



## Emerging Topics of High-Performance Alloys (2nd Edition)

Guest Editors:

**Dr. Li-Wei Tseng**

**Prof. Dr. Yeong-Lin Lai**

**Dr. James Smialek**

**Dr. Chau-Yi Tsai**

Deadline for manuscript  
submissions:

**18 November 2024**

### Message from the Guest Editors

Dear Colleagues,

High-performance alloys such as shape memory, high entropy, and aluminum alloys can be used in different industrial applications. Their properties are required to customize material processing and microstructure. As a result, it is important to investigate how the thermomechanical processing conditions affect the microstructure and property profile of high-performance alloys. This investigation is important for developing and optimizing new alloys for different thermomechanical processing and transfer to industrial processes. Therefore, this Special Issue aims to identify the correlations between thermomechanical processes, microstructure, and mechanical properties of high-performance alloys. Contributions are intended to show the influence of the thermomechanical process. In addition to experimental approaches, the development methods of modeling and simulation approaches are useful to predict composition–microstructure–property relations for high-performance alloy development and thermomechanical process design. The editors, therefore, welcome all contributions that add knowledge to this scientific field.





# crystals



an Open Access Journal by MDPI

## Editor-in-Chief

### Prof. Dr. Alessandra Toncelli

Department of Physics, University of Pisa, 56126 Pisa, Italy

## 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.

## 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](#), [CAPus / SciFinder](#), and [other databases](#).

**Journal Rank:** JCR - Q2 (*Crystallography*) / CiteScore - Q2 (*Condensed Matter Physics*)

## Contact Us

---

*Crystals* Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland

Tel: +41 61 683 77 34  
[www.mdpi.com](http://www.mdpi.com)

[mdpi.com/journal/crystals](https://mdpi.com/journal/crystals)  
[crystals@mdpi.com](mailto:crystals@mdpi.com)  
[X@Crystals\\_MDPI](#)