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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, tribology, and corrosion behaviours in 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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Special Issue



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Message from the Editor-in-Chief

Welcome to *Crystals*, the journal dedicated to the fascinating world of crystallographic research! Crystals are more than mere decorative elements; they hold the key to understanding the fundamental structure of matter. Our mission is to explore the crucial significance of this research across various fields. From medicine to technology, chemistry to geology, crystals play a vital role. Their structure provides insights into new advanced materials, innovative drugs, and groundbreaking technologies. Through *Crystals*, we delve into the microscopic world to discover solutions that will shape the future. Join us on a journey through the *Crystals*, where science merges with beauty and innovation.

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