Special Issue

Microstructure and Mechanical Properties of Metallic Materials Under Heat Treatment

Message from the Guest Editors

This Special Issue focuses on experimental and modeling results targeting conventional and non-conventional technologies for thermal or thermo-chemical treatments including those with high heating rates, thermal cycling, and very short soaking times. Researchers are invited to share their work on applying the above-mentioned conventional and innovative technologies on steel and non-ferrous alloys, showing the link between processing parameters, microstructure (including texture), and mechanical properties.

Keywords:
heat treatment;
thermo-chemical treatment;
non-conventional heat treatment;
ultra-fast heating;
ultra-short annealing;
thermal cycling; steel; advanced high-strength steels;
electrical steels;
non-ferrous alloys;
microstructure;
texture;
properties;

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About the Journal

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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