Special Issue

Nanostructural Materials with Rare Earth Ions: Synthesis, Physicochemical Characterization, Modification and Applications

Message from the Guest Editor

The goals of Special Issue of "Nanostructural Materials with Rare Earth Ions: Synthesis, Physicochemical Characterization, Modification and Applications" will be achieved by the preparation of nanometer-sized materials doped and co-doped with rare earth ions followed by the creation of periodically ordered nanostructures based on single nanoparticles. A small particle size implies high sensitivity and selectivity. These new effects and possibilities are mainly due to quantum effects that are a result of the increasing ratio of surface to volume atoms in low-dimensional systems. An important factor in this context so far has been the design and fabrication of nanocomponents with/displaying new functionalities and characteristics for the improvement of existing materials; including photonic materials, conductive materials, polymers and biocomposites. With this concept of nanotechnology in mind, the aim of the Special Issue should be covered by innovative products and application options in electronics and biomedicine, based solely on nanoscale technology.

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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