Special Issue

Magnetic Shape-Memory Alloys: An Exploration of the Correlation Between Microstructure and Macroscopic Properties

Message from the Guest Editors

Magnetic shape-memory alloys (MSMAs) exhibit both a shape memory effect and magnetic response characteristics, such as superelasticity, significant magnetostriction, rapid responsiveness, and high energy conversion efficiency. These materials hold considerable promise for applications in various fields such as medicine (e.g., minimally invasive devices), aerospace (e.g., smart actuators), robotics (e.g., precision actuators), sensors, and energy recovery. They facilitate the innovative use of smart materials in high-performance and miniaturized devices. Despite notable advancements in crystallography, this field continues to be plagued by numerous unresolved scientific questions and technical challenges. We cordially invite the submission of original research papers or review articles that focus on the development and applications of magnetic shape-memory alloys. Topics of interest include, but are not limited to, the areas mentioned above.

Guest Editors

Dr. Zhenni Zhou
Dr. Yuhai Qu
Prof. Dr. Arcady Zhukov

Deadline for manuscript submissions

closed (20 September 2025)

Crystals

an Open Access Journal by MDPI

Impact Factor 2.4
CiteScore 5.0

mdpi.com/si/234927

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

MDPI

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)