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Special Edition on Semiconductor Materials and Optics

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)

Message from the Guest Editors

Dear Colleagues,

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:

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



mdpi.com/si/166013



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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.

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Contact Us

Materials Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

Tel: +41 61 683 77 34
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