

Special Issue

New Insights into Perovskite Materials: From Fundamental Science to Applications

Message from the Guest Editors

ABX₃-based perovskites have potential applications in photovoltaics and optoelectronics due to their unique photoelectric properties, such as high absorption coefficients, long carrier diffusion lengths, unusually high defect tolerance, and adjustable band gaps. Perovskites can be divided into organic and inorganic metal halides according to their chemical compositions and have great application potential in various fields such as solar cells, light-emitting diodes, detectors, and laser devices. Although perovskites have been extensively studied, addressing long-term stability issues and further developing photoelectric conversion efficiency will be important to the challenge of achieving large-scale commercial production. The purpose of this Special Issue is to collect the latest research progress and results of perovskites, ranging from the basic theory, synthesis methods, and structural design, to their extensive applications, as well as the possibility of the widespread use of perovskites in future applications. We invite scientists from different disciplines to contribute their work to this cause.

Guest Editors

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Deadline for manuscript submissions

closed (15 July 2025)



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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

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