



High-Performance Alloys: Properties, Processing, and Applications

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Message from the Guest Editor

Dear Colleagues,

Increasing technological demand in several industries has encouraged the development of alloys that perform at a higher level than conventional alloys. Some of the properties that high-performance alloys exhibit include high strength or toughness, alloys resistant to creep, corrosion, or fatigue, alloys capable of operating in high-temperature and cryogenic environments, and thermoelectric properties. The processing of high-performance alloys is also of great importance in this field of study, including fabrication procedures, thermomechanical treatment, and joining techniques. Through the investigation of properties and processing, the application of high-performance alloys in aerospace, energy generation, cryogenics, and many other industries can flourish.

In this Special Issue, we invite researchers to submit articles that focus on the advances in high-performance alloy processing techniques, characterization of their unique properties, and discussion of novel high-performance alloy applications.





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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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