Special Issue

Novel Acquisition and Analysis Methods for X-ray Micro-CT in Materials Sciences

Message from the Guest Editors

In recent years, high-resolution X-ray computed tomography (micro-CT) has evolved drastically, both in lab environments, such as at synchrotron facilities, and in terms of data acquisition, as well as data analysis. With this Special Issue, we want to create an overview of these recent developments applied on materials research. The focus is on the methodological perspective of any of the aspects of X-ray micro-CT imaging illustrated with an example in materials sciences, as well as on novel applications of recent innovations in micro-CT imaging. Topics may include:

- X-ray phase contrast and/or dark-field imaging;
- Spectral and hyperspectral X-ray micro-CT;
- Dual-energy X-ray imaging;
- High-speed or dynamic X-ray micro-CT;
- In-situ or operando X-ray imaging;
- Micro-CT at novel X-ray sources;
- 3D analysis:
- Digital volume correlation;
- Conversion to numerical models.

Guest Editors

Prof. Veerle Cnudde

- 1. Ghent University PProGRess (UGCT), Belgium
- 2. Chairholder "Porous media Imaging techniques" Department of Earth Sciences, Utrecht University, Utrecht, The Netherlands

Prof. Matthieu N. Boone

Ghent University - Radiation Physics (UGCT), Belgium

Deadline for manuscript submissions

closed (30 September 2021)



an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed



mdpi.com/si/23786

Materials
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
materials@mdpi.com

mdpi.com/journal/materials





an Open Access Journal by MDPI

Impact Factor 3.2 CiteScore 6.4 Indexed in PubMed





About the Journal

Message from the Editor-in-Chief

Materials (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. Materials provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

Editor-in-Chief

Prof. Dr. Maryam Tabrizian

 Department of Biomedical Engineering, Faculty of Medicine and Health Sciences, McGill University, Montreal, QC H3A 2B6, Canada
 Faculty of Dentistry and Oral Health Sciences, McGill University, 3640 Rue University, Montreal, QC H3A 0C7, Canada

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), PubMed, PMC, Ei Compendex, CaPlus / SciFinder, Inspec, Astrophysics Data System, and other databases.

Journal Rank:

JCR - Q2 (Metallurgy and Metallurgical Engineering) / CiteScore - Q1 (Condensed Matter Physics)