Special Issue

Mechanical Modeling and Experimental Investigation of Metallic Materials

Message from the Guest Editor

To reduce the costs of steelmaking, increasing energy efficiency has become a priority task. The only way to realize is to modernize steel-making processes, equipment, and infrastructure. The most innovative approach to the modernization of steel plants is the introduction of cloud technologies into steel-making processes which have the potential to transform steel-making processes to a new more efficient level. Another approach to realizing is to introduce advanced process optimizations regarding productivity, product quality, and cost reductions. Modeling and simulations serve us as an invaluable source of information for conducting process analysis and as an alternative to expensive, dangerous, and time-consuming experimental trials. This Special Issue of Metals will cover recent advances in the modeling and optimization of different sub-processes in steelmaking from casting, rolling, heat treating, product delivery, quality assurance, and machinability assurance, while considering the most recent experimentally obtained process data.

Guest Editor

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Deadline for manuscript submissions

closed (30 June 2024)

Metals

an Open Access Journal by MDPI

Impact Factor 2.5
CiteScore 5.3

mdpi.com/si/79918

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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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