

## Special Issue

# Application of Artificial Neural Networks in Studies of Steels and Alloys

### Message from the Guest Editors

Computer-aided modeling is present both in research and industrial practice. Nature-inspired methods are being used more and more often.

Artificial neural networks are a universal tool for modeling and are capable of mapping complex functions. In order to prepare artificial neural networks to perform a particular task, an algorithm does not have to be precisely defined or recorded as a computer program. This process is replaced by training using a series of typical excitations and the desirable reactions that correspond to them. Neural networks are often associated with other computational methods, such as evolutionary algorithms, fuzzy logic, and the finite element method, to create so-called hybrid methods that combine the advantages of both methods. Artificial neural networks can be used to solve problems related to data processing and analysis, classification, prediction, and control.

It is our pleasure to invite you to submit a manuscript to this Special Issue. Manuscripts submitted to this Special Issue should demonstrate how the application of artificial neural networks extends the modeling in ways that traditional approaches cannot.

---

### Guest Editors

Prof. Dr. Jacek Trzaska

Department of Engineering Materials and Biomaterials, Silesian University of Technology, 44-100 Gliwice, Poland

Prof. Dr. Wojciech Sitek

Scientific and Didactic Laboratory of Nanotechnology and Materials Technologies, Silesian University of Technology, 44-100 Gliwice, Poland

---

### Deadline for manuscript submissions

closed (31 October 2021)



## Metals

---

an Open Access Journal  
by MDPI

---

Impact Factor 3.1  
CiteScore 5.7



[mdpi.com/si/47170](https://mdpi.com/si/47170)

*Metals*  
Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland  
Tel: +41 61 683 77 34  
[metals@mdpi.com](mailto:metals@mdpi.com)

[mdpi.com/journal/  
metals](https://mdpi.com/journal/metals)





# Metals

---

an Open Access Journal  
by MDPI

---

Impact Factor 3.1  
CiteScore 5.7



[mdpi.com/journal/  
metals](https://mdpi.com/journal/metals)



## 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

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

---

### Author Benefits

#### High Visibility:

indexed within Scopus, SCIE (Web of Science), Inspec, Ei  
Compendex, CAPlus / SciFinder, and other databases.

#### Journal Rank:

JCR - Q2 (Metallurgy and Metallurgical Engineering) /  
CiteScore - Q1 (Metals and Alloys)

#### Rapid Publication:

manuscripts are peer-reviewed and a first decision is  
provided to authors approximately 18.7 days after  
submission; acceptance to publication is undertaken in 2.7  
days (median values for papers published in this journal in  
the second half of 2025).