Special Issue

Experimental Mineralogy and Crystallography of Metal-Based Materials

Message from the Guest Editor

Scientific interest in the structure, properties and functionality of modern metal-based materials is inextricably linked to their structural-phase, physical, chemical, optical and other properties. It is the elements that comprise these materials, particularly metals and metalloids, that contribute to these characteristics. This Special Issue of *Metals* aims to present recent research regarding the mineralogy and crystallography of materials whose structure comprises metals. In addition, it focuses on the major influence that the microstructure of metal-based materials (natural, modified or synthetic) has on their functionality and applications by studying the composition–structure–property relationship. Controlling the microstructure of materials enables the design of new advanced materials that can be employed in various fields, including science, medicine, agrochemistry and ecology. A range of analytical methods, including chemical analysis (EDS, XRF, WDS), single-crystal and powder X-ray diffraction, and spectroscopic, microscopic and thermal methods, offer a powerful means of studying the microstructure of metallic materials.

Guest Editor

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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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