



entropy



an Open Access Journal by MDPI

Thermodynamics of Dissipative Structures and Related Emergent Phenomena

Guest Editors:

Dr. Hisashi Ozawa

Graduate School of Advanced Science and Engineering, Hiroshima University, Higashi-Hiroshima, Hiroshima 739-8521, Japan

Dr. Robert Niven

School of Engineering and Information Technology, The University of New South Wales, Canberra, ACT 2600, Australia

Deadline for manuscript submissions:
closed (31 January 2026)

Message from the Guest Editors

This Special Issue welcomes all papers that focus on the emergence and formation of dissipative structures in systems far from thermodynamic equilibrium. The scope of this Special Issue comprises all kinds of nonlinear non-equilibrium phenomena, from small-scale fluid dynamics to large-scale planetary circulations, as well as physical, chemical and biological kinetics characterized by their evolutionary tendency to increase entropy associated with enhanced rates of free energy dissipation. Physical and chemical kinetic processes taking place under highly non-equilibrium circumstances are of particular interest in revealing the mechanism of spontaneous pattern formation and related emergent phenomena. The resultant organization of regular or complex structures as well as scale-invariant morphologies, often referred to as “fractal” structures, are also within the scope of this Special Issue. Both theoretical and application studies aimed at resolving issues found in experiments, observations and numerical model simulations are welcome. We invite contributions from researchers in any discipline working on any of the aforementioned topics.



mdpi.com/si/183000

Special Issue



entropy



an Open Access Journal by MDPI

Editor-in-Chief

Prof. Dr. Kevin H. Knuth

Department of Physics, University
at Albany, 1400 Washington
Avenue, Albany, NY 12222, USA

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.

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)

Contact Us

Entropy Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

Tel: +41 61 683 77 34
www.mdpi.com

mdpi.com/journal/entropy
entropy@mdpi.com
[X@Entropy_MDPI](#)