

## Special Issue

# Radiation Damages in Metallic Materials

### Message from the Guest Editor

The irradiation of metallic materials by energetic particles (e.g., ions, neutrons, protons, or electrons) is frequently encountered in many applications, such as nuclear power systems, electron- or ion-based characterization techniques, and aerospace-oriented devices. Irradiation usually comes with undesired damages in the form of defect accumulation and physical property degradation. In general, the resulting damage effects are strongly dependent on the material microstructure and composition, as well as the radiation conditions. This Special Issue aims to present the latest experiments and simulations that can advance our understanding of the fundamentals of radiation damages in conventional or advanced metallic materials. We are inviting researchers in relevant fields to submit their original work to this Special Issue. We encourage submissions covering a wide range of topics, including, but not limited to, radiation-induced point defects and defect clusters, diffusion and segregation, hardening, volume swelling and surface modification, radiation-enhanced precipitation, recrystallization and grain growth, etc.

---

### Guest Editor

Dr. Cuncai Fan

Department of Mechanical Engineering, City University of Hong Kong, Kowloon Tong 518057, Hongkong

---

### Deadline for manuscript submissions

closed (31 December 2023)



## Metals

---

an Open Access Journal  
by MDPI

---

Impact Factor 2.5  
CiteScore 5.3



[mdpi.com/si/163795](https://mdpi.com/si/163795)

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

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





# Metals

---

an Open Access Journal  
by MDPI

---

Impact Factor 2.5  
CiteScore 5.3



[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, CAPus / 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).