



Advances in Lightweight Alloys

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Message from the Guest Editors

Dear Colleagues,

We are delighted to organize a Special Issue focusing on advances in lightweight alloys. To meet the requirement of energy saving and emission reduction, lightweight alloys have been widely used in aerospace, automotive, and railway transportation, and so on. Recent research advances enable a better understanding of the relationship between lightweight alloys' composition, microstructure, process, and properties. The papers presented in this Special Issue contain valuable information about the composition design, preparation process, casting, solidification, microstructure, and property analysis of lightweight alloys, including but not limited to aluminum alloy, magnesium alloy, titanium alloy, and lightweight nickel-based superalloy. We hope this Special Issue will contribute to the ongoing discussions on designing high-performance lightweight alloys and developing advanced processing technology.





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Message from the Editorial Board

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.

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