Special Issue

Physical Metallurgy of High Performance Steels

Message from the Guest Editor

Ever since human being started using alloys of iron, steels always have served as a backbone material for our society. It is possible because of endless evolution, making them exceptionally responsive to changes in social environments. Physical metallurgy primarily concerns the microstructure and mechanical properties of materials with their relationships. In this context, it is an essential subject for the persistent evolution of alloys of iron, creating a variety of novel high-performance steels. Recently, getting into more intensive competition with other structural alternatives, such as light metals or plastics, alloys of iron are required to make another quantum leap. This Special Issue attempts to compile efforts in the latest advances in the development of high-performance steels, particularly putting emphasis on fundamental and practical issues in physical metallurgy. Contributions are expected to navigate the everlasting evolution of steels in the future.

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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