Special Issue

Recent Development in Advanced High Strength Steel

Message from the Guest Editor

Advanced high-strength steels (AHSSs) encompass a large and continuously growing group of steels based on various alloying concepts, usually developed together with dedicated heat or thermo-mechanical treatment methods. The development of AHSSs started from low-carbon low-alloyed TRIP steels and continued to medium-carbon martensitic steels suitable for quenching and partitioning process, medium- and high-alloyed manganese steels, and low-density steels. The birth and development of these steels responded to the demands of the automotive industry for materials with improved strength-to-ductility ratio. In this Special Issue, we seek to provide a wide set of articles on various aspects of high-strength steels. The idea is to demonstrate the broad range of microstructures, properties, and applications of these steels. Articles on the production methods, development of new materials, microstructure characterization and phase transformation analysis, as well as mechanical and technological properties of advanced high-strength steels are desired. Articles describing the relationship among processing parameters and the resulting microstructures and properties are also expected.

Guest Editor

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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

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