

Special Issue

Metal Alloys: Design, Manufacturing, Micro/Nano Structure Characterization

Message from the Guest Editors

Metallic materials, especially high-entropy alloys (HEAs), are an exotic class of materials that possess desirable properties, such as exceptional micro/nano structures and single-phase formation. These features, in turn, contribute to attractive material properties, such as high strength and excellent softening resistance at elevated and cryogenic temperatures. In terms of composition, HEAs contain five or more elements in amounts ranging from 5 to 35 atomic percent (at. %) each, resulting in a vast compositional space that is still mainly unexplored to this day.

The purpose of this Special Issue is to provide a collection of articles on “Metal Alloys: Design, Manufacturing, Micro/Nano Structure Characterization” with the aim of publishing research articles and comprehensive reviews on current experimental and theoretical results for metallic materials. Specific topics of interest include, but are not limited to, new alloy design strategies, manufacturing (casting, additive manufacturing, thin-film manufacturing, etc.) phase stability and multi-scale structural evolution, and mechanical behaviors.

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