Special Issue

Research on the Structural Evolution and Properties of High-Performance Coatings and Thin Films

Message from the Guest Editors

The development of high-performance coatings and thin films is critical for addressing the increasing demands for their application in areas such as extreme environments, energy systems, and next-generation electronics. This Special Issue focuses on the structural evolution and multifunctional properties of coatings and thin films, aiming to highlight innovative research into their material design, processing techniques, and characterization methods. Contributions exploring the relationship between microstructure and properties, advanced fabrication processes (e.g., HiPIMS, CVD, PVD), and the integration of computational methods like machine learning and high-throughput simulations are particularly encouraged. Topics of interest for this Special Issue include, but are not limited to:
Advanced coatings for extreme conditions.
The design and synthesis of thin films with tailored mechanical, optical, or electrical properties.
In situ and ex situ techniques for structural characterization.
Modeling and simulation-driven approaches used to optimize film growth and properties.
Innovative methodologies for scalable and sustainable coating technologies.

Guest Editors

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Deadline for manuscript submissions

closed (10 July 2025)

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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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