

Metal Nanoparticles for Drug Delivery System

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Recently, so many biochemists have researched for gold nanoparticles(GNPs), silver nanoparticles(SNPs), and Quantum Dots because they are good for biomedical application to drug delivery system. Gold nanoparticles(GNPs) have the best electrical, optical properties and stability. It can be applied in the various field of bio-imaging, drug delivery, catalyst, environment, and energy because of its higher adsorptivity and bio-compatability. Silver nanoparticles(SNPs) are excellent conductible antibiotic, deodorant, adsorptive, absorptive, and harmless for human body and then can be used broadly for semiconductor and bio-application area. This study investigated that 1-10 nm size nanoparticles were synthesized by reduction reaction, adsorbed into chitosan particle carrier and then ionically gelated by TPP solution to stable 100-200 nm size gold-, silver-, and Quantum Dots-chitosan nanoparticles. Characteristics of nanoparticles were examined by ELS(electrophoretic light scattering), UV-visible Spectrometer, TEM(Transmission Electron microscope), FT-IR(Fourier transform - infrared).