

## Special Issue

# Artificial Intelligence for Crystal Growth and Characterization

### Message from the Guest Editors

The goal of this Special Issue is to promote the use of those methods in the field of synthesis and characterization of crystalline materials. By bundling reports from all subdisciplines of crystal research and technology, this Special Issue aims at facilitating inspiration across all subdisciplines of crystal research. Sharing of developed software tools is particularly encouraged (for instance, by means of a public Github repository, or a private repository that can be shared upon request of interested authors, author's webpages, etc.) but not mandatory. Topics include but are not at all limited to: AI for high-throughput crystal characterization (e.g., AI-based evaluation of optical/SEM/AFM/X-ray images), AI for optimization of crystal growth processes, AI for identifying previously unrecognized but relevant process variables, AI for acceleration of numerical simulations related to crystal growth, AI for predictions of stability of crystalline materials, AI for prediction of synthesis outcomes, and AI for prediction of properties of crystalline materials. Topics beyond these suggestions are also very welcome, as long as they fit the outlined scope of the Special Issue.

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### Guest Editors

Dr. Saskia Schimmel  
Dr. Wenhao Sun  
Dr. Natasha Dropka

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### Deadline for manuscript submissions

closed (31 July 2022)



## Crystals

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## 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.

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### Editor-in-Chief

Prof. Dr. Alessandra Toncelli  
Department of Physics, University of Pisa, 56126 Pisa, PI, Italy

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