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Fundamental Understandings of Deformation Mechanism, Oxidation, Tribology, and Corrosion Behaviours of High Entropy Alloys

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Message from the Guest Editors

High entropy alloys (HEAs), also termed complex concentrated alloys or multi-principal element alloys, are a new class of multi-component materials different from conventional alloys based only on one or two major alloying elements. Concerning the potential application of HEAs in structural and materials/metallurgical engineering, it is important to have a fundamental understanding of their mechanical properties, deformation mechanisms, corrosion behaviours in tribology. and different environments, high temperature oxidation, and fatigue performances. These are strongly dependent on the processing method of HEAs and their microstructure and phase constitutions. Our Special Issue aims to provide a timely review of research in the rapidly developing subject area of HEAs. We would like to invite you to submit research papers, short communications and review articles to the Special Issue. Specific topics of interests include (but are not limited to):

Design and processing of HEAs; Microstructure, phase constitution and mechanical properties; Deformation mechanism; Friction and wear properties; High temperature oxidation; Corrosion resistance; Theory, simulation and modelling; Coatings



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