



NanoMat Science Day 2023: Advanced X-ray Methods

Date: May 24th, 9 am – open end BBQ

Onsite workshop, location: FLASH seminar room

Poster session and BBQ : FLASH seminar room and hallway FLASH building

Topics & session coordinators:

1. X-ray Diffraction & imaging (chairs: Margarita Zakharova, Florian Bertram)
2. X-ray spectroscopy (hard & soft) (Hlynur Gretarsson, Christoph Schlüter)
3. Time resolved methods (SR+FEL) (chairs: Elke Plönjes, Ilya Sergeev)

X-ray Diffraction & imaging (chairs: Margarita Zakharova, Florian Bertram)		
Time	Title	Speaker
Short introduction by chairs		
9:00-9:20	BCDI experiment and data treatment	Ren Zhe
9:20-9:40	In situ sample environments for hard X-ray imaging of catalysts and functional materials	Srashtasrita Das
9:40-10:00	Phase- and particle-selectivity with DAFS and sub-micron X-ray beams at P23: the case of SmTaS3 nanotubes	Azat Khadiev
10:00-10:20	Probing functional materials using GISAXS/GIWAXS	Benedikt Sochor
10:20-10:40	Robust ptychographic X-ray speckle tracking with multilayer Laue lenses	Nikolay Ivanov
10:40-11:00	Scanning X-ray diffraction microscopy on epitaxially grown single InGaAs nanodot	Arka Dey
11:00-11:30	Coffee break & discussions	
X-ray spectroscopy (hard & soft) (chairs: Hlynur Gretarsson, Christoph Schlüter)		
Short introduction by chairs		
11:30-11:50	Ambient pressure XPS at POLARIS: following kinetics of the CO oxidation in the sub second scale	Fernando Garcia Martinez
11:50-12:10	Core-level resonant XUV/NIR sum- and difference frequency generation	Robin Engel
12:10-12:30	In operando Photoemission Spectroscopy for TMDC Devices	Alena Nierhauve
12:30-13:30	Lunch break and discussion	
13:30-13:50	Uranium M5-edge RIXS	Martin Sunderman
15:50-14:10	Spatial Structures in Quantum Materials	Jan Schunck
14:10-14:30	Dimensional crossover in NbSe3 under Extreme Conditions	Yongsheng Zhao
14:30-15:00	Coffee break & discussions	
Time resolved methods (SR+FEL) (chairs: Elke Plönjes, Ilya Sergeev)		
Short introduction by chairs		
15:00-15:20	Classical and single-shot ptychography for imaging and beam characterization at free-electron lasers	Konstantin Kharitonov
15:20-15:40	Time-resolved luminescence with vacuum ultra violet excitation at PETRA III P66 beamline: implementation and applications	Yevheniia Smortsova
15:40-16:00	Ultrafast photoinduced dynamics at the interface of water and anatase TiO2(101)	Heshmat Noei
16:00-16:20	Time-resolved XPS Studies of Interfacial Charge Transfer Dynamics	Dmitrii Potorochin



16:20-16:40	Time-resolved momentum microscopy of quantum materials at FLASH	Nils Wind
16:40-17:00	Creating a nuclear frequency comb as a hard X-ray quantum memory	Sven Velten
17:30 - xxx	BBQ and NanoMat poster session	