Special Issue

Electronic and Optical Properties of Semiconductor Nanocrystals

Message from the Guest Editor

The global quest for developing sustainable and energy-efficient electronics and optoelectronics has motivated the scientific community and industry to look toward reducing the size and improving the properties and functionalities of semiconductor materials. In this regard, semiconductor nanocrystals encompass a material platform whose physical-chemical properties can be strategically tailored for target applications through, for example, control of size, shape, composition, and surface termination. Despite impressive advances in the demonstration of devices with good charge transport characteristics, tunable light emission, and efficient light absorption, such as field-effect transistors, solar cells, LEDs, and photodetectors, further progress needs to be reached towards improving their performance. This can only be achieved through deep characterization and a fundamental understanding of material's properties, including unveiling the phenomena ruling at the nanoscale. This Special Issue welcomes papers focused on the latest advances in studies of electronic and optical properties of semiconductor nanocrystals as well as on their possible application in optoelectronic devices.

Guest Editor

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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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