Special Issue

Processing, Properties, Applications and Recycling of Light Alloys

Message from the Guest Editors

Light alloys hold a vital position in rail transit, aerospace, national defense, automotive manufacturing, and other fields due to their low density, high specific strength, excellent castability, and corrosion resistance. The alloy microstructure and properties are dominated by the processing procedure, which directly impacts their applications. Furthermore, to achieve closed-loop alloy flow, recycling secondary resources is a key component of the sustainable development of alloy systems.

This Special Issue showcases excellent studies on short-process alloy manufacturing—such as continuous rheological extrusion, integrated die casting, integrated casting and forging, and additive manufacturing, which are encouraged. Applications in rail transit, aerospace, national defense, and automotive manufacturing are all in scope. The recycling of aluminum and magnesium alloys is also anticipated. Research papers, reviews, and short communications from both experimental and simulation studies are welcome.

- aluminum and magnesium alloys
- processing
- properties
- applications
- recycling

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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