

Special Issue

Quantum Dot Frontiers

Message from the Guest Editors

Colloidal quantum dots (QDs), also known as nanocrystals (NCs) of a specific size range (2–20 nm), hold great promise for application in various fields, including but not limited to advanced lightings, photonics, optoelectronics, and bioimaging, which is mainly due to the customizable spectral properties of QDs. In terms of the visible range, cadmium chalcogenide QDs, such as CdSe or its alloys, exhibit vivid color performance in green and red, thus prompting QDs to be regarded as ideal light sources specifically when used for wide-gamut color displays. Particularly, the efforts expended toward developing ecofriendly QDs, such as InP and its alloys, have resulted in QDs being currently positioned on the verge of a new era based on the QD display technique. Moreover, newly emerged QDs, such as perovskite nanocrystals (PeNCs), are providing many new concepts for designing optoelectronic devices with much lower fabrication costs than those of conventional QDs.

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