Special Issue

Materials Physics in Thermoelectric Materials, Second Edition

Message from the Guest Editors

Thermoelectric materials, which could directly convert a temperature gradient into electrical energy, provide a promising solution for sustainable energy harvesting. The development of thermoelectric materials has recently gained tremendous attention in the fields of solid-state physics, chemistry, materials science, and engineering. Many strategies have been implemented to achieve a high-efficiency thermoelectric conversion e.g., doping, defect, intercalation, band engineering, strain, nanostructures, and molecule junctions, which greatly promote further applications of thermoelectrics. This Second Edition is a continuation of the Special Issue on "Materials Physics in Thermoelectric Materials" that aims to provide a unique international forum for researchers working in thermoelectric materials to report their latest endeavors in advancing this field, including pristine thermoelectric materials, strategies used to improve thermoelectric performance, theoretical understanding of thermoelectrics, physical insights into engineering high-performance thermoelectrics, computational discovery of thermoelectric materials, etc.

Guest Editors

Dr. Bao-Tian Wang

Institute of High Energy Physics, Chinese Academy of Science (CAS), Beijing 100049, China

Dr. Zhibin Gao

State Key Laboratory for Mechanical Behavior of Materials, School of Materials Science and Engineering, Xi'an Jiaotong University, Xi'an 710049, China

Deadline for manuscript submissions

20 April 2026

Materials

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed

mdpi.com/si/234611

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)

MDPI