Special Issue

Surface Modifications of Inorganic Nanoparticles and Their Applications

Message from the Guest Editors

The surface modification of inorganic nanoparticles is a motivating approach with which to tailor their biophysicochemical and functional features. Many modification strategies (i.e., chemical and photochemical) are attracting a great deal of attention. with the aim of realizing multifunctional nanomaterials with tunable sizes, morphologies, and surface compositions via coating with inorganic, organic, or bioderived moieties. This Special Issue will address topics concerning the chemical and photoinduced strategies capable of functionalizing the surfaces of inorganic nanoparticles, thus addressing their functionality for technological applications in various fields, such as nanomedicine, food packaging, optics and optoelectronic devices, semiconductor devices, textiles, cosmetics, agriculture, energy, and catalysis.

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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 nanometerscale 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.

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