

SATELLITE WORKSHOP - Photon Science



High Energy X-ray Diffraction for Physics and Chemistry at Beamlines P07-DESY & P21.1

Friday, 24 January 2025

High energy X-ray diffraction and scattering based techniques play a major role in many scientific fields incl. physics, chemistry, and materials science. In particular, they enable complex in situ and operando experiments and the analysis of local (dis)order on atomic scale. We are going to present and discuss the current and future capabilities available at the high-energy scattering and diffraction beamlines P07-DESY and P21.1 based primarily on the techniques of total scattering, single-crystal diffraction, surface diffraction and x-ray diffraction computed tomography. Reports on key experiments will demonstrate the wide spectrum of scientific applications. This workshop aims at bringing together experienced users, interested researchers, and beamline staff.

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PROGRAM

9:00	Introduction	Martin v. Zimmermann	DESY
9:15	Status and new developments at the High Energy X-Ray Diffraction Beamline P21.1 for Physics and Chemistry	Fernando Igoa Saldaña	DESY
9:45	Status and new developments at the high energy x-ray diffraction station P07-DESY	Ann-Christin Dippel	DESY
10:15 Coffee break			
10:45	'In situ X-ray Study on Cation-Site Disordered Cu ₃ PdN Nanocrystals for Hydrogen Evolution Electrocatalysis	Sani Harouna-Mayer	University of Hamburg
11:15	Discovery of Giant Unit-Cell Super-Structure in the Infinite-Layer Nickelate PrNiO _{2+x}	Jens Matthias Oppliger,	University of Zürich
11:45	Optimizing Self-Cleaning Surfaces: Growth and Oxidation of Cu Nanoparticles on rutile TiO ₂ (110)	Silvan Dolling	DESY NanoLab
12:15	Solidification and microstructure formation of levitated and additively manufactured Zr-based bulk metallic glass forming alloy	Fan Yang	German Aerospace Center (DLR)
12:45	Discussion		