



## Current Advances and Perspectives in Biomedical Imaging

Guest Editors:

### Dr. Simon Zabler

LRM–Lehrstuhl für  
Röntgenmikroskopie, Chair of X-  
ray Microscopy, University of  
Würzburg, 97070 Würzburg,  
Germany

### Dr. Jarosław Zubrzycki

Department of Informatization  
and Robotization of Production  
Processes, Faculty of Mechanical  
Engineering, Lublin University of  
Technology, 20-618 Lublin,  
Poland

Deadline for manuscript  
submissions:

**closed (20 November 2021)**

### Message from the Guest Editors

It is our pleasure to invite you to contribute a research paper and/or substantial review to this Special Issue on “X-Ray Imaging of Biomaterials”. Those two topics have been strongly intertwined ever since the discovery of X-rays 125 years ago. Using X-rays, we were finally able to visualize not just the skeleton but the entire anatomy of living creatures. The related techniques or their combination, micro-CT, phase contrast and/or darkfield X-ray imaging, X-ray fluorescence mapping, X-ray microscopy, and lens-less ptychography, have found profound applications in the study of microanatomy and diseases which impact on the latter, as well as in advancing the development of novel biomaterials in implants, particularly in scaffolds.

With the dire situation caused by the COVID-19 pandemic and with third-generation synchrotron sources upgrading their power worldwide, boosting their X-ray imaging capabilities to unprecedented levels, researchers in this field are called upon to define new strategies for using the data obtained by these powerful tools to advance the field and/or speed up the understanding, containment, and treatment of new diseases.





an Open Access Journal by MDPI

## Editor-in-Chief

**Prof. Dr. Giulio Nicola Cerullo**  
Dipartimento di Fisica,  
Politecnico di Milano, Piazza L.  
da Vinci 32, 20133 Milano, Italy

## 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.

## 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, CAPlus / SciFinder, and other databases.

**Journal Rank:** JCR - Q1 (Engineering, Multidisciplinary) / CiteScore - Q1 (General Engineering)

## Contact Us

---

*Applied Sciences* Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland

Tel: +41 61 683 77 34  
[www.mdpi.com](http://www.mdpi.com)

[mdpi.com/journal/applsci](http://mdpi.com/journal/applsci)  
[applsci@mdpi.com](mailto:applsci@mdpi.com)  
[X@Applsci](#)