

## Special Issue

# Design and Development of High-Strength Low-Alloy Steels

### Message from the Guest Editor

High-strength low-alloy (HSLA) steels, or microalloyed steels, are designed to provide specific desirable combinations of properties such as strength, toughness, formability, weldability, and atmospheric corrosion resistance. Developing modern HSLA steels through microalloying and thermomechanical processes has allowed the use of HSLA steels for many applications including oil and gas pipelines, offshore structures, and automotive components. The levels of mechanical properties can be radically improved through careful design of the alloy and the production process for which a comprehensive understanding of microstructure evolution during material processing is essential.

This Special Issue aims to collect original research articles that focus on recent progress and new developments in the relationships between the process, microstructure, and properties of HSLA steels. Research areas may include (but are not limited to) alloy design, production and manufacturing, heat treatment, thermomechanical processing, forming, welding, modelling and simulation, and microstructural characterization. Review papers that present the current state of the art are also welcome.

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### Guest Editor

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### Deadline for manuscript submissions

closed (30 November 2023)



## 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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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).