

Special Issue

High Entropy Alloys: Novel Design Concepts Enabling Enhanced Mechanical Properties

Message from the Guest Editor

In the search for new materials, high entropy alloys (HEAs), a new class of metallic materials with multi-component compositions, have attracted increasing interest due to their unique heterogeneities and exceptional properties. Recently, various novel design concepts have enabled enhanced mechanical properties of HEAs, which are the scope of this Special Issue. By tailoring chemical heterogeneities and microstructure complexities, these new strategies will continue to enhance the strength–ductility synergy of HEAs for potential space, aerospace, marine, nuclear, and biomedical applications. In this Special Issue, we welcome review articles and research papers that focus on improved strength–ductility synergy of HEAs through novel design concepts. The topics will include but are not limited to: (1) Novel chemical heterogeneities, including lattice distortion and chemical short-range order; (2) Novel microstructures, including heterostructure, gradient, dislocation engineering, precipitation, and eutectic;

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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