

HZB Photon School 2020
Preliminary program – as of 3rd March, 2020

1st Week, LECTURES, BESSY II Lecture Hall

MONDAY, 9th March (Welcome, Overview and Light)

08.45-09.00	REGISTRATION
09.00-09.30	WELCOME AND OVERVIEW M. Bär / C. Jiménez
09.30-10.00	Overview presentation on BESSY II A. Vollmer
10.00-10.30	BREAK
10.30-12.00	BESSY II Tour A. Vollmer, M. Bär, C. Jiménez, A. Freire-Anselmo, E. Handick
12.00-13.00	LUNCH
13.00-14.00	Storage Ring-Based Lightsources: Current Status and Future Trends A. Jankowiak
14.00-15.00	Insertion Devices – Undulators for Photon Production J. Bahrtdt
15.00-16.00	X-ray Optics and Beamlines for Synchrotron Radiation Experiments J. Viefhaus
16.00-16.30	BREAK
16.30-18.00	Heterogeneous Chemistry of Aqueous Interfaces Probed by Photoelectron Spectroscopy <i>Special Invited Lecture</i> , Hendrik Bluhm
18.00-20.00	GET-TOGETHER BUFFET - All, BESSY II Foyer

TUESDAY, 10th March (Interaction of X-rays with matter, X-ray emission / absorption)

09.00-10.30	Interaction of X-rays with matter – Part I A. Föhlisch
10.30-11.00	BREAK
11.00-12.00	Introduction to XANES and EXAFS I. Zizak
12.00-12.45	In-situ/operando X-ray Absorption Spectroscopy J. Timoshenko
12.45-13.45	LUNCH
13.45-14.45	Interaction of X-rays with matter – Part II A. Föhlisch
14.45-15.30	Functionality seen by RIXS A. Pietzsch and V. Vaz da Cruz
15.30-16.00	BREAK
16.00-17.00	X-Ray Fluorescence with Synchrotron Radiation: Basics and Applications M. Radtke
17.00-17.45	PTB activities with synchrotron radiation including reflectometry and GIXRF M. Krumrey

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WEDNESDAY, 11th March (Photoemission & Dynamics)	
09.00-10.30	Photoemission: Quantification, Depth-“profiling”, and Energy Level Alignment M. Bär
10.30-10.45	BREAK
10.45-11.30	In-situ XPS studies of surface reactions Ch. Papp
11.30-12.15	Photoemission for studying inorganic and organic electronic materials N. Koch
12.15-13.30	LUNCH
13.30-14.15	How to Detect Electrons from Solutions - Liquid-Jet Photoelectron Spectroscopy R. Seidel
14.15-15.00	Ambient Pressure X-ray Photoemission Spectroscopy in Catalysis Axel Knop-Gericke
15.00-15.45	Angle-Resolved Photoemission for the Investigation of Topological Matter O. Rader
15.45-16.15	BREAK
16.15-17.00	Magnetic Spectroscopy and Scattering and Ch. Schüßler-Langeheine
17.00-17.45	Ultrafast Dynamics studies with Soft X-Ray Pulses N. Pontius
THURSDAY, 12th March (Microscopy & Materials)	
09.00-10.00	Introduction into Imaging: X-ray Holography S. Eisebitt
10.00-10.30	BREAK
10:30-11:15	X-ray Microscopy S. Werner / G. Schneider
11.15-12.00	Scanning Transmission X-ray Microscopy M. Weigand / S. Raoux
12.00-12.45	X-ray Fluorescence Spectroscopy and Microscopy: Basics, Methods, and Applications B. Kanngießler
12.45-13.45	LUNCH
13.45-14.30	PEEM: Magnetic Imaging and Spectroscopy at the Nanoscale F. Kronast
14.30-15.15	Exploiting (partially) coherent synchrotron radiation: (phase) contrast and time A. Rack
15.15-16.00	Tomoscopy: Time-resolved tomography for materials science F. García-Moreno
16.00-16.30	BREAK
16.30-17.30	Current and future developments in photon science at HZB

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	J. Lüning
FRIDAY, 13th March (Structure and wrap-up)	
09.00-10.30	Fundamentals of Diffraction and Crystallography S. Schorr
10.30-11.00	BREAK
11.00-12.00	Macromolecular structure determination by synchrotron X-ray crystallography M. Weiss
12.00-12.45	In-situ X-ray Diffraction R. Mainz
12.45-13.30	LUNCH
13.30-14.15	Anomalous X-ray Diffraction and its Use in the Analysis of Atomic Structures D. Többens
14.15-15.00	Introduction to Small Angle X-ray Scattering (SAXS) and Anomalous SAXS A. Hoell
15.00-15.45	Introduction to Infrared Spectroscopy, Beamlines, and Spectrometers U. Schade
15.45-16.15	BREAK
15.45-16.30	Advances and Applications of Infrared Synchrotron Radiation in Microspectroscopy L. Puskar
16.30-17.30	Energy Materials Research with X-rays M. Bär
17.30-18.00	Wrap-up first week, feedback, certificate distribution

SATURDAY, 14th March (Social Program in the city center / Networking / C. Jiménez)

SUNDAY, 15th March (FREE)

2nd Week: HANDS-ON TRAINING, BESSY II (limited places)

MONDAY, 16th March	
09.30-10.30	Workshop on how to write a BESSY II experimental report and prepare a poster C. Jiménez
10.30-11.00	BREAK
11.00-12.00	Workshop on how to prepare good beamtime proposals A. Brandt
12.00-13.00	LUNCH
13.00-18.00	Experiment – Day 1 Safety instruction (if necessary) Access to experimental stations (badges and dosimeters) Introduction, preparatory work, and adjustments at the experimental stations Experiment responsible

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TUESDAY, 17th March

09.00-18.00	Experiment – Day 2 Experiment responsible
12.00-13.00	LUNCH

WEDNESDAY, 18th March

09.00-18.00	Experiment – Day 3 Experiment responsible
12.00-13.00	LUNCH

THURSDAY, 19th March

09.00-12.00	Experimental Report and Poster Preparation (Part I) All
12.00-13.00	LUNCH
13.00-18.00	Experimental Report Preparation (Part II) // Deadline for poster submission (14.00) All

FRIDAY, 20th March

09.00-10.30	Poster presentation Practice I All
10.30-10.45	BREAK
10.45-12.00	Poster Presentation II + feedback on reports All
12.00-13.00	LUNCH
13.00-15.00	Poster Competition All
15.00-15.30	Closing Remarks, Certificate Distribution & Farewell J. Lüning