# Special Issue

# Development and Performance Optimization of High-Strength Steels

**Message from the Guest Editors**

The development and performance optimization of high strength steels (HSS) have been a research focus since the mid-1970s when the HSS evolved. Design strategies, such as solution strengthening, precipitation hardening, grain refinement strengthening, and working hardening, are adopted to elevate the mechanical properties of HSS. Some novel conceptions, for example, Transformation-Induced Plasticity, are also included in order to meet the requirements of structural materials design. This Special Issue aims to provide a broad forum for the latest results in the development and performance optimization of HSS. This includes fundamental questions regarding the microstructure-property relationship, phase transformations, strain partitioning, strain hardening mechanisms and hydrogen embrittlement. Topics related to the processing, testing, characterization, and applications of HSS are invited.

I am very honored to be invited to serve as a of the journal of Metals and provide academic exchange opportunities for colleagues from all over the world to support the research and development of HSS.


**Guest Editors**

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**Deadline for manuscript submissions**

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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.

## Editors-in-Chief

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