Special Issue

Optoelectronic and Photoluminescent Properties of Quantum Dots

Message from the Guest Editor

The Nobel Prize in Chemistry 2023 has been awarded "for the discovery and synthesis of quantum dots". Quantum dots (QDs) are semiconductor nanocrystals with a size in the quantum confinement regime. QDs have promised an unprecedented class of emissive materials due to their unique size-dependent emission color, narrow line width, convenient photo- and electro-excitation, good photostability, and high photoluminescence quantum yields. This Special Issue is aimed at presenting the recent progress in the synthesis, optoelectronic and photoluminescent properties as well as the applications of QDs. Potential topics include, but are not limited to, the following:

- Synthetic strategies and excited state studies of various types of QDs;
- Transient and steady-state characterization methods of optoelectronic and photoluminescent properties;
- QD-based applications in the fields of LED, photovoltaics, photodetectors, lasers, biomedicine, sensing, etc.

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.

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