Special Issue

Formation, Microstructure, and Properties of Light Alloys

Message from the Guest Editor

This Special Issue on the “Formation, Microstructure, and Properties of Light Alloys” explores advancements and challenges pertaining to light metal alloys, focusing on their formation processes, microstructural evolution, and resultant mechanical properties. The issue emphasizes the latest research on alloy compositions, processing techniques, and their impact on performance in applications such as aerospace, automotive, and structural engineering. Special attention is given to the role of microstructure in dictating material properties, including strength, ductility, and fatigue resistance. Moreover, it discusses the integration of novel fabrication technologies, such as additive manufacturing and advanced forging, in improving the formability and functionality of light alloys. This collection of articles aims to provide a comprehensive understanding of how light alloys can be optimized for performance in demanding environments, offering insights into future trends and innovations in alloy design and processing.

Guest Editor

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Message from the Editor-in-Chief

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.

Editor-in-Chief

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