Special Issue

Special Edition on Semiconductor Materials and Optics

Message from the Guest Editors

Recent advances in optics have had a large societal impact through new devices and applications, and have promoted a deeper understanding of the intrinsically quantum nature of matter and radiation, in the wake of highly controlled experiments. The main focus of this Special Issue will thus cover semiconductor materials and optics. Both fundamental physics and applications will be covered. Original research articles and reviews are welcome. Research areas may include (but not limited to) the following:

- Optoelectronic and kinetic properties of semiconductor materials;
- High harmonic generation in semiconductor crystals and artificial nanostructures;
- Negative differential conductivity (NDC) and electrical domain instabilities in GaAs, GaN and other semiconductor crystals;
- Bloch oscillations in superlattices, quantum cascade lasers, and other semiconductor crystals;
- Semiconductor quantum dots;
- MIR-THz OCLs and other semiconductor nanocrystals applied to explosives detection;
- Semiconductor-based gas sensors.

Guest Editors

Prof. Dr. Mauro Fernandes Pereira

Physics Department, Khalifa University of Science and Technology, Abu Dhabi, United Arab Emirates

Dr. Apostolos Apostolakis

Institute of Physics of the Czech Academy of Sciences, Prague, Czech Republic

Deadline for manuscript submissions

closed (10 November 2023)

Materials

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed

mdpi.com/si/166013

Materials
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
materials@mdpi.com

mdpi.com/journal/materials

Materials

an Open Access Journal
by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed

mdpi.com/journal/materials

About the Journal

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.

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

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 and Metallurgical Engineering) / CiteScore - Q1 (Condensed Matter Physics)

MDPI