Special Issue

Heat Treatment of Engineering Materials including Steel, Magnesium, and Aluminum Alloys

Message from the Guest Editor

The subject of this Special Issue is the heat treatment of steel, aluminum, magnesium, and their alloys, which is one of the most important and cost-efficiency manufacturing processes for achieving the various desired properties required for a particular application. Heat treatment techniques include annealing, normalizing, hardening, aging, stress relieving, tempering, carburization, and nitriding. According to the type and process conditions, a change in the microstructure of the material is induced, thereby changing the physical properties. This Special Issue embraces interdisciplinary work covering physical metallurgy and processes, reporting on experimental and theoretical progress. Research on the microstructure and property changes in these metals caused by heating and cooling incidentally generated during other processes such as welding and hot forming is included in the Special Issue, despite this topic not strictly involving direct heat treatment. Manuscripts are highly welcomed from both academic and commercial viewpoints with progressive results. To find more information, please click this link.

Guest Editor

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closed (31 August 2022)

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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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