

Reduction of gold chloride by amino acids, peptides and fibroin

In-ki Park, Hong-you Kim, Won Hur

Kangwon National University, School of Biotechnology and Bioengineering

TEL: +82-33-250-6276, FAX: +82-33-243-6350

Development of reliable procedures for the synthesis of nanoparticles of well-defined sizes and good monodispersity is an important aspect of nanotechnology. There are a number of synthesis procedures for obtaining gold nanoparticles over a range of sizes and shapes that may be broadly classified into two sections depending on whether the nanoparticles are grown in a non-polar organic medium or a polar medium such as water.¹⁾ The synthesis of water dispersible amino acid protected gold nanoparticles by the spontaneous reduction of aqueous chloroaurate ions by aspartic acid¹⁾, tryptophan²⁾, glutamic acid³⁾, lysine, arginine, and tyrosine⁴⁾ was described.

In this study, we synthesized gold chloride and various amino acids, fibroin peptides and fibroin. Those were characterized that by UV-vis spectroscopy and transmission electron microscopy(TEM).

The protected gold nanoparticles that may be obtained in the form of a dry powder and readily redispersed in water. The amino acid protected gold nanoparticles have been characterized by UV-vis spectroscopy and transmission electron microscopy(TEM)..

References

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