Special Issue

Advances in Microstructure and Properties of Light Alloys

Message from the Guest Editor

Light alloys are increasingly used in motor vehicles and aircraft due to their exceptional properties. This Special Issue aims to summarize recent advancements in alloy microstructure, properties, applications, heat treatment, fabrication, and safety considerations. These materials offer significant potential for industrial applications, particularly in reducing the weight of engineering components, which can lead to lower operating costs. For instance, titanium is 42% lighter than steel, aluminum 65% lighter, and magnesium 77% lighter. However, it is essential to thoroughly examine all material properties to ensure their safe and effective use. These properties are influenced by factors such as raw materials, production processes, and microstructure. I invite you to contribute an article to this Special Issue that explores the latest developments in light metals.

Guest Editor

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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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