Special Issue

Quantum Dots for Optoelectronic Devices

Message from the Guest Editors

Semiconductor quantum dots (QDs) have been receiving immense attention due to their intriguing beneficial attributes—particularly in electronic and optical aspects. Thus, they are considered a promising class of active nanomaterials for next-generation optoelectronic devices. Enabled by the great advances in the synthesis of QDs and their in-depth electro- and photo-physical understanding, they are very near the level of commercialization. This Special Issue is aimed at offering recent informative QD-associated resources to readers by including a broad range of subjects from QD materials chemistry, characterization and processing to optoelectronic device fabrication. Special focus will cover not only the synthesis of colloidal QDs with diverse compositions including not only the group II-VI, III-V, I-III-VI, IV-VI, halide perovskite, and carbon species; heterostructural/morphological engineering; surface functionalization and electro/photophysical findings, but also their various optoelectronic applications.

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Message from the Editor-in-Chief

Materials (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

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