Special Issue

Synthesis and Characterization of Nanostructural Electrode Materials

Message from the Guest Editors

A high-efficiency, long-lasting, and high-specific-capacity rechargeable lithium-ion battery (LIB) is essential in our modern world, dominated by mobile communications, portable electronics, and electric vehicles. This Special Issue primarily focuses on the synthesis and characterization of nanostructural electrode materials suitable for such batteries. Implementing these materials can lead to batteries with higher energy densities, enabling smaller battery packs to deliver the same power. Nanosized materials are increasingly vital for electrochemical energy storage, and nanotechnology holds promise for enhancing lithium battery performance. Using nanosized solid-state materials not only boosts the power density but also streamlines Li-ion insertion/extraction from the storage materials, thereby improving the battery's cycle life.

Guest Editors

Prof. Dr. Ahmed M.A. Hashem

Inorganic Chemistry Department, National Research Centre, Behoes Street, Dokki, P. O. Box 12622, Giza, Cairo, Egypt

Prof. Dr. Likun Zhu

Department of Mechanical and Energy Engineering, Indiana University Purdue University, Indianapolis, IN 46202, USA

Deadline for manuscript submissions

closed (25 February 2025)

Crystals

an Open Access Journal by MDPI

Impact Factor 2.4
CiteScore 5.0

mdpi.com/si/182894

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)