

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

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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

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