

European XFEL Users' Meeting — Satellite meeting:

Biological Sample Preparation and Characterization for XFEL Experiments



22 January 2019 / XTOB

Headquarters, European XFEL, Holzkoppel 4, 22869 Schenefeld or DESY

XFELs open up new possibilities for life science experiments from imaging of single molecules to monitoring of biochemical reactions. The science critically depends on the performance of the X-ray laser and on quality of samples that are placed into the X-ray beam. Many biological transformations happen on time scales shorter than some minutes, and an optimal use of the beam heavily depends on well prepared and thoroughly characterised samples. This workshop will focus on sample preparation, characterization, sample environment for biological samples at the SPB/SFX end station, results of first experiments at the European XFEL as well as novel developments in these areas.

Organizer: Kristina Lorenzen

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Tuesday, 22 January 2019

9:00	Registration (Coffee)		
9:20	Welcome	K. Lorenzen	European XFEL
9:30	The XBI Laboratories at the European XFEL	R. Schubert	European XFEL
10:00	Preparation and characterization of samples at the XBI for time-resolved crystallography at SPB-SFX	M. McDonough	University of Oxford
10:40	Photosystem I science with XFELs	R. Fromme	Arizona State University
11:20	Serial measurements at synchrotrons: cross fertilisation with FELs and potential for complementary solutions for sample delivery	A. Pearson	University Hamburg
12:00	Lunch and Tour 1 + 2		
13:00	Understanding malaria parasite actin filament structure and dynamics	I. Kursula	University of Bergen
13:30	The master regulator MITF, its biophysical characterization and beyond	V. Pogenberg	EMBL
14:00	Transmission Electron Microscopy as a tool for sample characterization	L. Franke	Centre for Structural Systems Biology
14:30	Microfluidic SFX workflows: from sample preparation to injection	M. Heymann	Max-Planck-Institute of Biochemistry
15:00	Coffee		
15:30	Sample preparation and delivery for serial and time-resolved crystallography	D. Obertür	Center for Free-Electron Laser Science
16:00	"Native mass spectrometry for single particle imaging at the European XFEL	A. Kadec	Heinrich Pette Institute
16:30	Intracellular protein crystallization for diffraction data collection at XFELs	L. Redecke	University of Lübeck
17:00	Sample Injection at the European XFEL	J. Bieleki	European XFEL
17:30	Poster session and Tour 3 + 4		
18:30	Dinner/Bufferet Foyer		