



materials



an Open Access Journal by MDPI

Optical Properties and Applications of Nanocrystals

Guest Editor:

Dr. Valerio Pinchetti

Dipartimento di Scienza dei
Materiali, Università degli Studi di
Milano-Bicocca, 20125 Milano,
Italy

Deadline for manuscript
submissions:

closed (20 April 2023)

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.



mdpi.com/si/98218

Special Issue



an Open Access Journal by MDPI

Editor-in-Chief

Prof. Dr. Maryam Tabrizian

1. Department of Biomedical Engineering, Faculty of Medicine and Health Sciences, McGill University, Montreal, QC H3A 2B6, Canada

2. Faculty of Dentistry and Oral Health Sciences, McGill University, 3640 Rue University, Montreal, QC H3A 0C7, Canada

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.

Author Benefits

Open Access: free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility: indexed within Scopus, SCIE (Web of Science), PubMed, PMC, Ei Compendex, CaPlus / SciFinder, Inspec, Astrophysics Data System, and other databases.

Journal Rank: JCR - Q2 (*Metallurgy & Metallurgical Engineering*) / CiteScore - Q2 (*Condensed Matter Physics*)

Contact Us

Materials Editorial Office
MDPI, St. Alban-Anlage 66
4052 Basel, Switzerland

Tel: +41 61 683 77 34
www.mdpi.com

mdpi.com/journal/materials
materials@mdpi.com
[X@Materials_Mdpi](https://twitter.com/Materials_Mdpi)