Special Issue

Emerging Perovskite Materials and Applications

Message from the Guest Editors

Perovskite materials have shown good application prospects in optoelectronics and photovoltaics due to their unique structural advantages. How to control the local structure of perovskite materials based on the original structure and performance advantages, to explore potential high performance and new properties, is of great significance to further expanding the application prospects of such materials. In view of the structural characteristics of the vacancy configuration of the double perovskite Cs2BX6, different ions can be easily doped, especially the 6-coordinated tetravalent cation B position. After ion doping, due to the different ionic radii, local distortion of the octahedral structural unit is caused, the symmetry of the local structure is reduced, a local potential well is generated, and the transition from free exciton to self-trapped exciton is induced. It is expected to break the odd–even forbidden transition and provide additional emission centers to excite the novel photoelectric properties of perovskite. Therefore, it can be foreseen that regulating the local behavior of double perovskite octahedral units is expected to optimize their physical properties.

Guest Editors

Prof. Dr. Tingting Yan

School of Materials Science and Engineering, Shenyang Jianzhu University, Shenyang 110168, China

Dr. Heinz Christoph Neitzert

Department of Industrial Engineering, University of Salerno, 84084 Fisciano, Italy

Deadline for manuscript submissions

25 October 2025

Crystals

an Open Access Journal by MDPI

Impact Factor 2.4
CiteScore 5.0

mdpi.com/si/236299

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)