

Special Issue

Microstructure and Deformation of Metals and Alloys

Message from the Guest Editor

In today's material science and engineering, the demand for high-performance materials is increasing. Pure metals, alloys, and rare earth metals and alloys play a key role in many fields, such as electronics, optics, and semiconductors. With the continuous progress of technology, the performance requirements of metal materials are getting higher and higher. It is of great scientific significance and practical application value to study the plastic deformation process of metal blanks based on numerical simulation and experimental research. This Special Issue aims to explore the plastic deformation process of metal billets through numerical simulation technology. Specifically, we focus on understanding the microstructure evolution during plastic deformation processes such as rolling and provide innovative practical guidance for the plastic deformation mechanism of large-sized billets. We aim to optimize the deformation process, improve the quality and performance of materials, and predict the deformation behavior and failure mode of materials to meet the needs of specific application fields.

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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