

## Special Issue

# X-ray Technologies and Applications for Materials Structure & Properties Characterization

### Message from the Guest Editors

In recent decades, there have been versatile and valuable efforts from the scientific community to optimize the synthesis, growth of different types of materials, such as epitaxial films, self-organized structures using different deposition methods.

To achieve good quality and well-characterized materials, X-ray technology using fast detection systems, powerful synchrotron X-ray beam, and automated instrumentation embedded in the scattering and diffraction methods have played an important role in exploring the structure in terms of crystallinity, morphology, microstructure, and defects. The interconnection between the real imaging using microscopic methods and reciprocal space imaging by means of X-ray methods characterization can lead to a deep insight into material structure evaluation.

This Special Issue “X-Ray Technologies and Applications for Materials Structure & Properties Characterization” aims to attract novel contributions covering the wide range of techniques that have been developed for material structure characterization and relating between structure and properties.

---

### Guest Editors

Dr. Sondes Bauer

The Institute for Photon Science and Synchrotron Radiation IPS,  
Karlsruhe Institute of Technology KIT, 76131 Karlsruhe, Germany

Prof. Dr. Vaclav Holy

Department of Condensed Matter Physics, Faculty of Mathematics and Physics, Charles University, Ke Karlovu 5, 121 16 Praha, Czech Republic

---

### Deadline for manuscript submissions

closed (20 February 2022)



## Applied Sciences

---

an Open Access Journal  
by MDPI

---

Impact Factor 2.5  
CiteScore 5.5



[mdpi.com/si/72107](https://mdpi.com/si/72107)

*Applied Sciences*  
Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland  
Tel: +41 61 683 77 34  
[applsci@mdpi.com](mailto:applsci@mdpi.com)

[mdpi.com/journal/](https://mdpi.com/journal/)

[applsci](https://doi.org/10.3390/applsci)





# Applied Sciences

---

an Open Access Journal  
by MDPI

---

Impact Factor 2.5  
CiteScore 5.5



[mdpi.com/journal/  
applsci](https://mdpi.com/journal/applsci)



## About the Journal

### Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

---

### Editor-in-Chief

Prof. Dr. Giulio Nicola Cerullo  
Dipartimento di Fisica, Politecnico di Milano, Piazza L. da Vinci 32,  
20133 Milano, 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), Ei Compendex, Inspec, CAPlus / SciFinder, and other databases.

#### Journal Rank:

JCR - Q2 (Engineering, Multidisciplinary) / CiteScore - Q1 (General Engineering )