## **Special Issue**

# Irradiation Effects in High-Entropy Alloys and Their Applications

## Message from the Guest Editors

New high-performance structural materials that can survive radiation are urgently needed since existing nuclear structural materials are far from being able to meet the needs of advanced nuclear energy systems. On the one hand, irradiation occurs everywhere and is a major contributor to the deterioration and even failure of nuclear structural materials, particularly the material irradiation damage effect in a strong irradiation field. The research and development of nuclear structural materials that have great mechanical strength, resistance to wear and irradiation, as well as resistance to corrosion under extreme conditions, has been the primary focus of attention around the world.

This Special Issue focuses on newly designed structural materials (High-Entropy Alloys (HEAs) or Medium-Entropy Alloys (MEAs)) that perform well in extreme environments such as high temperature, high pressure, severe corrosion, high wear resistance, high strain rate impact, and high irradiation damage levels, which are all critical and urgent. Authors are urged to contribute their most recent findings and conclusions, which may include original publications or reviews.

## **Guest Editors**

Dr. Jamieson Brechtl
Oak Ridge National Laboratory, Oak Ridge, TN 37831, USA

### Dr. Muhammad Abubaker Khan

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

#### Deadline for manuscript submissions

closed (15 September 2024)



an Open Access Journal by MDPI

Impact Factor 2.4 CiteScore 5.0



mdpi.com/si/173530

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

mdpi.com/journal/crystals





an Open Access Journal by MDPI

Impact Factor 2.4 CiteScore 5.0



## **About the Journal**

## Message from the Editor-in-Chief

Welcome to *Crystals*, the journal dedicated to the fascinating world of crystallographic research! Crystals are more than mere decorative elements; they hold the key to understanding the fundamental structure of matter. Our mission is to explore the crucial significance of this research across various fields. From medicine to technology, chemistry to geology, crystals play a vital role. Their structure provides insights into new advanced materials, innovative drugs, and groundbreaking technologies. Through *Crystals*, we delve into the microscopic world to discover solutions that will shape the future. Join us on a journey through the *Crystals*, where science merges with beauty and innovation.

#### Editor-in-Chief

Prof. Dr. Alessandra Toncelli
Department of Physics, University of Pisa, 56126 Pisa, Pl, Italy

#### **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, Ei Compendex, CAPlus / SciFinder, and other databases.

#### Journal Rank:

JCR - Q2 (Crystallography) / CiteScore - Q2 (Condensed Matter Physics)

