Special Issue

Microstructural Characterization of Metallic Materials

Message from the Guest Editors

The classification of microstructures of metallic materials based on morphology is of great significance for the study of structure–property relationships. Further insight into the details of substructures is usually necessary for the researchers to evaluate the relevant attributes. The development of metallic materials is always required to achieve the improved combinations of toughness and strength (or hardness). Careful alloy design and advances in process technology can make ordinary materials become extraordinary. This Special Issue aims to explore the special microstructures that are produced by some new processes/alloy additions and exhibit excellent properties. Through optical metallography, scanning electron microscopy/electron backscatter diffraction, transmission electron microscopy, scanning transmission electron microscopy, etc., microstructural characterization brings about new findings. The related metallic materials for the subjects will include (but not limited to) alloy steels, stainless steels, light metals: aluminum alloys, magnesium alloys and titanium alloys, high entropy alloys, etc.

Guest Editors

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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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