Special Issue

Novel Insights into Magnetic Properties of Metals and Alloys

Message from the Guest Editor

The carriers in magnetic materials have spin-polarization characteristics, so the two degrees of freedom of electrons can be used simultaneously to develop a new information processing technology model that integrates information transmission, processing, and storage and then develops new microelectronic devices. Therefore, magnetic materials have broad application prospects as a new generation of electronic materials. In this Special Issue, we welcome articles that focus on the calculations of magnetic materials by first-principles and Monte Carlo methods. Through theoretical simulations, the intrinsic relationship between the microstructure, components, and macroscopic mechanical, thermodynamic, and thermoelectric properties of magnetic materials can be revealed. At the same time, the influence of surface and interface effects on the above properties is revealed, which in turn provides a scientific basis for the application of magnetic materials in spintronic devices.

Guest Editor

Prof. Dr. Xiaoping Wei

Department of Physics, The School of Mathematics and Physics, Lanzhou Jiaotong University, Lanzhou 730070, China

Deadline for manuscript submissions

closed (31 December 2024)

Metals

an Open Access Journal by MDPI

Impact Factor 2.5
CiteScore 5.3

mdpi.com/si/203719

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

mdpi.com/journal/metals

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.

Editors-in-Chief

Prof. Dr. Hugo F. Lopez
Department of Materials Science and Engineering, College of Engineering & Applied Science, University of Wisconsin-Milwaukee, 3200 N. Cramer Street, Milwaukee, WI 53211, USA

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).

MDPI