Special Issue

Advanced Research on Microstructure Evolution in Crystalline Materials

Message from the Guest Editors

This Special Issue is dedicated to presenting the latest advances in the field of microstructure evolution in crystalline materials. The aim is to provide a comprehensive platform for researchers to share original research, innovative methodologies, and insightful reviews that deepen our understanding of the mechanisms governing microstructure evolution. The scope of this Special Issue encompasses, but is not limited to, the following topics:Theoretical and computational approaches: (1) advanced theoretical models of microstructure evolution, (2) Simulation techniques for nucleation and morphological evolution, (3) bridging scales from atomistic to mesoscale and continuum models into evolution mechanisms.Fundamental mechanisms: (1) atomic and molecular processes governing nucleation, growth rates, and crystal morphology, (2) kinetic pathways and the influence of defects, surfaces, and interfaces on microstructure evolution.Emerging challenges and interdisciplinary perspectives: (1) Addressing unresolved questions and proposing new frameworks for complex kinetic phenomena, (2) Encouragement of interdisciplinary approaches to advance the field.

Guest Editors

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Deadline for manuscript submissions

10 March 2026

Crystals

an Open Access Journal by MDPI

Impact Factor 2.4
CiteScore 5.0

mdpi.com/si/248097

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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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