

## Special Issue

# Numerical Analysis of Microstructure and Mechanical Properties in Metallic Materials

### Message from the Guest Editors

The microstructure plays a vital role in determining the mechanical properties in metallic materials. It is recognised that numerical modelling has become increasingly prevalent in the corresponding engineering analysis. Nevertheless, the link between the microstructure and properties in metallic materials may result in a variety of challenges. Therefore, to increase processing productivity and produce high-quality, high-performing products, it is crucial to investigate numerical approaches for a better understanding of the microstructure–properties relationship involved in metallic materials. This topic aims to provide a framework for collective understanding of the state of the art in the numerical modelling of metallic materials and further encourage interdisciplinary interaction for the upcoming advancement and application of numerical modelling techniques in materials science and engineering. Accordingly, scientists, researchers, and engineers are cordially encouraged to submit articles to this Special Issue on a variety of related subjects.

---

### Guest Editors

Dr. Mingshuai Huo

Prof. Dr. Zhengyi Jiang

Prof. Dr. Wenzhen Xia

Dr. Guanyao Su

Dr. Tao Zhang

Dr. Lianjie Li

---

### Deadline for manuscript submissions

closed (30 November 2023)



## Crystals

---

an Open Access Journal  
by MDPI

---

Impact Factor 2.4  
CiteScore 5.0



[mdpi.com/si/149579](https://mdpi.com/si/149579)

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

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





# Crystals

---

an Open Access Journal  
by MDPI

---

Impact Factor 2.4  
CiteScore 5.0



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



## 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, PI, 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, CAPus / SciFinder, and other databases.

#### Journal Rank:

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