

## Special Issue

# Advanced Thermoelectric Materials and Micro/Nanoscale Heat Transfer

### Message from the Guest Editors

Thermoelectric energy conversion has attracted growing interest as a potential technology for waste heat harvesting, power generation, and cooling applications. Micro/nanoscale heat transfer effects play a significant role in the efficiency of thermoelectric energy conversion due to their impact on phonon and electron transport. Micro/nanoscale heat transfer is also essential for a range of emerging technologies such as micro/nanotechnology, information technology, biotechnology, and low-carbon energy applications. This Special Issue aims to provide a comprehensive overview of recent advances in thermoelectric materials and micro/nanoscale heat transfer. This Special Issue welcomes original research articles and reviews. Potential research areas include (but are not limited to) the following topics:

- Thermoelectric power generation;
- Thermoelectric cooling;
- Micro/nanoscale thermoelectric materials;
- Micro/nanoscale multi-phase flow and heat transfer;
- Micro/nanoscale thermophysical properties
- Interfacial thermal transport in micro/nanostructures;
- Low-dimensional materials;
- Phonon and electron transport;
- Electron-phonon interaction.

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### Guest Editors

Dr. Ziman Wang

Prof. Dr. Xinyu Wang

Dr. Man Wang

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### Deadline for manuscript submissions

20 February 2026



## Materials

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## 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.

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### Editor-in-Chief

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