Special Issue

Mechanical Properties and Friction Behavior of Metal Alloys and Their Composites

Message from the Guest Editor

The mechanical properties and friction behavior of metal alloys and their composites are of crucial significance in modern engineering.
Mechanical properties, such as strength, ductility, and modulus et al. Through alloying and composite design, specific mechanical responses can be achieved.
Friction behavior, including wear resistance and frictional coefficients. Understanding the underlying mechanisms and the influence of factors such as surface topography, lubrication, and operating conditions is essential in optimizing performance.
We welcome original research articles, reviews, and technical notes. Topics of interest include the following:
1. Alloy and composite design strategies to achieve the desired mechanical properties;
2. Microstructural analysis and its correlation with mechanical and friction behavior;
3. Characterization methods for microstructure–mechanical-property–friction relationships;
4. Friction and wear models and experimental verification;
5. Surface treatment techniques for enhanced friction and wear performance;
6. Mechanical and friction behavior under extreme conditions;
7. Industrial applications and the role of mechanical and friction properties.

Guest Editor

Dr. Jingwen Qiu
School of Physics and Electronics, Hunan Normal University, Changsha 410081, China

Deadline for manuscript submissions

10 February 2026

Crystals

an Open Access Journal by MDPI

Impact Factor 2.4
CiteScore 5.0

mdpi.com/si/225674

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)