

Special Issue

Supercapacitor and Related Materials

Message from the Guest Editor

Supercapacitors store energy via electrolyte ions adsorption or fast surface redox reactions, enabling ultrafast charging/discharging, long lifecycle, and bridging the energy gap between traditional dielectric capacitors and batteries. Nanomaterials offer greatly improved ionic transport and electronic conductivity, which is essential to the electrochemical performances of supercapacitors. Advanced nanomaterials such as carbon-based nanomaterials, graphene, MXene, transition metal chalcogenides, metal oxides, conducting polymers, metal–organic frameworks, and covalent organic frameworks have been developed for high-performance supercapacitors. Additionally, prominent progress in supercapacitors has been achieved, specifically in rational design high-voltage window electrolyte, device fabrication methods, and charge storage mechanisms.

Original research papers, reviews, and perspectives related to the scope of the section are warmly welcomed.

Guest Editor

Dr. Liangzhu Zhang

State Key Laboratory of Catalysis, Dalian Institute of Chemical Physics, Chinese Academy of Sciences, 457 Zhongshan Road, Dalian 116023, China

Deadline for manuscript submissions

closed (30 June 2023)



Crystals

an Open Access Journal
by MDPI

Impact Factor 2.4
CiteScore 5.0



mdpi.com/si/152171

Crystals
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
crystals@mdpi.com

mdpi.com/journal/

[crystals](https://mdpi.com/journal/crystals)





Crystals

an Open Access Journal
by MDPI

Impact Factor 2.4
CiteScore 5.0



[mdpi.com/journal/
crystals](https://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, CAPus / SciFinder, and other databases.

Journal Rank:

JCR - Q2 (Crystallography) / CiteScore - Q2 (Condensed Matter Physics)