Special Issue

Processing Technology and Properties of Light Metals

Message from the Guest Editors

Light metal alloys, that are based on Aluminium (Al), Magnesium (Mg), and Titanium (Ti), are widely used in transportation, aerospace, medicine, and various types of construction and consumer goods manufacturing. Growing production costs and a tendency to reduce energy consumption at the application stage heighten the requirements for improved mechanical properties (strength and toughness) and a greater strength-to-weight ratio. This initiates further developments of new alloy compositions and processing technologies.

This Special Issue is dedicated to alloy design and the development of new processing technologies for modern Al-, Mg-, and Ti-based alloys. The effects of alloying elements, such as Si, Mg, Cu, Zr, Sc, Li, V, Nb, and Mo, on microstructure and mechanical properties will be analysed. Recent trends in additive manufacturing, thin strip casting, and thermo-mechanical processing will be discussed. Novel research results and comprehensive reviews of previously published data are welcome in this Special Issue.

Guest Editors

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About the Journal

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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