



## Advanced High Strength Steels by Quenching and Partitioning

Guest Editors:

**Dr. Ilchat Sabirov**

IMDEA Materials Institute, 28906  
Getafe, Madrid, Spain

**Prof. Dr. Maria J. Santofimia**

Department of Materials Science  
and Engineering, Technical  
University of Delft, Mekelweg 2,  
2628 CD Delft, The Netherlands

**Prof. Dr. Roumen Petrov**

Department of  
Electromechanical, Systems and  
Metal Engineering, Ghent  
University, B-9052 Ghent,  
Belgium

Deadline for manuscript  
submissions:

**closed (31 October 2020)**

### Message from the Guest Editors

Quenched and partitioned (Q&P) steels are complex, sophisticated materials, with carefully selected chemical compositions and multiphase microstructures resulting from precisely controlled heating and cooling processes. The key treatment parameters include annealing temperature, quenching temperature, partitioning temperature and time. Manipulation with these parameters along with the steel chemistry leads to a variety of multiphase microstructures showing a wide range of properties.

For this Special Issue in *Metals*, we welcome research articles and reviews addressing theoretical and experimental design of steels and Q&P process, microstructure of Q&P treated steels, their mechanical and performance properties, Q&P process – microstructure – properties relationship, as well as examples of their industrial applications. The Special Issue is oriented to researchers from universities and industrial research centers and to steel producers directly involved in the production and product development.





an Open Access Journal by MDPI

## Editors-in-Chief

### **Prof. Dr. Hugo F. Lopez**

Department of Materials Science  
and Engineering, College of  
Engineering & Applied Science,  
University of Wisconsin-  
Milwaukee, 3200 N. Cramer  
Street, Milwaukee, WI 53211, USA

### **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.

## Author Benefits

**Open Access:** free for readers, with **article processing charges (APC)** paid by authors or their institutions.

**High Visibility:** indexed within **Scopus**, **SCIE (Web of Science)**, **Inspec**, **CAPLUS / SciFinder**, and **other databases**.

**Journal Rank:** JCR - Q2 (*Metallurgy & Metallurgical Engineering*) / CiteScore - Q1 (*Metals and Alloys*)

## Contact Us

Metals Editorial Office  
MDPI, St. Alban-Anlage 26  
4052 Basel, Switzerland

Tel: +41 61 683 77 34  
[www.mdpi.com](http://www.mdpi.com)

[mdpi.com/journal/metals](http://mdpi.com/journal/metals)  
[metals@mdpi.com](mailto:metals@mdpi.com)  
[X@Metals\\_MDPI](https://twitter.com/X@Metals_MDPI)