

## Special Issue

# Advanced Synchrotron Techniques for Soft and Nanomaterials

### 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.

### 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

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## Materials

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

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### Message from the Editor-in-Chief

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### 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

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