Special Issue

Thermo-Physical Properties of Metals and Oxides

Message from the Guest Editor

Thanks to the progress in industrial digital transformation, manufacturing technologies have shown great improvements in recent years. Surely, digital twin based on computer simulations would accelerate the improvements, especially in metallurgy and its applications. For fascinating process simulations, accurate and reliable data on thermo-physical properties of metals and oxides are essential. This Special Issue on “Thermophysical Properties of Metals and Oxides” aims to collect excellent research and review papers on the recent progress of science and technologies in the study of thermophysical properties of metals and oxides. Topics addressed in this Special Issue may include but are not limited to:

- Measurements of thermophysical properties of metals and oxides (solid and liquid);
- Structure analysis and relationship with thermophysical properties;
- Improvements of the measuring technique;
- Computational modeling of thermophysical properties;
- Application of thermophysical properties in metallurgical processes;
- Digital transformation based on the thermophysical property database.

Guest Editor

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About the Journal

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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manuscripts are peer-reviewed and a first decision is provided to authors approximately 18 days after submission; acceptance to publication is undertaken in 2.6 days (median values for papers published in this journal in the first half of 2025).

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