

## Special Issue

# Microstructure and Mechanical Properties of Austenitic Stainless Steels

### Message from the Guest Editors

Austenitic stainless steels constitute about 70% of stainless steel production, and are widely used in many industrial fields (e.g., chemical, petrochemical, fertilizer, food, medical and nuclear) owing to their excellent corrosion resistance, superior mechanical properties and good workability. To meet the requirements of extreme operating environments such as cryogenic temperature, higher temperature, higher operating pressure, severe corrosive environment, radiation environment and longer lifetime, the continuing development of austenitic stainless steels is still underway. Currently, promising methods including novel alloying design, processing techniques and fabrication techniques are proposed to further improve the mechanical properties. This Special Issue titled "Microstructure and Mechanical Properties of Austenitic Stainless Steels" aims to highlight recent progress in microstructural modification and mechanical properties improvement in austenitic stainless steels.

---

### Guest Editors

Dr. Shenghu Chen

Institute of Metal Research, Chinese Academy of Sciences, Shenyang 110016, China

Dr. Qingsong Pan

Institute of Metal Research, Chinese Academy of Sciences, Shenyang 110016, China

---

### Deadline for manuscript submissions

closed (31 July 2023)



## Crystals

---

an Open Access Journal  
by MDPI

---

Impact Factor 2.4  
CiteScore 5.0



[mdpi.com/si/128073](https://mdpi.com/si/128073)

*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, CAPlus / SciFinder, and other databases.

#### Journal Rank:

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