Special Issue

Quantum Dot Materials and Their Optoelectronic Applications

Message from the Guest Editors

Quantum dots (QDs) have been attracting immense attention recently owing to their quantum-size effect bandgap tunability from the visible to infrared range, strong absorption with a high molar extinction coefficient, and new phenomena, such as multiple exciton generation (MEG) and low-cost solution processability. This makes QDs promising in various applications, for instance, light-emitting diodes (LEDs), photodetectors, and solar cells. The present Special Issue is the continuation of the previous one and aims to collect further studies and results about the novel synthesis and passivation methods of QD materials, the new progress of QD-based optoelectronic applications, and the charge dynamics in those devices. Prof. Dr. Yaohong Zhang

Guest Editors

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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 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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