Special Issue

Synthesis, Characterization and Simulation of Novel Magnetic Intermetallic Compounds

Message from the Guest Editors

Magnetic materials form a basis for most of the critical and key technologies of today's society, such as data storage and retrieval, power generation, magnetic sensing, magnetic navigation and magnetic refrigeration. Thus, the demand for these materials will continue to increase in the future. Intermetallic compounds containing transition metals and/or rareearth metals provide a splendid "playground" for the design of novel functional magnetic materials. This Special Issue aims to address the fundamental scientific challenge of synthesizing, characterizing and measuring the physical properties of magnetic intermetallic compounds. It also aims to use first-principle calculations and computational simulations to understand why some materials are ordered magnetically and others are not and what controls the magnetic phase transition, the nature and strength of the magnetic interactions and magnetic anisotropy in a compound.

In this Special Issue, original research articles and reviews are welcome. Research areas may include (but are not limited to) the syntheses, characterization, physical properties and theoretical results of magnetic intermetallic compounds.

Guest Editors

Dr. Yuemei Zhang

Department of Chemistry and Physics, Warren Wilson College, Asheville, NC 28815, USA

Dr. Neetika Sharma

Jülich Centre for Neutron Science JCNS-2, Peter Grünberg Institute PGI-4, Forschungszentrum Jülich GmbH, Jülich, Germany

Deadline for manuscript submissions

closed (31 March 2024)



Metals

an Open Access Journal by MDPI

Impact Factor 2.5 CiteScore 5.3



mdpi.com/si/111588

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

mdpi.com/journal/ metals





Metals

an Open Access Journal by MDPI

Impact Factor 2.5 CiteScore 5.3



About the Journal

Message from the Editor-in-Chief

Metallic materials play a vital role in the economic life of modern societies; contributions are sought on fresh developments that enhance our understanding of the fundamental aspects related to the relationships between processing, properties and microstructure – disciplines in the metallurgical field ranging from processing, mechanical behavior, phase transitions and microstructural evolution, nanostructures, as well as unique metallic properties – inspire general and scholarly interest among the scientific community.

Editor-in-Chief

Prof. Dr. Yong Zhang

Beijing Advanced Innovation Center of Materials Genome Engineering, State Key Laboratory for Advanced Metals and Materials, University of Science and Technology Beijing, 30 Xueyuan Road, Beijing 100083, China

Author Benefits

High Visibility:

indexed within Scopus, SCIE (Web of Science), Inspec, Ei Compendex, CAPlus / SciFinder, and other databases.

Journal Rank:

JCR - Q2 (Metallurgy and Metallurgical Engineering) / CiteScore - Q1 (Metals and Alloys)

Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 18 days after submission; acceptance to publication is undertaken in 2.6 days (median values for papers published in this journal in the first half of 2025).

