

Special Issue

Impact of Lattice Vibrations on Diffusion in Solids

Message from the Guest Editor

Understanding diffusion in a solid is highly relevant to cutting-edge material science from ionic conductivity in novel battery materials to thin film technology. Diffusion is usually a thermally activated process and, therefore, it is naturally coupled to lattice vibrations through the attempt frequency. Moreover, vibrations also cause the energy landscape and the potential barriers to be time-dependent. In addition, phonon instability can drive phase transitions and thereby facilitate migration processes.

With this Special Issue, we aim to provide an interdisciplinary collection of studies on the impact of lattice vibrations on diffusion in solids. We would like to bring the ideas and tools of physicists closer to the practical world of material scientists. Therefore, we invite the submission of original research articles and high-quality reviews that describe complex topics and phenomena in a way that non-specialists can understand.

Guest Editor

Dr. Fanni Jurányi

Laboratory for Neutron Scattering and Imaging, Paul Scherrer Institute, CH-5232 Villigen, Switzerland

Deadline for manuscript submissions

closed (31 May 2021)



Crystals

an Open Access Journal
by MDPI

Impact Factor 2.4
CiteScore 5.0



mdpi.com/si/55451

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, CAPlus / SciFinder, and other databases.

Journal Rank:

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