

Special Issue

Multiscale Modelling and Characterization of Mechanical Properties in Heat-Resistant Alloys

Message from the Guest Editors

Various heat-resistant alloys have been used in industry; however, the bridge between the bulk mechanical properties and the underlying micro- and nanoscopic local properties remains an issue. Here, we focus on modeling and characterization approaches from multiscale aspects, for example, finite element analysis for representative volume element, mechanism-based constitutive modeling, molecular dynamics for high-temperature modeling approaches, tensile small-specimen test, nano- or micro-indentation test, strain mapping using digital-image collation as characterization approaches.

Guest Editors

Dr. Ikumu Watanabe

Prof. Dr. Nobufumi Ueshima

Dr. Jovana Ruzic

Prof. Dr. Hongzhi Cui

Deadline for manuscript submissions

closed (1 August 2021)



Crystals

an Open Access Journal
by MDPI

Impact Factor 2.4
CiteScore 5.4



mdpi.com/si/57190

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 5.4



[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)