Special Issue

Texture Evolution and Mechanical Properties of Light Alloys

Message from the Guest Editors

The voluminous production of emissions from the transport sector is one of the most acute climate-related issues we face today. One possible solution is to reduce vehicle mass by utilizing lightweight structural components. However, the mechanical properties of these materials are heavily dependent on factors such as microstructure and texture. In order to develop light alloys with optimized strength and ductility, further research on the fundamental topics related to the design, control, and prediction of texture in light alloys is required. The aim of this Special Issue is to gather the current research in the textural engineering of light alloys. The central topics in which we are particularly interested include, but are not limited to, the following: (1) the textural formation and evolution mechanisms of light alloys; (2) the relationship between texture and mechanical anisotropy. We welcome all forms of contribution, including theoretical, numerical, and experimental research, as well as various types of manuscripts, such as reviews, full-length articles, technical reports, letters, and communications.

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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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