



## Application of Emerging Materials for Advanced Imaging and Sensing

Guest Editors:

**Dr. Lado Filipovic**

Institute for Microelectronics, TU  
Wien, Gußhausstraße 27-  
29/E360, 1040 Wien, Austria

**Prof. Dr. Tibor Grasser**

Institute for Microelectronics, TU  
Wien, Gußhausstraße 27-  
29/E360, 1040 Wien, Austria

Deadline for manuscript  
submissions:

**closed (20 October 2023)**

### Message from the Guest Editors

Dear Colleagues,

The introduction of novel materials towards specific imaging and sensing applications is inescapable. The benefits obtained by many new materials are simply unparalleled to silicon and co. Optoelectronic devices and sensors have seen a drastic potential increase with the introduction of compound semiconductors (e.g., GaAs, InP, and GaN), while continued materials innovation with two-dimensional (2D) materials such as graphene, transition-metal dichalcogenides (TMDs), phosphorene, and perovskites are paving the way for the future. With the introduction of new and emerging materials, we no longer benefit from decades of experimental data collected on silicon. Engineers will have to make decisions at several scales and stages, including the choice of material, the device structure and design, and interconnection and packaging.

Emerging materials which can be efficiently applied in high-performance sensing and imaging technologies are highly sought after. Materials will need to be investigated for their applicability for use in many types of sensor designs, including those based on field effect transistors (FETs), chemiresistors, or optical properties.





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](http://www.mdpi.com)

[mdpi.com/journal/materials](http://mdpi.com/journal/materials)  
[materials@mdpi.com](mailto:materials@mdpi.com)  
[X@Materials\\_Mdpi](https://twitter.com/Materials_Mdpi)