Special Issue

Preparation, Formation and Application of Light Alloys and Their Composites

Message from the Guest Editor

Light alloy materials, such as aluminum alloy, magnesium alloy, titanium alloy and their composite materials, are a new type of metal-based materials. Especially under the trend of light-weighting, light alloy materials have become a crucial choice for various industries in the pursuit of high efficiency, energy saving, and environmental protection due to their light weight and high strength. Naturally, it has become an indispensable and important material in aerospace, electronic communications, architectural decoration and many other fields. The preparation method of light alloy-based materials also varies according to different needs, mainly casting technology, but also involves additive manufacturing, powder metallurgy, hot pressing, and other metal solidification-related means. With the emergence of new preparation and processing technologies, light alloy materials bring more obvious advantages and new requirements. For the above-mentioned reasons, advances in light alloys and their composites, including the preparation, formation, and application of the materials in all processing steps and final property analysis, are the scope for this Special Issue.

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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