Special Issue

Dislocations and Twinning in Metals and Alloys

Message from the Guest Editors

Crystalline defects endow materials with diverse microstructural characters, which enable the tuneable modification of the material's properties. Dislocations and twin boundaries (TBs) are two common types of crystalline defects in metals and alloys that have significant influence on their properties. The past few decades have witnessed eminent progress in the design and deployment of metals and alloys with superior performances by tuning their dislocations and/or TB microstructures. In this Special Issue, we aim to collect a wide spectrum of articles that elucidate the contributions of dislocations and/or TBs to the behaviours and properties of metals and alloys, which includes, but is not limited to, the following topics: (a) the interaction between dislocations, TBs and other defects, such as grain boundaries and precipitates; (b) the correlation between plastic deformation mechanisms and mechanical properties in nano-twinned structures; (c) deformation twinning mechanisms in metals and alloys. Experimental and/or computational investigations of plastic deformation related to dislocations and TBs are welcome.

Guest Editors

Dr. Qi Zhu

Dr. Yejun Gu

Dr. Dinh-Phuc Tran

Deadline for manuscript submissions

closed (20 April 2024)

Crystals

an Open Access Journal by MDPI

Impact Factor 2.4
CiteScore 5.0

mdpi.com/si/157129

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)