

## 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 rare-earth 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

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### Deadline for manuscript submissions

closed (31 March 2024)



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## About the Journal

### Message from the Editorial Board

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.

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### Editors-in-Chief

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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).