Special Issue High-Entropy Alloys (HEAs)

Message from the Guest Editors

Originated from the idea of multi-principal-element solid solution, the field of "high-entropy alloys (HEAs)" has attracted intense and increasing interest from academia and industries worldwide. Outstanding (physical, mechanical, and functional) properties have been reported for a variety of HEAs. In order to balance the properties for targeted applications, the microstructure of HEAs can be a single phase or composite, and traditional physical metallurgy principles have been applied to develop unique HEAs, including high-entropy stainless steels, high-entropy superalloys, high-entropy refractory alloys, high-entropy light-weight alloys, highentropy oxides, high-entropy metallic compounds, etc. As presented in a recent comprehensive review on HEAs, great challenges remain in fundamental understanding of HEAs formation and their properties, and potential high-performance HEAs are yet to be explored. The objective of this Special Issue is to timely disseminate the rapid progress in fundamental understanding and applications of HEAs.

Guest Editors

Dr. Michael C. Gao

AECOM|Contractor for the US DEPT of ENERGY, National Energy Technology Laboratory (Albany), 1450 Queen Ave SW, Albany, OR 97321, USA

Prof. Junwei Qiao

Laboratory of Applied Physics and Mechanics of Advanced Materials, College of Materials Science and Engineering, Taiyuan University of Technology, Taiyuan 030024, China

Deadline for manuscript submissions

closed (31 July 2017)



Metals

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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.

Editors-in-Chief

Prof. Dr. Hugo F. Lopez

Department of Materials Science and Engineering, College of Engineering & Applied Science, University of Wisconsin-Milwaukee, 3200 N. Cramer Street, Milwaukee, WI 53211, USA

Prof. Dr. Yong Zhang

Beijing Advanced Innovation Center of Materials Genome Engineering, State Key Laboratory for Advanced Metals and Materials, University of Science and Technology Beijing, 30 Xueyuan Road, Beijing 100083, China

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