



materials



an Open Access Journal by MDPI

Advanced Synchrotron Techniques for Soft and Nanomaterials

Guest Editor:

Dr. Andrei V. Petukhov

van 't Hoff laboratory for physical
& colloid chemistry, Debye
Institute for Nanomaterials
Science, Utrecht University, The
Netherlands and Laboratory of
Physical Chemistry, Eindhoven
University of Technology, The
Netherlands

Deadline for manuscript
submissions:

closed (15 July 2020)

Message from the Guest Editor

Faster detectors and higher-brightness sources have recently improved the time resolution of in-situ studies. Micro- and nano-sized beams can be applied to obtain local spatially-resolved data. The improved coherence of X-ray beams promotes the application and further development of coherent techniques such as X-ray photon correlation spectroscopy (XPCS) and coherent diffraction imaging (CDI). Grazing-incidence SAXS (GISAXS) and x-ray reflectivity (XRR) allow researchers to study surfaces including soft and liquid interfaces. Spectromicroscopy using X-rays close to the adsorption edge of a specific element has been shown to provide element-specific chemical information with nanometric resolution. The hard X-ray microscopy with a much larger penetration depth is shifting to the nanoscale. X-ray spectroscopy is slowly progressing to meet the challenges of nanomaterials, soft matter and biological materials. Much progress has recently been seen in the development of the sample environment. I believe that this issue will contribute to the discussion of recent developments of techniques similar to those mentioned above and of their recent applications for soft matter and nanomaterials.



mdpi.com/si/18863

Special Issue



an Open Access Journal by MDPI

Editor-in-Chief

Prof. Dr. Maryam Tabrizian

1. Department of Biomedical Engineering, Faculty of Medicine and Health Sciences, McGill University, Montreal, QC H3A 2B6, Canada

2. Faculty of Dentistry and Oral Health Sciences, McGill University, 3640 Rue University, Montreal, QC H3A 0C7, Canada

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.

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 & Metallurgical Engineering*) / CiteScore - Q2 (*Condensed Matter Physics*)

Contact Us

Materials Editorial Office
MDPI, St. Alban-Anlage 66
4052 Basel, Switzerland

Tel: +41 61 683 77 34
www.mdpi.com

mdpi.com/journal/materials
materials@mdpi.com
[X@Materials_Mdpi](https://twitter.com/Materials_Mdpi)