Special Issue

Computational Methods in Metallic Materials Manufacturing Processes

Message from the Guest Editors

The increasing complexity of metallic materials manufacturing processes causes significant difficulties in their optimization, modeling and control. The most innovative way to modernize these manufacturing processes is to introduce advanced computational methods. Emerging technologies such as machine learning, artificial intelligence, cloud computing, the Internet of Things and cognitive systems have the potential to transform metallic materials manufacturing processes to a more efficient level. This Special Issue of *Metals* will cover recent advances in the modeling, optimization and control of different subprocesses in metallic materials manufacturing from casting, rolling, heat treating, machining, product delivery and quality assurance, while considering the most recent experimentally obtained process data. Practical applications are especially welcome, and research with results from the industrial environment is desirable.

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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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