

1st Week, LECTURES, online

MONDAY, 27th March (Welcome, Overview, Light, Interaction of X-rays with matter,)	
09.00-09.30	WELCOME AND OVERVIEW Marcus Bär / Catalina Jiménez
09.30-10.00	Overview presentation on BESSY II Antje Vollmer
10.00-10.15	15' BREAK
10.15-11.15	Storage ring-based lightsources: Current status and future trends Andreas Jankowiak
11.15-12.15	Insertion devices – Undulators for photon production Edward Rial
12.15-13.15	1h BREAK
13.15-14.15	X-ray optics and beamlines for synchrotron radiation experiments Jens Viefhaus
14.15-14.45	Virtual tour of BESSY II <i>Online</i>
14.45-15.00	15' BREAK
15.00-16.30	Interaction of X-rays with matter – Part I Alexander Föhlisch
16.30-16.45	15' BREAK
16.45-17.45	Operando X-ray absorption spectroscopy and diffraction for catalysis – <i>Special Invited Lecture</i> Anna Zimina and Jan-Dierk Grunwaldt
TUESDAY, 28th March (Interaction of X-rays with matter, X-ray absorption / emission)	
09.00-10.30	Interaction of X-rays with matter – Part II Alexander Föhlisch
10.30-10.45	15' BREAK
10.45-11.45	Introduction to XANES and EXAFS Ivo Zizak
11.45-12.30	PTB activities with synchrotron radiation including reflectometry and GIXRF Michael Krumrey
12.30-13.30	1h BREAK
13.30-14.30	In-situ and operando X-ray Absorption Spectroscopy Janis Timoshenko
14.30-15.00	Molecular Electronic Structure from RIXS: Experimental Perspectives Annette Pietzsch
15.00-15.15	15' BREAK
15.15-15.45	Molecular Electronic Structure from RIXS: Theoretical Perspectives Vinícius Vaz da Cruz
15.45-16.30	Theoretical core-level spectroscopy at highest accuracy and with techniques from artificial intelligence Annika Bande
16.30-16.45	15' BREAK
16.45-17.45	Participant's presentations and informal discussion I (max. 5'/participant, a bit about yourself, your research, your motivation to attend this school. Let's have a drink together and talk about research opportunities at BESSY II)

WEDNESDAY, 29th March (Photoemission & Magnetic Spectroscopy)	
09.00-10.30	Photoemission: Quantification, depth-“profiling”, and energy level alignment Marcus Bär
10.30-10.45	15' BREAK
10.45-11.30	Photoemission for studying inorganic and organic electronic materials Norbert Koch
11.30-12.15	In-situ XPS studies of surface reactions Christian Papp
12.15-13.15	1h BREAK
13.15-14.00	Operando soft X-ray spectroscopy experiments for heterogeneous catalytic reactions Axel Knop-Gericke
14.00-14.45	How to detect electrons from solutions - Liquid-jet photoelectron spectroscopy Robert Seidel
14.45-15.00	15' BREAK
15.00-16.00	Angle-resolved photoemission for the investigation of topological matter Oliver Rader
16.00-16.45	RESPES Christoph Janowitz
16.45-17.00	15' BREAK
17.00-17.45	Magnetic spectroscopy and scattering Christian Schüßler-Langeheine

THURSDAY, 30th March (Microscopy & Materials)	
09.00-09.45	PEEM: Magnetic imaging and spectroscopy at the nanoscale Florian Kronast
09.45-10.30	Scanning transmission X-ray microscopy Markus Weigand
10.30-10.45	15' BREAK
10.45-11.30	Novel measurement opportunities at coherent x-ray sources Jan Lüning
11.30-12.15	Introduction, Advances and Applications of Infrared Synchrotron Radiation in Microspectroscopy Ljiljana Puskar
12.15-13.15	1h BREAK
13.15-13.45	X-ray Tomography Alexander Rack
13.45-14.30	X-ray microscopy Stephen Werner / Gerd Schneider
14.30-15.00	Tomoscopy: Time-resolved tomography for materials science Francisco García-Moreno / Paul-H. Kamm
15.00-15.15	15' BREAK
15.15-16.15	Energy Materials Research with X-rays Marcus Bär

16.15-16.30	15' BREAK
16.30-17.30	Participant's presentations and informal discussion II (max. 5' /participant)

FRIDAY, 31 st March (Structure and wrap-up)	
09.00-10.30	Fundamentals of Diffraction and Crystallography Susan Schorr
10.30-10.45	15' BREAK
10.45-11.30	In-situ X-ray Diffraction Roland Mainz
11.30-12.30	Macromolecular structure determination by synchrotron X-ray crystallography Manfred Weiss
12.30-13.30	1h BREAK
13.30-14.15	Anomalous X-ray Diffraction and its Use in the Analysis of Atomic Structures Daniel Töbrens
14.15-15.00	Introduction to Small Angle X-ray Scattering (SAXS) and Anomalous SAXS Armin Hoell
15.00-15.15	15' BREAK
15.15-16.00	Workshop on how to prepare good beamtime proposals Astrid Brandt
16.00-16.15	15' BREAK
16.15-17.30	Participant's presentations and informal discussion III (max. 5'/participant)
17.30-17.45	Wrap-up first week, feedback

HZB Photon School 2023
Preliminary program – November 8th, 2022

2nd Week: on-site practical trainings (limited places)

MONDAY, 3 rd April	
10.00-10.30	Goals of trainings - Workshop on how to prepare your poster Catalina Jiménez
10.30-10.45	15' BREAK
10.45-12.00	BESSY II Tour Catalina Jiménez
12.00-13.00	1h LUNCH BREAK
13.00-18.00	Training – Day 1 Meet your trainer in a small group of two or three people and start activity.

TUESDAY, 4 th April	
09.00-18.00	Training – Day 2 Full dedication to your training.
12.00-13.00	1h BREAK

WEDNESDAY, 5 th April	
09.00-18.00	Training – Day 3 Complete discussion of results and interpretation. Prepare and submit poster.
12.00-13.00	1h BREAK

THURSDAY, 6 th April	
09.00-12.00	Rehearsal for Poster competition All
12.00-13.00	1h BREAK
13.00-15.00	Poster competition All
15.00-15.30	Closing Remarks, Certificate Distribution & Farewell Marcus Bär