Special Issue

Advances in Metal Materials: Structure, Properties and Heat Treatment

Message from the Guest Editor

This research necessitates the precise manipulation of heat treatment process parameters, encompassing temperature, duration, and cooling rate, to systematically analyze the phase transformation behavior, grain refinement mechanisms, and mechanical property evolution of metallic materials under varying heat treatment conditions. It aims to elucidate the influence of heat treatment on the microhardness, strength, toughness, creep resistance, fatigue endurance, and corrosion resistance of metallic materials, thereby furnishing a theoretical foundation for optimizing material properties to meet the demands of advanced engineering applications.

Guest Editor

Dr. Jiayi Zhang
Faculty of Materials Science and Engineering, Jiangxi University of Science and Technology, Ganzhou 341000, China

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Metals
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
metals@mdpi.com

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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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Prof. Dr. Hugo F. Lopez
Department of Materials Science and Engineering, College of Engineering & Applied Science, University of Wisconsin-Milwaukee, 3200 N. Cramer Street, Milwaukee, WI 53211, USA

Prof. Dr. Yong Zhang
Beijing Advanced Innovation Center of Materials Genome Engineering, State Key Laboratory for Advanced Metals and Materials, University of Science and Technology Beijing, 30 Xueyuan Road, Beijing 100083, China

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