Special Issue

Structure and Properties of Advanced Thermoelectric Materials and Devices

Message from the Guest Editor

Thermal energy and electric energy are the most important forms of energy in our social life. Electric energy is one of the most convenient forms for energy transmission and use. Thermoelectric materials and devices can make use of many kinds of thermal energy, such as nuclear heat, solar heat, geothermal heat, ocean heat, and various waste heats to generate power. The only drawback is low thermoelectric conversion efficiency. Therefore, improving conversion efficiency has become a research hotspot that has received extensive attention by scientists at home and abroad. This Special Issue aims to cover recent progress and new developments in the relationships between the structure and properties of advanced thermoelectric materials and devices. All aspects related to new structures, new principles, new concepts, new materials, new methods, new processes, physical and numerical simulation, and new applications in the field of thermoelectric materials and devices are covered. Review articles which describe the current state of the art are also welcomed.

Guest Editor

Prof. Dr. Guiying Xu

School of Materials Science and Engineering, University of Science Technology Beijing, Beijing, China

Deadline for manuscript submissions

closed (20 December 2024)

Materials

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed

mdpi.com/si/134464

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)