Special Issue

Numerical Modelling and Simulation of Metal Processing

Message from the Guest Editor

The service properties of materials strongly depend on the chemical composition, as well as their processing conditions. The specific applications and the optimization of thermal and thermo-mechanical processes, respectively, enable both, to save processes and to treat new alloy variants, as well as to realize materials with special properties. The numerical simulation of metal processing, coupled with the modelling of the structural evolution allows to reduce time and cost expensive tests at lab and industrial scale. Here, multi-scale modelling is an appropriate means to describe the development of the nano, micro and macro structure and, hence, to determine the local materials properties.

Guest Editor

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About the Journal

Message from the Editor-in-Chief

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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