

HERCULES

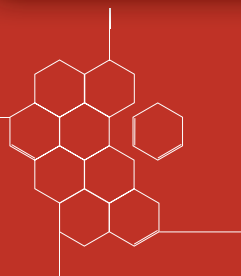
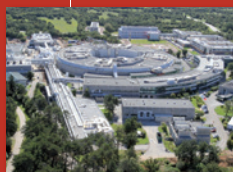
European School

Neutrons and synchrotron radiation
for science

2020

March
16th to 20th

Barcelona
ALBA Synchrotron





HERCULES SCHOOL 2020: PLANNING IN BARCELONA

16th - 20th March 2020

Session A: Physics and chemistry of condensed matter
Session B: Biomolecular structure and dynamics

MONDAY, March 16th
in Maxwell Auditorium

TIME	TITLE	LECTURER
9:00	Welcome message and presentation of ALBA Synchrotron	<i>Management</i>
9:30	Soft X-ray absorption and XMCD	Javier Herrero
10:30	Coffee break	
11:00	Macromolecular Crystallography at ALBA: from data to structure	Xavier Carpena
12:00	Low energy Electron and X-ray Photoemission Electron Microscopy (LEEM & XPEEM): Principles and applications	Michael Foerster
13:00	Lunch	
14:30	Full field soft X-ray transmission microscopy	Andrea Sorrentino
15:30	Near Ambient Pressure Photoemission at ALBA (NAPP) - more realistic studies by reducing the pressure gap	Carlos Escudero
16:30	Coffee break	
17:00	Guided Tour to ALBA	

TUESDAY, March 17th**GROUP 1A**

TIME	TITLE	INSTRUCTORS	ROOM
9:00	Practical at BOREAS: <i>XAS and XMCD investigation of bulk and surface science samples</i>	Pierluigi Gargiani Manuel Valvidares	BL29
13:00	Lunch		
14:30- 18:00	Practical at BOREAS: <i>XAS and XMCD investigation of bulk and surface science samples</i>	Javier Herrero	BL29

GROUP 2A

TIME	TITLE	INSTRUCTORS	ROOM
9:00	Practical at NCD-SWEET: <i>SAXS/WAXS study on polymer crystallisation</i>	Marc Malfois Eduardo Solano	BL11
13:00	Lunch		
14:30- 18:00	Practical at NCD-SWEET: <i>SAXS/WAXS study on polymer crystallisation</i>	Marc Malfois Eduardo Solano	BL11

GROUP 3A

TIME	TITLE	INSTRUCTORS	ROOM
9:00	Practical at CLAESS: <i>X-ray absorption and emission spectroscopy to access the local structural and electronic properties of the matter</i>	Laura Simonelli Carlo Marini Giulio Gorni	BL22
13:00	Lunch		
14:30- 18:00	Practical at CLAESS: <i>X-ray absorption and emission spectroscopy to access the local structural and electronic properties of the matter</i>	Laura Simonelli Carlo Marini Giulio Gorni	BL22

GROUP 1B

TIME	TITLE	INSTRUCTORS	ROOM
9:00	Practical at MIRAS: <i>Using the FTIR microscope and various experimental setups at MIRAS BL</i>	Tanja Ducic	BL01
13:00	Lunch		
14:30- 16:30	Practical at MIRAS: <i>Using the FTIR microscope and various experimental setups at MIRAS BL</i>	Tanja Ducic	BL01

TUESDAY, March 17th**GROUP 2B**

TIME	TITLE	INSTRUCTORS	ROOM
9:00	Practical at XALOC: <i>Advanced Macromolecular Crystallography Data Collection Protocols</i>	Bárbara Calisto	BL13
13:00	Lunch		
14:30- 16:30	Practical at XALOC: <i>Advanced Macromolecular Crystallography Data Collection Protocols</i>	Bárbara Calisto	BL13

WEDNESDAY, March 18th**GROUP 1A**

TIME	TITLE	INSTRUCTORS	ROOM
9:00	Practical at NCD-SWEET: <i>SAXS/WAXS study on polymer crystallisation</i>	Marc Malfois Eduardo Solano	BL11
13:00	Lunch		
14:30- 18:00	Practical at NCD-SWEET: <i>SAXS/WAXS study on polymer crystallisation</i>	Marc Malfois Eduardo Solano	BL11

GROUP 2A

TIME	TITLE	INSTRUCTORS	ROOM
9:00	Practical at CLAESS: <i>X-ray absorption and emission spectroscopy to access the local structural and electronic properties of the matter</i>	Laura Simonelli Carlo Marini Giulio Gorni	BL04
13:00	Lunch		
14:30- 18:00	Practical at CLAESS: <i>X-ray absorption and emission spectroscopy to access the local structural and electronic properties of the matter</i>	Laura Simonelli Carlo Marini Giulio Gorni	BL04

GROUP 3A

TIME	TITLE	INSTRUCTORS	ROOM
9:00	Practical at BOREAS: <i>XAS and XMCD investigation of bulk and surface science samples</i>	Javier Herrero	BL29
13:00	Lunch		
14:30- 18:00	Practical at BOREAS: <i>XAS and XMCD investigation of bulk and surface science samples</i>	Manuel Valvidares Pierluigi Gargiani	BL29

GROUP 1B

TIME	TITLE	INSTRUCTORS	ROOM
9:00	Practical at XALOC: <i>Advanced Macromolecular Crystallography Data Collection Protocols</i>	Xavier Carpena	BL13
13:00	Lunch		
14:30- 16:30	Practical at XALOC: <i>Advanced Macromolecular Crystallography Data Collection Protocols</i>	Iñaki de Diego	BL13

GROUP 2B

TIME	TITLE	INSTRUCTORS	ROOM
9:00	Practical at MIRAS: <i>Using the FTIR microscope and various experimental setups at MIRAS BL</i>	Martin Kreuzer	BL01
13:00	Lunch		
14:30- 16:30	Practical at MIRAS: <i>Using the FTIR microscope and various experimental setups at MIRAS BL</i>	Martin Kreuzer	BL01

20:30	SOCIAL DINNER		
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THURSDAY, March 19th

SESSION A

TIME	TITLE	INSTRUCTORS	ROOM
9:00	Analysis of data collected at BOREAS: <i>Analysis of XAS and XMCD data: spectra treatment, sum rules and introduction to multiplet simulations (Group 3A+1A)</i>	Javier Herrero Pierluigi Gargiani	Tesla
11:30	Preparation of an experimental report		
13:00	Lunch		
14:30	Analysis of XAS data collected at CLAES: <i>XANES linear combination approach, XES data treatment: quantification of the local magnetic moment by the IAD method (Group 3A+2A)</i>	Laura Simonelli Carlo Marini Giulio Gorni	Tesla
17:00	Coffee Break		
17:30	Preparation of an experimental report. One-to-one meetings with ALBA researchers		

THURSDAY, March 19th

TIME	TITLE	INSTRUCTORS	ROOM
9:00	Analysis of data collected at NCD-SWEET: <i>data reduction using pyFAI and DAWN software. Preliminary data analysis and interpretation.</i> (Group 2A)	Marc Malfois Eduardo Solano	Bohr
11:30	Preparation of an experimental report		
13:00	Lunch		
14:30	Analysis of data collected at NCD-SWEET: <i>data reduction using pyFAI and DAWN software. Preliminary data analysis and interpretation.</i> (Group 1A)	Marc Malfois Eduardo Solano	Bohr
17:00	Coffee Break		
17:30	Preparation of an experimental report. One-to-one meetings with ALBA researchers.		

SESSION B

TIME	TITLE	INSTRUCTORS	ROOM
9:00	Macromolecular model building and analysis of electron density maps.	Roeland Boer Damià Garriga	Lovelace
13:00	Lunch		
14:30	Infrared data handling (chemical imaging and individual spectra) using OPUS and Unscrambler software.	Ibraheem Yousef	Lovelace
16:30	Coffee Break		
17:00	Preparation of an experimental report. One-to-one meetings with ALBA researchers		

FRIDAY, March 20th

TIME	TITLE	ROOM
9:00	Preparation of an experimental report: Final touches	Bragg Hodgkin Niels Bohr
10:00	Presentation of the reports (Session A): Group 1A: NCD-SWEET+BOREAS exp.	Maxwell Auditorium
10:20	Group 2A: CLAESS+NCD-SWEET exp.	
10:40	Group 3A: BOREAS+CLAESS exp.	
11:00	Coffee break	
11:20	Presentation of the reports (Session B): Group 1B: XALOC+MIRAS exp.	Maxwell Auditorium
11:40	Group 2B: XALOC+MIRAS exp.	
12:00	Wrap-up session	
13:00	Lunch	

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