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Study on Phase Transformation and Deformation of Metallic Materials

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Deadline for manuscript submissions:
closed (20 July 2024)

Message from the Guest Editor

Dear Colleagues,

Phase transformation is a very common phenomenon in metallic materials. It was activated in several circumstances, such as temperature variations or deformation. For instance, the well-known TRIP (transformation-induced plasticity) effect involves phase transformation during deformation and simultanesouly enhances plasticity. During high-temperature deformation of steels, the austenite phase transforms into the ferrite phase, a phenomenon known as dynamic transformation and used to produce ultrafine grained ferrite steels.

The current Special Issue welcome articles that focus on phase transformation during thermomechanical processing of metallic materials (e.g., annealing or deformation). It will provide a comprehensive understanding of the fundamentals of phase transformation during thermomechanical processing.

Dr. Baoqi Guo
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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