

## Special Issue

# Computational and Theoretical Insights into Superconductors Advancements

### Message from the Guest Editors

The phenomenon of superconductivity has the yet-untapped potential to revolutionize advancements in medicine, energy storage, transportation, and quantum computing. The well-understood mechanism of conventional BCS superconductivity has paved the way for theoretical predictions, computational methods, data science, and artificial intelligence (AI) to play a crucial role in advancing the field. Concurrently, the experimental confirmation of higher-temperature superconductivity has marked a transformative moment in the field, stimulating further theoretical studies. The present Special Issue on "Computational and Theoretical Insights into Superconductor Advancements" serves as a comprehensive report summarizing the tools and theories that currently define the field, and the recent progress that has been made therein, encouraging further studies in this area.

---

### Guest Editors

Dr. Xiaoyu Wang

Dr. Francesco Belli

Prof. Dr. Eva Zurek

---

### Deadline for manuscript submissions

closed (16 August 2024)



## Crystals

---

an Open Access Journal  
by MDPI

---

Impact Factor 2.4  
CiteScore 5.0



[mdpi.com/si/196779](https://mdpi.com/si/196779)

*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)