Special Issue

Research Progress of Thermoelectric Materials, Modules and Applications

Message from the Guest Editors

Thermoelectric materials have potential applications in power generation devices that convert waste heat into electric current by the so-called Seebeck effect, thus providing alternative energy technology to reduce the dependence on traditional fossil fuels. Moreover, thermoelectric devices can be used as solid-state Peltier coolers, which do not use environmentally harmful fluids. Thermoelectric generators have the advantage of containing no moving parts, making them quiet, durable, and reliable. It is only recently that advances in materials development, theory, and computational tools have shown that thermoelectric devices can compete with traditional refrigeration technologies and be attractive for power generation. This Special Issue aims to present a collection of articles describing recent advances in thermoelectric-related materials and technologies, ranging from material study to device development. I kindly invite you to submit a manuscript for this Special Issue. Your participation will ensure that this Special Issue becomes an essential contribution to the thermoelectric materials and energy community. I look forward to receiving your contributions.

Guest Editors

Dr. Mirosław Jakub Kruszewski

Faculty of Materials Science and Engineering, Warsaw University of Technology, 141 Wołoska str., 02-507 Warsaw, Poland

Dr. Pawel Nieroda

Faculty of Materials Science and Ceramics, AGH University of Science and Technology, 30 Mickiewicza Ave., 30-059 Kraków, Poland

Deadline for manuscript submissions

20 October 2025

Materials

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed

mdpi.com/si/197722

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)