



NanoMat Science Day 2025: Research in DESY MML Material

Date: May 6th, 9 am – open end BBQ

Onsite workshop, location: FLASH seminar room

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

Topics & session chairs:

1. Complex Materials – Andreas Stierle

2. Functional materials – Stephan Roth

3. Quantum Materials – Kai Rossnagel

Complex Materials		
Time	Title	Speaker
9:00-9:20	High-Resolution Multimodal Hard X-ray Spectro-Microscopy of Au Microcrystallites	Chaitali Sow
9:20-9:40	Complex Evolution of Oxide Supported Pd Catalysts During Methane Oxidation Light-off	Jan-Christian Schober
9:40-10:00	Defects and site resolved cation transport in the near-surface region of magnetite	Steffen Tober
10:00-10:20	Coffee break	
10:20-10:40	Imbibition-induced deformation dynamics in ordered, cylindrical nanopores	Lars Dammann
10:40-11:00	Niobium in Focus: From Crystal Grains to SRF Gains	Artem Zaidman
11:00-11:30	Discussion + Post-Its	
Functional Materials		
11:30-11:50	Solvent Annealing of PEDOT:PSS Electrodes via Spray Deposition	Marie Betker
11:50-12:10	Strain and stress measurements in polycrystalline materials across length scales	Ulrich Lienert
12:10-12:30	Towards high resolution ptychography using high-NA multi-layer Laue lenses	Ahmed Mokhtar
12:30-13:30	Lunch break & discussions	
13:30-13:50	Pseudo reflectivity – high resolution structure measurement of liquid surfaces under grazing incidence geometry	Chen Shen
13:50-14:10	Structure and Function of Solar Cells measured by Multi-modal X-ray Microscopy	Jackson Barp
14:10-14:30	Discussion + Post-Its	
Quantum Materials		
14:30-14:50	Manipulating the electronic structure of LaCoO3 by employing Ni doping	Meng-Jie Huang
14:50-15:10	Compact high-resolution RIXS via photoemission	Jan Schunck
15:10-15:30	Coffee break	
15:30-16:00	Evolution of lattice, electronic fluctuations and superconductivity in Rb2Mo6Se6 under pressure - results of Yongsheng Zhao	Moritz Hoesch
16:00-16:20	Ultrafast core and valence electron dynamics in 1T-TaS2	Lukas Bruckmeier
16:20-16:40	3D atomic structure determination of quantum materials with ultrashort-pulse MeV electron diffraction	Patrick Reinke
16:40-17:10	Discussion + Post-Its	



17:30 - xxx

BBQ and NanoMat poster session

Please feel free to give further input on cards provided at the seminar room and attach these during the breaks onto the discussion boards for each materials session.

What should be the main focus, future emphasis, where is the connectivity, what has been neglected etc., what is your focus?

Poster session

Please bring your poster along before 9 am. or put it on during the intervals.

Please keep in mind that posters have to be taken off in the evening.

ID	Name	Title of the poster
1	Sulaiman Al Salem	In-Situ XAS Study of ZnO and Mn-ZnO Thin Films
2	Lydia Bachmann	BCDI on single PtPd nanoparticles under operando conditions
3	Pablo J. Bereciartua	MagStREXS: last developments and current status of the software
4	Miguel Blanco Garcia	Cysteine adsorption and photo-oxidation on Anatase (101) TiO ₂ Surfaces
5	Lyudmyla Borkovska	Peculiarities of Mn ⁴⁺ red emission in manganese and lithium co-doped MgO and (Mg,Zn)O
6	Manuel Brinker	Electrochemo-Mechanical Actuation in Nanoporous Silicon
7	Shouzheng Chen	Deciphering the kinetics of photopolymerization-induced nanostructure and interface formation
8	Oksana Chukova	Solid state synthesis and spectroscopic features of the Sm-doped lanthanum vanadate nanoparticles with different crystal structures
9	Sonia Francoual	Science (Quantum Materials) with REXS at beamline P09 at PETRA III
10	Peter Gaal	Active X-Ray Optics for Time-Resolved Synchrotron Science
11	Fernando Garcia Martinez	Pressure Gap and Structure Dependence of NO reduction by CO on Rhodium near 1 bar
12	Hlynur Gretarsson	Science with tender x-ray RIXS
13	Thomas Florian Keller	DESY NanoLab
14	Anurag Keloth	Controlling creep regime domain wall velocity in Pt/CoFeB/Pt multilayers using He ⁺ ion irradiation
15	Larysa Khomenkova	Dopant induced effects in zirconia based materials
16	Simon Marotzke	First experiments with ultrashort, circularly polarized soft X-ray pulses at FLASH2
17	Alexander Meinhardt	Following The Directed Self-Assembly Of Crystallizable Block-Co-Oligomers Via In Situ AFM
18	Heshmat Noei	Dynamics of Chemical reaction on TiO ₂
19	Christian Plückthun	Low temperature single crystal resonant X-ray diffraction at beamline P09, PETRA III, DESY
20	Ekaterina Salikhova	Colloidal Synthesis of Ultra-Large InAs Quantum Dots



21	Kai Schlage	Nuclear resonant GISAXS on self-assembled magneto-resistive multilayer nanowires
22	Andreas Schropp	Scanning X-ray Microscopy Based on MEMS Technology
23	Yevheniia Smortsova	Factor analysis of 3D data from the time-resolved VUV luminescence beamline
24	Yufeng Zhai	Deep Learning-Driven GISAXS Data Processing for Nanostructure Characterization