# Special Issue

# Recent Advances in III-Nitride Semiconductors and Correlated Wide Bandgap Semiconductors, 2nd Edition

## Message from the Guest Editors

The interest in group-III nitrides lies in their irreplaceable and efficient blue-UV luminescence capability. Recently, more correlated wide-bandgap semiconductor materials, including Ga2O3, NiO, diamond, LiNbO3, and AlScN , have been at the forefront of research. Nitrides, along with those wide bandgap materials, are promising candidates for next-generation power electronic applications because of their outstanding material properties, but their potential is far from being realized, and many material properties and device mechanisms still require investigation. The topics include, but are not limited to, the following subjects:

- Growth of III-nitride semiconductors and correlated wide-bandgap semiconductor materials and micro/nanostructures;
- Characterization of these materials and the heterostructures;
- Novel devices, including emission, detection, and power devices;
- Application and integration of these materials and novel devices in novel electronics and photonics

## Guest Editors

Prof. Dr. Peng Chen

1. Jiangsu Provincial Key Laboratory of Advanced Photonic and Electronic Materials, School of Electronic Science and Engineering, Nanjing University, Nanjing 210023, China
2. Nanjing National Laboratory of Microstructures, Nanjing University, Nanjing 210093, China

Prof. Dr. Zhizhong Chen

State Key Laboratory for Artificial Microstructure and Mesoscopic Physics, School of Physics, Peking University, Beijing 100871, China

## Deadline for manuscript submissions

20 November 2025

Crystals

an Open Access Journal by MDPI

Impact Factor 2.4
CiteScore 5.0

mdpi.com/si/188476

*Crystals*
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
crystals@mdpi.com

mdpi.com/journal/crystals

# Crystals

an Open Access Journal by MDPI

Impact Factor 2.4
CiteScore 5.0

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)