# **Special Issue**

## Synthesis and Multiscale Modeling of Advanced Nanomaterials

## Message from the Guest Editors

This Special Issue seeks to highlight the latest advancements in the synthesis, characterization, and multiscale modeling of nanomaterials, with a focus on their applications and potential for innovation. It will cover, but will not be limited to, the following topics:

- Synthesis Methods and Characterization Techniques: innovative methods for the synthesis of nanomaterials, such as sol-gel; advanced techniques for characterizing the electrical, magnetic, optical, mechanical, and structural properties of nanomaterials, including XRD, EDS, XPS, Raman spectroscopy, AFM, and STM.
- Multiscale Modeling: the application of multiscale computational techniques, such as density functional theory (DFT) and molecular dynamics, to study and design nanomaterials.
- Functionalization and Doping: studies on the functionalization and doping of nanomaterials to enhance their properties and applications.

We invite researchers, scientists, and engineers to contribute their original research and review articles to foster a comprehensive discourse on the synthesis and multiscale modeling of advanced nanomaterials.

#### **Guest Editors**

Dr. Sarah Ghazanfari

Dr. Zhaofan Li

Prof. Dr. Alessandro Vergara

## Deadline for manuscript submissions

30 November 2025



an Open Access Journal by MDPI

Impact Factor 2.4 CiteScore 5.0



mdpi.com/si/237041

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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.

## Editor-in-Chief

Prof. Dr. Alessandra Toncelli
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