Special Issue

Hot Forming/Processing of Metals and Alloys

Message from the Guest Editor

We invite you to contribute to our Special Issue on “Hot Forming/Processing of Metals and Alloys.” Hot forming/processing is crucial in materials science, enabling the production of complex components with improved mechanical properties and dimensional accuracy. Techniques such as hot rolling, forging, extrusion, and superplastic forming are key for shaping metals at elevated temperatures, reducing deformation resistance, and enhancing material flow. These processes are particularly beneficial for high-strength materials, allowing the production of intricate parts with superior mechanical performance. The field is gaining importance due to the growing demand for high-performance components in aerospace, automotive, energy, and marine industries. However, challenges like precise temperature control, microstructural evolution, and process optimization remain. Ongoing research focuses on developing new processing techniques, material models, and simulations to improve efficiency and product quality. This Special Issue welcomes original research, reviews, and practical applications on hot forming/processing advancements.

Guest Editor

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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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