Special Issue

Structure and Properties of High-Entropy Alloys

Message from the Guest Editors

High-entropy alloys (HEAs) are emerging as an outstanding class of materials with excellent combinations of properties such as high thermal stability, superior mechanical performance, and unique magnetic properties that are not attainable in conventional alloys.

This Special Issue will provide a comprehensive overview of recent advances in the study of the structure and properties of high-entropy alloys. We invite submissions that focus on experimental investigations, theoretical modeling, and computational simulations to enhance our understanding of HEA behavior. Topics of interest include, but are not limited to, the following:

-Phase formation and stability in HEAs;
-Microstructure evolution and characterization;
-Mechanical and physical properties;
-Advanced processing techniques;
-Computational modeling across different length scales to investigate the structure and properties of HEAs;
-Machine learning and data-driven methods for discovering high-performance HEA compositions;
-Functional and magnetic properties.

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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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