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Quantum Dot Materials and Optoelectronic Devices

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Message from the Guest Editors

Dear Colleagues,

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 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, field effect transistors (FETs), light emitting diodes (LEDs), photodetector, photocatalysts, and solar cells. The last Special Issue on QD materials and optoelectronic deivces was published several years ago, and there has been impressive new progress in the field since. Thus, it is time to highlight these new results so that we can be better prepared for future development. This Special Issue is focused on the synthesis and passivation of QD materials, and the new progress of QD-based optoelectronic devices such as solar cells, QD-LED, FETs, detectors and photocatalytic systems.

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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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