Special Issue

Synthesis and Characterization of Nanofunctionalized Natural Hydrogels

Message from the Guest Editor

Recently, hydrogels based on natural polymers have attracted considerable interest owing to their possible applications in different fields, such as biomedical, drug delivery, tissue engineering and regenerative medicine. They possess nontoxicity, high biocompatibility, biodegradability and similarity with native ECM. However, natural hydrogels do not always provide the biological and physicochemical properties required, but nanofunctionalization is a promising approach to modulate their properties. Soft and hard nanoparticles can be incorporated as fillers or reinforcing agents in the matrix. Hard nanoparticles (inorganic and metallic particles, quantum dots and carbon nanotubes) facilitate the modulation of local and global mechanical properties and electrical conductivity, while soft nanoparticles (liposomes, dendrimers, polymeric micelles and nanogels) allow the level of biological factors to be sustained. The Special Issue will cover the synthesis, preparation, characterization and applications of functionalized hydrogels.

Guest Editor

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Message from the Editor-in-Chief

Nanoscience and nanotechnology are exciting fields of research and development, with wide applications to electronic, optical, and magnetic devices, biology, medicine, energy, and defense. At the heart of these fields are the synthesis, characterization, modeling, and applications of new materials with lower nanometer-scale dimensions, which we call “nanomaterials”. These materials can exhibit unusual mesoscopic properties and include nanoparticles, coatings and thin films, metal–organic frameworks, membranes, nano-alloys, quantum dots, self-assemblies, 2D materials such as graphene, and nanotubes. Our journal, *Nanomaterials*, has the goal of publishing the highest quality papers on all aspects of nanomaterial science to an interdisciplinary scientific audience. All of our articles are published with rigorous refereeing and open access.

Editor-in-Chief

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