Special Issue

Advances in Rare-Earth-Doped Materials

Message from the Guest Editor

Rare-earth-doped nanomaterials that convert low-energy excitation photons into high-energy emission are at the core of numerous photonic technologies, including bioimaging, solar energy conversion, and optical storage. In particular, this type of luminescent material, which is characterized by flexible energy levels and tailorable spectral properties, is of exceptional interest.This Special Issue will explore both scientific and engineering dimensions of rare-earth-doped nanomaterials, and their applications in high-level security, high-throughput sensing, photon regulation and their multiplexing systems. This encompasses the design and controlled synthesis of nanoarchitectures, their fundamental properties, advanced spectral management strategies, and the development of state-of-the-art photonic devices. We invite authors to contribute original research and review articles to this issue that address recent advancements in the field of rare-earth-doped nanomaterials.

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. We are proud of our increasing impact factor and ability to provide rapid decisions to authors.

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