

Special Issue

Understanding Iron Superconductors and Isostructural Materials

Message from the Guest Editor

Studies of iron-based superconductors, stimulated by an enormous public interest and supported by the experience collected from the preceding work on the unconventional superconductivity. It is possible to synthesize numerous related yet different materials of the iron family. An assortment of spontaneous orders, related to the breaking of all possible symmetries of the many-electron wave function, has been detected in these materials. We have accumulated a good bulk of evidence suggesting that such proximity of different electronic phases is connected to the very origin of unconventional superconductivity. Nevertheless, the precise formulation of what actually underlies efficient electron pairing has not yet been achieved. Recently, compounds of the same crystalline symmetries, but with iron substituted by the other *d*-elements, have caught the attention of the research community. This Special Issue will collect new experimental and theoretical results, as well as overviews, generalizations, and analyses of the known facts, facilitating the understanding of iron-based superconductors from a wide perspective.

Guest Editor

Dr. Daniil Evtushinsky

Laboratory for Quantum Magnetism, Institute of Physics, École Polytechnique Fédérale de Lausanne, CH-1015 Lausanne, Switzerland

Deadline for manuscript submissions

closed (15 September 2022)



Symmetry

an Open Access Journal
by MDPI

Impact Factor 2.2
CiteScore 5.4



mdpi.com/si/52325

Symmetry
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
symmetry@mdpi.com

[mdpi.com/journal/
symmetry](https://mdpi.com/journal/symmetry)





Symmetry

an Open Access Journal
by MDPI

Impact Factor 2.2
CiteScore 5.4



[mdpi.com/journal/
symmetry](https://mdpi.com/journal/symmetry)



About the Journal

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.

Editor-in-Chief

Prof. Dr. Sergei Odintsov

1. ICREA, 08010 Barcelona, Spain

2. Institute of Space Sciences (IEEC-CSIC), C. Can Magrans s/n, 08193 Barcelona, Spain

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within SCIE (Web of Science), Scopus, CAPlus / SciFinder, Inspec, Astrophysics Data System, and other databases.

Journal Rank:

JCR - Q2 (Multidisciplinary Sciences) / CiteScore - Q1 (General Mathematics)