Special Issue

Thermal Transport for Sustainability

Message from the Guest Editor

This Special Issue aims to encourage authors to share their new advances in thermal transport that could contribute to sustainability, from physics, materials science, electronics, and machine learning perspectives. Many studies have been carried out highlighting the importance of thermal management to improve heat dissipation, increasing the efficiency of processes and reducing their energy consumption. To study thermal transport, the Fourier law has been widely used, which works for steady-state situations and in bulk samples. When the sample size is reduced to the micro or nano scale, with complex geometries or grating, and/or when the heating conditions are performed at high-frequency time scales, the Fourier law cannot be longer applied. The heat is not transferred in a diffusive manner, but other transport regimes such as ballistics, quasi-ballistics or hydrodynamics may appear.

In this Special Issue, we seek relevant contributions in these beyond-Fourier transport regimes from a fundamental point of view. Works dealing with first principle calculations, finite element modelling and machine-learning techniques are welcome.

Guest Editor

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Deadline for manuscript submissions

closed (15 September 2023)



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Message from the Editor-in-Chief

I encourage you to contribute a research or comprehensive review article for consideration for publication in Sustainability, an international open access journal which provides an advanced forum for research findings in areas related to sustainability and sustainable development. The journal publishes original research articles, reviews, conference proceedings (peer reviewed full articles) and communications. I am confident you will find the journal contributes to enhancing understanding of sustainability and fostering initiatives and applications of sustainability-based measures and activities.

Editor-in-Chief

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