Special Issue

Advances in Thermoelectric Materials-

Message from the Guest Editor

In recent years, major efforts have been made in the development of novel and innovative materials and techniques for efficient, renewable, and environmentally friendly energy conversion into useful electricity. Thermodynamics, enabling the direct energy conversion of heat into electricity. Various classes of novel narrow-gap semiconductors showing a high thermoelectric potential were discovered which exhibited decent thermoelectric figure of merit, ZT, and values of no more than 1. Although these values were sufficient to develop practical thermoelectric power generators, their heat-to-electricity conversion efficiency was very limited. Because not enough practical thermoelectric generators with equivalently enhanced conversion efficiency values are being reported, recent efforts have also been made toward the design and development of such highly efficient practical conversion devices. This Special Issue is dedicated but not limited to both theoretically and experimentally optimizing the *ZT* values of various material classes, as well as experimental and theoretical methods for approaching practical power generation devices.

Guest Editor

Prof. Dr. Yaniv Gelbstein

Department of Materials Engineering, Ben-Gurion University of the Negev, Beer-Sheva 84105, Israel

Deadline for manuscript submissions

closed (10 April 2023)

Materials

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed

mdpi.com/si/98862

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)