Special Issue

Mechanical Properties and Wear Resistance of Multi-Component Alloys and Composites

Message from the Guest Editors

Multi-component alloys (MCAs) containing multi-principal elements, also known as high-entropy alloys (HEAs) or medium-entropy alloys (MEAs), have attracted considerable attention during the past two decades as a non-traditional class of alloys. One of main advantages of MCAs is their flexibility for chemical composition and microstructure manipulation, which greatly facilitates obtaining optimal combinations of superior mechanical properties and high resistances to corrosion, oxidation, and wear, making them promising candidate materials for applications under complex and extreme service conditions in the forms of bulks, coatings, and composite matrixes. This Special Issue aims to report recent advances in the development of MCAs as wear-resistant materials, including MCA design, anti-wear performance, and mechanisms for wear of MCAs in various environments. The Special Issue covers, but is not limited to, mechanical properties and wear behaviors of MCAs and MCA matrix composites in ambient conditions, at elevated temperatures, and in corrosive environments, and the relationships among the chemical composition, microstructure, and properties.

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Friction, wear, and lubrication are tribological phenomena that govern the behavior of interacting surfaces in a wide range of machine components. Understanding the physical and chemical nature of these phenomena is critical to achieving long component lifetime and economical operation. Research in the field of tribology is highly interdisciplinary, and encompasses the fields of physics, chemistry, engineering, and mathematical modeling. *Lubricants* invites contributions on new advances in all areas of tribology for publication as peer-reviewed research articles, reviews of current research, letters, and communications. We are committed to providing timely reviews of all articles submitted. Please consider sharing your work with the scientific community through publication in *Lubricants.*

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