Special Issue

Quantum Thermodynamics in Action

Message from the Guest Editors

Quantum platforms have developed over the past years incredibly quickly, thanks to the intensive efforts towards quantum information processing, sensing, and related fields. This progress provides a basis for the investigation of quantum thermodynamics both conceptually and via concrete experiments. Novel ways to control thermal properties and currents in quantum systems are needed, either by active means (thermal machines) or via passive routes optimizing thermal transport. An important aspect of quantum technology is to develop systems that can be considered as isolated but at the same time controllable by external signals. “Quantum Thermodynamics in Action” would mean taking into account and benefiting from the technological development and present ideas and experiments in this vigorous research area. Articles are welcomed from both theoretical and experimental communities working on different platforms of quantum technology, including superconducting circuits, quantum dot devices, NMR systems, trapped ions, ultracold atoms, and NV centers.

Guest Editors

Dr. Bayan Karimi

1. Pritzker School of Molecular Engineering, University of Chicago, Chicago, IL 60637, USA
2. Department of Applied Physics, Aalto University, P.O. Box 13500, 00076 Aalto, Finland

Prof. Dr. Jukka P. Pekola

Department of Applied Physics, Aalto University, P.O. Box 13500, 00076 Aalto, Finland

Deadline for manuscript submissions

30 June 2026

Entropy

an Open Access Journal by MDPI

Impact Factor 2.0
CiteScore 5.2
Indexed in PubMed

mdpi.com/si/260366

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

mdpi.com/journal/entropy

Entropy

an Open Access Journal by MDPI

Impact Factor 2.0
CiteScore 5.2
Indexed in PubMed

mdpi.com/journal/entropy

About the Journal

Message from the Editor-in-Chief

The concept of entropy is traditionally a quantity in physics that has to do with temperature. However, it is now clear that entropy is deeply related to information theory and the process of inference. As such, entropic techniques have found broad application in the sciences.

Entropy is an online open access journal providing an advanced forum for the development and/or application of entropic and information-theoretic studies in a wide variety of applications. *Entropy* is inviting innovative and insightful contributions. Please consider *Entropy* as an exceptional home for your manuscript.

Editor-in-Chief

Prof. Dr. Kevin H. Knuth
Department of Physics, University at Albany, 1400 Washington Avenue, Albany, NY 12222, USA

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), Inspec, PubMed, PMC, Astrophysics Data System, and other databases.

Journal Rank:

JCR - Q2 (Physics, Multidisciplinary) / CiteScore - Q1 (Mathematical Physics)

MDPI