Special Issue

Energy Transport in Small-Sized Systems

Message from the Guest Editors

With the development of modern technology, the size of many devices has reached the nanoscale. Different from that in conventional, large-sized devices, energy transport in such small devices is much more complicated. From the atomistic point of view, size reduction will yield different bonding environments due to a larger surface-to-volume ratio. Consequently, the properties of corresponding materials will be changed, which can be beneficial for some applications while introducing challenges to others. To maximize the performance of small-sized devices, a deeper understanding of energy transport is required. To this end, we are calling for papers addressing energy transport efficiency in small-sized systems on the following topics:

- Materials engineering involving nanosized elements;
- Fluids in interaction with nanocomposites;
- Far-field and near-field radiation;
- Surface phonon-polaritons;
- Thermoelectric materials;
- Thermal interface materials;
- Thermal metamaterials;
- Thermal logic devices;
- Surfaces, interfaces, and corresponding structures;
- Size effect on thermal transport;
- High-entropy alloys;
- Amorphous systems;
- Thermal barrier coatings.

Guest Editors

Prof. Dr. Shiyun Xiong

Dr. Yajuan Cheng

Prof. Dr. Hongliang Yi

Prof. Dr. Sebastian Volz

Deadline for manuscript submissions

closed (30 June 2023)

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Nanomaterials
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
nanomaterials@mdpi.com

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Message from the Editor-in-Chief

Nanoscience and nanotechnology are exciting fields of research and development, with wide applications to electronic, optical, and magnetic devices, biology, medicine, energy, and defense. At the heart of these fields are the synthesis, characterization, modeling, and applications of new materials with lower nanometer-scale dimensions, which we call “nanomaterials”. These materials can exhibit unusual mesoscopic properties and include nanoparticles, coatings and thin films, metal–organic frameworks, membranes, nano-alloys, quantum dots, self-assemblies, 2D materials such as graphene, and nanotubes. Our journal, *Nanomaterials*, has the goal of publishing the highest quality papers on all aspects of nanomaterial science to an interdisciplinary scientific audience. All of our articles are published with rigorous refereeing and open access.

Editor-in-Chief

Prof. Dr. Eugenia Valsami-Jones
School of Geography, Earth and Environmental Science, University of Birmingham, Birmingham B15 2TT, UK

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