

## Special Issue

# Experimental and Numerical Investigation of Fatigue Behavior

### Message from the Guest Editors

The study of fatigue behaviour in engineering components remains a critical area of research, particularly as industries push the boundaries of performance, durability, and safety.

This Special Issue aims to provide a comprehensive exploration of the latest experimental and numerical methods employed to investigate fatigue behaviour. We welcome submissions that focus on the detailed characterization of fatigue mechanisms across multiple length scales, ranging from microstructural changes at the atomic or granular level to crack initiation and propagation at the macroscopic scale. We particularly welcome contributions that employ advanced numerical simulations, including finite element analysis (FEA) and computational fluid dynamics (CFD).

Additionally, with the evolving nature of fatigue research, we also welcome articles presenting interdisciplinary approaches that combine concepts from materials science, mechanics, and computational modelling, to advance the development of materials and structures with improved fatigue resistance.

---

### Guest Editors

Dr. Usman Abdullah  
Dr. Salman Saeidlou  
Dr. Mian Hammad Nazir

---

### Deadline for manuscript submissions

10 December 2026



## Crystals

---

an Open Access Journal  
by MDPI

---

Impact Factor 2.4  
CiteScore 5.0



[mdpi.com/si/229518](https://mdpi.com/si/229518)

*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)