symmetry

an Open Access Journal by MDPI

IMPACT FACTOR 2.7

CITESCORE 4.9

Quantum Phenomena in Magnetic Materials

Guest Editor:

Dr. Robert Georgii
Department of Physics,Technical University Munich, Lichtenbergstr.1, 85748 Garching, Germany

Deadline for manuscript submissions:
closed (31 October 2023)

Message from the Guest Editor

Dear colleagues,

Although mankind has known about magnetite for more than 2500 years, our knowledge of magnetic materials is still fast-growing and magnetic materials play a vast role in modern technology throughout all aspects and fields. Their applications range from permanent magnets, though to computer storage, superconductors, sensors, and actuators, to very special applications in optics, electronics, nuclear spin resonance imaging, and calorimetrics.

Magnetic materials also have a vast number of quantum phenomena ranging from the existence of magnetic “monopoles”, a surprising role of magnetism in the existence of novel superconducting phases to topological protected large objects. These skyrmions were first observed in non-centrosymmetric cubic magnetic materials with emergent topological spin structure. Furthermore, parity-time (PT) symmetry-breaking phase transition also could be seen in quantum spin systems. Amongst others, all these phenomena are of special importance for applications in future quantum computing...

symmetry

IMPACT FACTOR 2.7

CITESCORE 4.9

an Open Access Journal by MDPI

Editor-in-Chief

Prof. Dr. Sergei D. Odintsov
1. Institució Catalana de Recerca i Estudis Avançats (ICREA), Passeig Luis Companys, 23, 08010 Barcelona, Spain
2. Institute of Space Sciences (ICE-CSIC), C. Can Magrans s/n, 08193 Barcelona, Spain

Message from the Editor-in-Chief

Symmetry is ultimately the most important concept in natural sciences. It is not surprising then that very basic and fundamental research achievements are related to symmetry. For instance, the Nobel Prize in Physics 1979 (Glashow, Salam, Weinberg) was received for a unified symmetry description of electromagnetic and weak interactions, while the Nobel Prize in Physics 2008 (Nambu, Kobayashi, Maskawa) was received for the discovery of the mechanism of spontaneous breaking of symmetry, including CP symmetry. Our journal is named *Symmetry* and it manifests its fundamental role in nature.

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), CAPlus / SciFinder, Inspec, Astrophysics Data System, and other databases.
Journal Rank: JCR - Q2 (*Multidisciplinary Sciences*) / CiteScore - Q1 (*General Mathematics*); Q1 (*Physics and Astronomy*); Q1 (*Computer Science*)

Contact Us

Symmetry Editorial Office
MDPI, St. Alban-Anlage 66
4052 Basel, Switzerland

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

mdpi.com/journal/symmetry
symmetry@mdpi.com
𝕏@Symmetry_MDPI