

## Special Issue

# Advanced High-Performance Steels: From Fundamental to Applications

### Message from the Guest Editors

This Special Issue highlights recent advancements in automotive steels, focusing on Advanced High-Strength Steels (AHSSs) and electrical steels for new energy vehicles (NEVs). AHSSs enable the manufacturing of lightweight, cost-effective components with enhanced safety and environmental performance, and their mechanical properties are governed by their phase composition, microstructure distribution, and metastable phase stability. Additionally, we emphasize critical developments in electrical steels for NEV applications, including high-efficiency non-oriented grades with optimized core loss, thin-gauge silicon steels for high-frequency motor operation, and novel processing techniques for enhancing magnetic properties while maintaining mechanical strength. This Special Issue also serves as a forum for researchers to interact with one another. We invite authors to submit original research articles as well as review articles focusing on novel developments in steel design and on new insights regarding processing-microstructure-property relationships in steels.

### Guest Editors

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### Deadline for manuscript submissions

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## Metals

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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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### Editors-in-Chief

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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).