Special Issue

Recent Developments of High-Entropy Alloys and Metallic Glasses

Message from the Guest Editors

Bulk metallic glasses and high-entropy alloys are two classes of exotic material systems, which possess desirable properties, such as wear resistance, corrosion resistance, and high strength. The aim of this Special Issue is to publish research articles and reviews on the up-to-date experimental and theoretical results for these types of alloys. Specific topics of interest include, but are not limited to, the following: (i) crystallization kinetics, (ii) advanced characterization techniques, (iii) in situ plastic deformation behavior (including serrated flows), (iv) biocompatibility, (v) mechanical behavior at elevated and cryogenic temperatures, (vi) irradiation effects, (vii) machine learning and high-throughput methods, and (viii) links between mechanical behavior and microstructures. The overarching goal of this Special Issue is to provide a comprehensive platform for the dissemination of new findings, while discussing future directions in the fields of bulk metallic glass and high-entropy alloy research.

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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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