Special Issue

Effects of Radiation on Microstructure and Properties of Metallic Materials

Message from the Guest Editor

Nuclear energy has been an important part of today's clean energy. However, structural materials in the nuclear reactor must face irradiation from intense particles for a long time, which will lead to the deterioration of the material properties. Energetic particle irradiation into materials can generate atomic displacement, causing significant microstructural alteration, which ranges from crystalline to amorphous phase transitions to the creation of high concentrations of point defects or solute aggregates in crystal lattices. These microstructural changes often lead to significant changes in the physical and mechanical properties of irradiated materials. Such effects induced by irradiation vary by type, particle energy, and material properties.

Guest Editor

Dr. Lilong Pang

1. Institute of Modern Physics, Chinese Academy of Sciences, Lanzhou, China
2. Huizhou Research Center of Ion Sciences, Huizhou, China

Deadline for manuscript submissions

closed (20 May 2024)

Metals

an Open Access Journal by MDPI

Impact Factor 2.5
CiteScore 5.3

mdpi.com/si/134560

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

mdpi.com/journal/metals

Metals

an Open Access Journal by MDPI

Impact Factor 2.5
CiteScore 5.3

mdpi.com/journal/metals

About the Journal

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.

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

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 days after submission; acceptance to publication is undertaken in 2.6 days (median values for papers published in this journal in the first half of 2025).

MDPI