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Novel Insights into Steelmaking Processes

Guest Editor:

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Deadline for manuscript submissions:
closed (30 June 2024)

Message from the Guest Editor

Dear Colleagues,

The focus of this Special Issue will be on the actual status and development of the numerical and validation methods and techniques applied to steelmaking processes, and new insights into ongoing technologies will be discussed. Our Special Issue will address a range of relevant topics, including the following:

- Raw materials selection based on modeling approaches for analyzing decarbonization routes;
- Raw materials preparation, sintering, blast furnace and shaf furnace modeling (statistical, continuous, and discrete approaches) focusing on alternatives for the decarbonization of the process;
- Modeling and optimization techniques applied to steelmaking processes;
- CALPHAD and kinetic modeling approaches to steelmaking processes;
- Big Data approaches to process analysis and control;
- Artificial intelligence and expert systems for steelmaking process control;
- New alternative fuels and gases for steelmaking process decarbonization;
- Industrial trials aimed at sustainable developments in the steelmaking process chain.

We look forward to receiving your contributions.

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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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