Special Issue

Characterisation and Application of Synthesized Gold Nanoparticles

Message from the Guest Editors

The development of nanotechnology has attracted a lot of interest since it offers new possibilities. Gold nanoparticles AuNPs are very attractive due to many potential applications. The first step is the synthesis. We can use different methods such as thermal or microwave synthesis, laser ablation, etc. Green synthesis (effect of polyphenols) opens the door for other applications. It has been found that some nanoparticle modifications exhibit the properties of biological molecules (especially enzymes). Such pseudo-enzymatic behavior brings advantages like significant physico-chemical stability compared to enzymes. Moreover, AuNPs belong to a group of nanomaterials with significant peroxidase-like activity. AuNPs are incorporated into many nanomedical applications, from diagnostic methods (they can be modified with antibodies, nucleic acids, polymers, etc.) to targeted nanotransporters (AuNPs can be modified to bind targeting molecules on their surface such as antibodies, nucleic acids, enzymes, but also low molecular weight substances such as cytostatics, etc.).

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Message from the Editor-in-Chief

Materials (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

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