# **Special Issue**

# Sustainable Approaches in Metal Manufacturing and Developing Durable Metallic Alloys

Message from the Guest Editor

This Special Issue aims to gather cutting-edge research that addresses these critical challenges by exploring innovative methods and materials that contribute to sustainability in the metal industry.

The focus of this Special Issue includes, but is not limited to, the following areas:

Sustainable Manufacturing Processes: Investigating eco-friendly manufacturing techniques that minimize waste, reduce energy consumption, and lower greenhouse gas emissions.

Development of Durable Alloys: Creating and optimizing metallic alloys that offer superior durability, corrosion resistance, and mechanical properties, thereby extending the lifecycle of products.

Recycling and Reuse: Exploring strategies for the recycling and reuse of metals and alloys to promote a circular economy.

Advanced Characterization Techniques: Utilizing stateof-the-art characterization methods to understand the microstructural and compositional factors that influence the sustainability and performance of metallic materials. Life Cycle Assessment (LCA): Conducting comprehensive LCAs to evaluate the environmental impact of metal manufacturing processes and alloy development.

#### **Guest Editor**

Dr. Farshid Pahlevani

Centre for Sustainable Materials Research & Technology, School of Materials Science and Engineering, UNSW Sydney, Sydney, Australia

### Deadline for manuscript submissions

closed (20 February 2025)



an Open Access Journal by MDPI

Impact Factor 2.4 CiteScore 5.0



mdpi.com/si/214698

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)

