







an Open Access Journal by MDPI

Nanomaterials and Devices: Optical and Electrical Properties

Guest Editors:

Prof. Dr. Simon Mokhotjwa Dhlamini

Department of Physics, College of Science Engineering and Technology, University of South Africa, Johannesburg, South Africa

Prof. Dr. Luyanda Lunga Noto

Department of Physics, College of Science Engineering and Technology, University of South Africa, Johannesburg, South Africa

Dr. Guy Leba Kabongo

Department of Physics, College of Science Engineering and Technology, University of South Africa, Johannesburg, South Africa

Deadline for manuscript submissions:

10 September 2024

Message from the Guest Editors

Dear Colleagues,

development of new technologies improvement of existing technologies (photonics and energy) need novel materials with special tunable properties. Nanomaterials provide us with the platform to design these new materials for specific applications as it gives us access to very important physical, electrical, and chemical properties. The optical properties nanomaterials (absorption, transmission, reflection, and emission) are dynamic and may significantly differ from their bulk counterparts. It has also been observed that the electrical and electrochemical properties (conductivity or resistivity) of materials change at the nanoscale. Optical and electrical properties are some of the key properties of materials that are used for various technological applications and may be engineered by manipulating the shape, size, and surface functionality of the materials' particles. Therefore, in this Special Issue, we welcome original research and review articles (on the synthesis and deposition of nanodevices) which focus on the optical and electrical properties of nanomaterials for photonics, energy storage, and photovoltaic applications.













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, OC H3A 0C7, Canada

Message from the Editor-in-Chief

Materials (ISSN 1996-1944) was launched in 2008. The iournal covers twenty-five comprehensive biomaterials, energy materials, advanced composites. advanced materials characterization, porous materials, manufacturing processes and svstems. 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 - Q1 (Metallurgy and Metallurgical Engineering) / CiteScore - Q2 (*Condensed Matter Physics*)

Contact Us

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