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Study on Quantum Dot and Quantum Dot-Based Device

Guest Editor:

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Deadline for manuscript submissions:
closed (20 November 2023)

Message from the Guest Editor

Dear Colleagues,

The enormous interest in semiconductor QDs in recent years derives from their excellent electro-optical properties derived from their size, shape, and chemical formulation. Indeed, nanocrystals with nanometer size dimensions exhibit several interesting optical/electronic properties depending on their size and shape (quantum size effect). By using different synthetic approaches, it is possible to modify the structure, and thus the properties, of nanomaterials, achieving spherical core shell QDs, or more exotic architectures, such as nanoplatelets, tetrapods, dot in rods, etc.

The present Special Issue of *Nanomaterials* is focused on the application of semiconductor QDs in different types of devices. Displays, photovoltaics, biomedical and environmental sensors, photodetector and catalysis are some of the emerging areas of application of such nanometric structures. We invite original articles or reviews in (but not limited to) the above-mentioned field.

See more information at https://mdpi.com/si/125056. We look forward to receiving your contributions.

Dr. Francesco Antolini
Guest Editor

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Editor-in-Chief

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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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