makes possible the production of pure nanoparticles in biologically-friendly environment. Gold and silver nanoparticles were produced in distilled water, deionized water and ethanol. The TEM and spectral measurements were carried out to determine average size and size distribution. The plasmon resonance absorption spectra Au and Ag nanoparticle colloids and their coalescence were studied. The average size of produced Au nanoparticles was reduced to 3-4nm in ethanol by plasmon resonance absorption using second harmonics 532nm of Nd:YAG laser