

عنوان مقاله:

ANTIBACTERIAL PROPERTIES OF AU-AG ALLOY NANOPARTICLES

محل انتشار:

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خلاصه مقاله:

This paper reports a preliminary study on the effect of alloying on the antibacterial properties of silver and gold. Au-Ag alloy nanoparticles were synthesized in water by co-reduction of metal salts by sodium borohydride in the presence of sodium citrate as a capping agent. The particle morphology and size were studied by transmission electron microscope. The Au-Ag (1:1) particles were of 4 ± 1 nm size with a good monodispersity. The formation of alloy was concluded by spectrophotometry in the visible region complemented by Energy Dispersive Spectroscopy (EDS). The antibacterial activity of the particles was examined against *Escherchia coli* ATCC 25922. Interestingly, the alloy particles exhibited greater antibacterial activities than the pure metals. The antibacterial property of the alloy nanoparticles enhanced even further with increasing the molar ratio of silver.

کلمات کلیدی:

Nanoparticles, Au-Ag alloy, Synthesis, Antibacterial effect

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