Special Issue

Preparation, Properties, Microstructure and Applications of High Entropy Alloys

Message from the Guest Editors

Metallic materials play an important role in industrial production and scientific research. The emergence of high-entropy alloys offers a new strategy for alloy composition design, providing significant development opportunities in the field of materials. This “rising star” in the world of alloy materials exhibits uncommon microstructures and numerous appealing properties, including exceptional strength, hardness, corrosion resistance, fracture and fatigue resistance, high-temperature stability, and more, which outperform conventional alloys. The concept of high-entropy alloys has been extended to high-entropy ceramics, high-entropy thin films, high-entropy steels, high-entropy high-temperature alloys, high-entropy cemented carbides, and so on.

In this Special Issue, we welcome articles that focus on the preparation methods of high-entropy alloys and their microstructure modulation and the influence of post-treatment processes on the properties of the final products.

- high entropy alloys
- multicomponent
- fabrication
- synthesis techniques
- microstructural characterization
- properties

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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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