



*entropy*



an Open Access Journal by MDPI

## Thermodynamics and Phase Transitions in Magnetic Materials

Guest Editors:

**Prof. Dr. Luana Caron**

Faculty of Physics, Bielefeld  
University, 33615 Bielefeld,  
Germany

**Dr. Francesco Cugini**

Department of Mathematical,  
Physical and Computer Sciences,  
University of Parma, 43124  
Parma, Italy

**Dr. Xuefei Miao**

School of Materials Science and  
Engineering, Nanjing University  
of Science and Technology,  
Nanjing 210094, China

### Message from the Guest Editors

Several interesting and useful phenomena take place around magnetic phase transitions. For example, magnetic shape memory due to magnetostructural coupling in martensites may be exploited in sensors and actuators, large entropy and temperature changes in magnetocaloric materials may be used for heat pumping and power conversion, permanent magnets and superconductors are extensively utilized in several applications, from generators to laboratory devices to MRIs, etc.

In this issue, we would specially like to address the thermodynamic description of magnetic phase transitions which give rise to a variety of phenomena. Additionally, within the scope of this Special Issue are the design of novel thermomagnetic cycles and simulation of materials functional properties for, e.g., magnetic refrigeration.

Deadline for manuscript  
submissions:

**closed (25 August 2021)**



[mdpi.com/si/53070](https://mdpi.com/si/53070)

# 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, St. Alban-Anlage 66  
4052 Basel, Switzerland

Tel: +41 61 683 77 34  
[www.mdpi.com](http://www.mdpi.com)

[mdpi.com/journal/entropy](http://mdpi.com/journal/entropy)  
[entropy@mdpi.com](mailto:entropy@mdpi.com)  
[X@Entropy\\_MDPI](#)