

Synthesis and characterization of gold/iron oxide nanoparticles for biochemical applications

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Composite nanoparticles containing both gold and iron oxide are being developed for various applications in biochemistry due to their tunable optical and magnetic properties. The combination of different nanostructured materials promises the innovation of multifunctional nanomedical platforms for diagnosis and therapy. In our study, magnetite nanoparticles decorated with gold nanoparticles have been prepared. A detailed investigation by transmission electron microscopy, X-ray diffraction, UV-Vis and vibrating sample magnetometer are performed in order to elucidate the morphologies and properties of the nanocomposites.