



*crystals*



an Open Access Journal by MDPI

## Microstructure and Mechanical Properties of 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)**

### 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.



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

# Special Issue



*crystals*



an Open Access Journal by MDPI

## Editor-in-Chief

**Prof. Dr. Alessandra Toncelli**

Department of Physics, University  
of Pisa, 56126 Pisa, PI, 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, St. Alban-Anlage 66  
4052 Basel, Switzerland

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

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