



Recent Progress in Advanced High-Entropy Alloys

Guest Editor:

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Message from the Guest Editor

Dear Colleagues,

First reported in 2004, high-entropy alloys (HEAs), which consist of at least four principal elements, as compared to only one or two primary elements in conventional alloys, have provided a platform to revolutionize alloy design strategies. HEAs have also provided novel design pathways for attaining excellent structural and functional properties, including high strength combined with good ductility, promising magnetic properties, and excellent resistance to hydrogen embrittlement. Not surprisingly, HEAs have attracted considerable interest from the materials community in recent years. The volume of reports on high-entropy materials has warranted the publication of many articles (including reviews) that serve to establish the evolving understanding of the field.

Hence, the objective of this Special Issue is to gather and disseminate recent progress in HEAs. We welcome reviews and original research articles which can concisely address the defining qualities of HEAs, point out the evolving understanding of their core concepts, highlight exceptional properties that are responsible for the popularity of HEA research, and discuss HEA design aspects.





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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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