



Satellite Meeting: 10th Workshop on X-ray Nano-Imaging of Biological and Chemical Systems at PETRA III

Thursday, 30 January 2020

CFEL Bldg.99, CFEL I-III

The workshop gives attention to X-ray microscopy at various PETRA III beamlines with special emphasis on applications in biology and chemistry. Several scientific highlights are presented and recent methodological and instrumental developments at PETRA III beamlines and the DESY NanoLab are discussed. X-ray microscopy will greatly benefit from a future upgrade of PETRA into the ultra-low emittance source PETRA IV. Participants are encouraged to discuss future scientific opportunities.

Organisers: G. Falkenberg & C.G. Schroer

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PROGRAMME

Session 1: Nano-imaging and P10 workshop session			
13:00	Welcome & X-Ray Microscopy Today and at PETRA IV	Christian Schroer	Chair: G. Falkenberg DESY/UHH
13:20	News from the Nanolab	Thomas Keller	DESY
13:30	Sample cells for X-ray ptychography and nanotomography - towards operando chemical imaging of catalysts and functional materials	Thomas Sheppard	Karlsruhe Institute of Technology
14:00	Multi-scale tomography of heart tissue: from Cardiomyocyte to whole heart	Marius Reichardt	Goettingen University
14:30	Revealing the organization of axonal bundles from synchrotron tomography using streamline tractography	Hans Martin Kjer	Technical University of Denmark
15:00	3D anatomy and spatial chemistry in animal-microbe symbioses – Correlative phase-contrast x-ray tomography, metabolite imaging and fluorescence microscopy	B. Geier	MPI Marine Microbiology
15:30-16:00	Coffee break (30 Min.)		
Session 2: Nano-imaging workshop			
			Chair: C.G. Schroer
16:00	Nano-imaging experiments with Multilayer Laue optics	Sasa Bajt	DESY
16:20	Soft x-Ray Fluorescence Nanoscopy with the AnImaX endstation for biomedical and environmental applications	L. Lühl	TU-Berlin
16:40	X-ray fluorescence analysis of metal distributions in cryogenic biological samples	A. Rosenhahn	Ruhr-Univ. Bochum
17:00	Optical microscopy-driven imaging control software with online data visualization	S. Van Malderen	U Ghent
17:15	Self-Absorption Correction for XRF-Tomography at P06	D. Brückner	DESY/Uni HH
17:40	Coupled Ptycho-Tomography	M. Kahnt	Max IV
18:00	Missing wedge tomography with deep learning	Xiaogang Yang	DESY
18:20	Closing remarks	Christian Schroer	DESY
18:25	End of the workshop		