

Special Issue

Optical Properties and Applications of Nanocrystals

Message from the Guest Editor

Nanocrystals have attracted tremendous interest in recent decades for their superior tunable optical properties. Since the first reports on nanocrystalline II–VI semiconductors with tunable bandgaps via size-control of the quantum confinement effect, a large variety of solutions have been adopted to modify the photophysics of this class of nanomaterials to best fit the requirements of different technological applications. Specifically, multi-component nano-heterostructures, 1D- and 2D-geometries and doping have been successful solutions used to produce nanomaterials with tailored optical properties spanning from the near-UV to the near- and mid-infrared spectral regions.

The sheer number of parameters available to finely customize the optical properties of nanomaterials made them excellent candidates for many applicative areas, spanning from spintronics to photovoltaics; from nanomedicine to light-emitting diodes. The rapid growth in this field resulted in a global improvement that suitably reflects the technological demand for more efficient optical materials with application-driven properties.

Guest Editor

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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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