Special Issue

X-ray Technologies for Chemical and Material Applications

Message from the Guest Editors

X-rays are widely utilised in materials research as a basic characterisation tool to determine the atomic coordination or electronic properties of materials. It is possible to monitor dynamic changes in chemical systems or materials (i.e., in situ/operando measurements) using synchrotron facilities (SRs). Recent developments in 3rd/4th-generation SRs and X-ray free electron lasers (XFELs) have brought new opportunities to observe/characterise a tiny part of materials or address heterogeneities inside substances on a small scale (i.e., micrometre or nanometre) by focusing X-rays.

Research utilising advanced X-ray methodologies should be a main topic. However, research related to the development of new X-ray techniques/instruments or state-of-the-art techniques are very welcome. This Special Issue is intended to be a showcase for recent progress on applications of advanced X-ray techniques.

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Deadline for manuscript submissions

closed (15 January 2022)

Applied Sciences

an Open Access Journal by MDPI

Impact Factor 2.5
CiteScore 5.5

mdpi.com/si/61796

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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.

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