Special Issue

Crystallographic Design of Material Thermal Properties

Message from the Guest Editor

This Special Issue aims to publish the latest work on the characterization and design of materials in the field of heat transfer. Thermal parameters can explain the mechanism of thermal energy dissipation via materials. Contact and non-contact methods measure heat oscillations, giving thermal characterization. The crystal quality is critical in applications and significantly impacts detector sensitivity. The performance of detectors based on compound semiconductors is limited by crystal imperfections, so the lattice disorder must be defined. Growing new materials usually requires mixing or introducing dopants into the crystal host structure. The substitution of the native element within a crystal leads to undesired effects, the nature of these phenomena can be ambiguous.
The Issue aims to improve understanding of the physics and chemistry of these materials, and growth and design processes. Areas of interest include material growth, design, defects, dopants, mixing, disorder, surface chemistry, fabrication, thermal/electrical properties, modeling, charge transport, electro-/magneto-optical properties, and interactions amongthese.

Guest Editor

Dr. Karol Strzałkowski
Institute of Physics, Faculty of Physics, Astronomy and Informatics, Nicolaus Copernicus University, Grudziadzka 5, 87-100 Torun, Poland

Deadline for manuscript submissions

closed (20 February 2024)

Materials

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed

mdpi.com/si/142287

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

MDPI

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)