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Numerical and Physical Modeling in Steel Refining and Casting

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Deadline for manuscript submissions:
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Message from the Guest Editors

High-quality steel is one of the most important raw materials to support the development of our society. In the past years, its production technology has achieved great advances, where physical and numerical modelling play an important role in this aspect. The social development puts forward improved requirements on physical and mechanical properties of steel. This in turn requires a strict control in the steel production process with respect to steel compositions, cleanness, homogenization, solidification structure, and various defects of steel semi-product. In addition, it is necessary to further improve the production efficiency and to lower the production cost, which is important for the sustainable competitiveness of steel. To achieve the above aims, technological progress in steel refining and casting are of great significance.

We want to present state-of-the-art studies which bring new insights in steel refining and casting. Articles of numerical and physical modelling including but not limited to ladle refining, vacuum processing, continuous casting, and ingot casting are welcome.

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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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