Special Issue

Advanced Intermetallic Alloys and Intermetallics

Message from the Guest Editor

Intermetallic compounds and alloys based on intermetallic compounds are the subject of ever-increasing interest on the part of researchers. Such alloys have a number of important properties that are useful for their practical application, such as positive temperature dependence of the yield strength, anomalous temperature and pressure ranges, their stability, and resistance to high-intensity external influences. The Special Issue is devoted to the ideas about the development of this direction, demonstrated by well-known scientists. The content of the Special Issue may include, but is not limited to, the following sections:

- Results of experimental studies of intermetallic compounds;
- Computer modeling of materials based on intermetallic compounds at three levels—microscopic (nanostructural), mesoscopic and macroscopic;
- Application of computer simulation methods, molecular dynamics, Monte Carlo, cellular automata method and their combinations;
- Quantum transformations are structural, superstructural. Their influence on the physical and mechanical properties of materials;
- Superalloys based on intermetallic compounds.

Guest Editor

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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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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).

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