Special Issue

Rolling and Deformation of Alloys and Composites

Message from the Guest Editors

Alloys and composites occupy a vital position in modern industries, and processing via rolling has become one of the main forming methods due to its controllable product quality, high degree of mechanical automation, and production efficiency. As such, the importance of further research in this direction is self-evident. Through rolling deformation, the microstructure of the material can be improved, the mechanical properties and physical properties can be improved, and better materials can be provided for use in automotive, aerospace, electronics, and other fielded applications. This Special Issue aims to concentrate on the following: new processes and theories of the rolling deformation of alloys and composite materials; influence and mechanisms of rolling deformation and heat treatment on material properties; modeling and simulation of the evolution of the microstructure, grain refinement, and texture; and the application of advanced experimental techniques and detection technologies to monitor the process of rolling deformation.

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Deadline for manuscript submissions

closed (31 May 2025)

Metals

an Open Access Journal by MDPI

Impact Factor 2.5
CiteScore 5.3

mdpi.com/si/220515

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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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