



Mechanical Behavior of High-Strength Low-Alloy Steels

Guest Editors:

Dr. Ricardo Branco

Department of Mechanical
Engineering, University of
Coimbra, 3030-788 Coimbra,
Portugal

Prof. Dr. Filippo Berto

Department of Chemical
Engineering, Materials and
Environment, Sapienza University
of Rome, 00184 Rome, Italy

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Message from the Guest Editors

Dear Colleagues,

High-strength low-alloy steels are designed to provide specific desirable combinations of properties, such as strength, toughness, formability, weldability, and corrosion resistance. These steels are used in a myriad of engineering applications, namely highway and off-road vehicles, passenger car components, mine and railroad cars, construction machinery, industrial equipment, offshore structures, storage tanks, oil and gas pipelines, power transmission towers, and bridges, among others.

This Special Issue aims to address the mechanical behavior of high-strength low-alloy steels from different perspectives in terms of mechanical deformation, damage and failure under applied load. Papers dealing with processing techniques, modeling of the mechanical behavior, characterization of material microstructure, testing solutions, influence of environmental parameters, temperature dependence, as well as advanced applications are encouraged.

Prof. Dr. Ricardo Branco

Guest Editor

Prof. Filippo Berto

Co-Guest Editor





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Department of Materials Science
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Milwaukee, 3200 N. Cramer
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Prof. Dr. Yong Zhang

Beijing Advanced Innovation
Center of Materials Genome
Engineering, State Key
Laboratory for Advanced Metals
and Materials, University of
Science and Technology Beijing,
30 Xueyuan Road, Beijing 100083,
China

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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Metals Editorial Office
MDPI, St. Alban-Anlage 26
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