

Special Issue

Inclusion Metallurgy

Message from the Guest Editors

The primary focus of this Special Issue is on recent advances in inclusion engineering that aim at controlling steel cleanliness and microstructure by modeling and experimental work. The particularly interesting research theme of the formation mechanism and evolution control methods of inclusions in the smelting process in laboratory and steel plants is welcomed. The study of the agglomeration and floatation of inclusions and the kinetics of slag adsorption in the process of refining and solidification are also potential themes of contribution. Topics addressed in this Special Issue may include, but are not limited to, the following aspects:

- Formation/evaluation of inclusions during steel smelting/refining/solidification;
- Multiphase reaction of steel–slag–inclusion–refractory;
- Thermodynamics and kinetics prediction;
- Fundamentals on wettability, contact angle, and surface tension, as well as the related basic database;
- Inclusion metallurgy in clean steel.

Guest Editors

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Deadline for manuscript submissions

closed (31 January 2023)



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About the Journal

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.

Editor-in-Chief

Prof. Dr. Yong Zhang

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manuscripts are peer-reviewed and a first decision is
provided to authors approximately 18 days after
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days (median values for papers published in this journal in
the first half of 2025).