

VII AUSE CONGRESS AND II ALBA USER'S MEETING - 2015

16th -19th June 2015

<http://indico.cells.es/indico/event/AUSE-ALBA-2015>

Scientific Committee:	Local Committee:
Caterina Biscari (cbiscari@cells.es)	Miguel A. G. Aranda (g.aranda@cells.es)
Gastón García (ggarcia@cells.es)	Inma Ramos (iramos@cells.es)
Salvador Ferrer (sferrer@cells.es)	Laura Campos (lcampos@cells.es)
Miguel A. G. Aranda (g.aranda@cells.es)	Ana Belen Martinez (amartinez@cells.es)
Mari Cruz García-Gutiérrez (maricruz@iem.cfmac.csic.es)	Xavier Torrelles Albarada (torrelles@icmab.es)
Xavier Torrelles Albareda (torrelles@icmab.es)	
Gloria Subías (gloria@unizar.es)	
Olga López (oloesh@cid.csic.es)	
Ignacio Jiménez Guerrero (ijimenez@icmm.csic.es)	
Ana Cámara (acamara@ual.es)	
Aurelio Cabeza (aurelio@uma.es)	
María Alonso (malonso@icmm.csic.es)	

Scientific Committee Mailing list:

cbiscari@cells.es, ggarcia@cells.es, g.aranda@cells.es, sferrer@cells.es, maricruz@iem.cfmac.csic.es, torrelles@icmab.es, gloria@unizar.es, oloesh@cid.csic.es, ijimenez@icmm.csic.es, acamara@ual.es, aurelio@uma.es, malonso@icmm.csic.es.

Local Committee Mailing list:

g.aranda@cells.es, iramos@cells.es, lcampos@cells.es, amartinez@cells.es, torrelles@icmab.es

Final scientific program 16th-19th June, 2015

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Tuesday-16th of June (AUSE)

13:00-15:00 Registration & lunch.

15:00-15:10. Welcome. Gastón García (ALBA Deputy Director) & Mari Cruz García-Gutiérrez (AUSE President)

15:10-15:30. Miguel Ángel García Aranda “ALBA general status”

Chairperson: Ignacio Jiménez

15:30-16:20. Invited talk: Prof. Klaus Lips. “EMIL @ BESSY”. 45’ + 5’.

16:20-16:40. Víctor A. de la Peña O’Shea. “Insights in the CO₂ photo-activation over Titania-Based Photocatalysts for Artificial Photosynthesis” 15’ + 5’.

16:40-17:00. Vlad Martín-Diaconescu. “Structural and electronic characterization of the principal catalytic components in C-H bond functionalization by triazamacrocyclic-Cu complexes” 15’ + 5’.

17:00-17:20. Miguel Angel Niño Orti. “X-ray circular dichroism in adsorbed films of homochiral organic molecules on ferromagnetic substrates” 15’ + 5’.

17:20-17:40. José Cascales. “Photoemission and x-ray absorption of graphene/h-BN multilayers grown by ion-beam-assisted deposition” 15’ + 5’.

17:40-19:30. Coffee and poster discussion: ALBA users and AUSE members.

Authors should be present to answer the questions/comments from the awarding committee. Authors entitled for the prizes must be ‘young researchers’ as defined by being 30 years old (or younger) 16/06/2015.

AUSE prize to the best poster (300 € & diploma), secondary award ‘accésit’ (150 € & diploma)

ALBA prize to the best poster (300 € & diploma), secondary award ‘accésit’ (150 € & diploma)

Wednesday-17th (AUSE)

Chairperson: Gloria Subías

09:00-09:50. Invited talk: Prof. Tilo Baumbach. “X-ray imaging for spatiotemporally resolved studies of micro-structure evolution during technological and biological processes” 45’ + 5’.

09:50-10:10. Carlos Frontera. “TTS microdiffraction of microcrystals embedded in thin polished films” 15’+5’.

10:10-10:30. Ana Cuesta. “Hydration studies of ye’elimite by using Ptychographic X-ray nanotomography” 15’ + 5’.

10:30-10:50. Fernando Aguado. “Structural behaviour of CaZrO₃ perovskite under pressure. Influence of pressure-transmitting medium” 15’ + 5’.

10:50-11:20. Coffee break

Chairperson: Xavier Torrelles

- 11:20-11:40. Tiberio Ezquerro. “Nanofabrication of Laser Induced Periodic Surface Structures on polymer thin films as revealed by Grazing Incidence Small Angle X-ray Scattering” 15’ + 5’.
- 11:40-12:00. Esther Barrena “X-ray Real-time Investigation of the Crystallization of Photovoltaic Polymer-fullerene films during Solvent Drying: the Effect of Processing Additives” 15’+5’.
- 12:00-12:20. Belen Aleman. “Synchrotron WAXS/SAXS analysis of CNT fibre based nanocomposites” 15’ + 5’.
- 12:20-12:40. Ernesto Pérez. “The role of mesomorphic phases in the ordering of polymers” 15’ + 5’.
- 12:40-13:00. Pedro Matias. “A structural overview of Pontin, Reptin and their complex(es)” 15’+5’.

13:00-14:30. Lunch

Chairperson: Olga López

- 14:30-15:20. Invited talk: Dr. Gianfelice Cinque “Multimode InfraRed Imaging and Microspectroscopy at Diamond: MIRIAM beamline perspectives”. 45’ + 5’.
- 15:20-15:40. Inmaculada Martínez-Rovira. “FTIR study of the biochemical effects in F98 glioma cells induced by x-ray irradiations combined with nanoparticles” 15’ + 5’.
- 15:40-16:00. Estibalitz Fernández. “Bicosomes as skin delivery systems: A study based on Fourier-transform infrared microspectroscopy using synchrotron radiation” 15’ + 5’.
- 16:00-16:20. Manuel Valiente. “Speciation of iron and zinc in cured ham to assess the curing process” 15’+5’.

Chairperson: Mari Cruz García-Gutiérrez

- 16:20-16:50. Talk based on the Ph.D. thesis award AUSE – 2013/2014. Ignacio Martín-Fabiani. “Characterization, assessment and optimization of polymer nanostructures using synchrotron radiation” 25’ + 5’.

AUSE award to the best oral contribution (award & diploma)

16:50-17:20. Coffee break

- 17:20-17:50. Key-note contribution: Germán Castro “Technical capabilities, developments and upgrade plans of SpLine, the Spanish CRG BM25 beamline at the European Synchrotron Radiation Facility”. 25’ + 5’.

18:00-19:30. AUSE general assembly

Thursday-18th (ALBA Users)

09:00-09:20. News and recent developments at XALOC BL.

09:20-09:40. News and recent developments at MISTRAL BL.

09:40-10:00. News and recent developments at NCD BL.

10:00-10:20. Guillermo Montoya. “Visualizing phosphodiester-bond hydrolysis by an endonuclease” 15’+5’.

10:20-10:40. Rafael Junqueira Borges. “Phasing your XALOC data with ARCIMBOLDO”. 15’ + 5’.

10:40-11:00. Daniela UHRIKOVA. “Stimuli responsive polymorphism in DNA-cationic liposomes complexes: effect of composition, pH and temperature” 15’ + 5’.

11:00-11:30. Coffee break

11:30-11:50. News and recent developments at CIRCE BL – PEEM endstation

11:50-12:10. News and recent developments at CIRCE BL – NAPP endstation

12:10-12:40. News and recent developments at BOREAS BL

12:40-13:00. Juan de la Figuera. “Near-surface magnetic moment of Co-doped magnetite (100)” 15’+5’.

13:00-13:20. Jordi Llorca. “Unraveling the working architecture of real catalysts by near-ambient XPS” 15’ + 5’.

13:20-13:40. Jessica Padilla-Pantoja. “Spin-lattice coupled anomalies and magneto-crystalline transition in $\text{Pr}_{0.50}\text{Sr}_{0.50}\text{CoO}_3$ investigated by x-ray absorption spectroscopies” 15’ + 5’.

13:45-15:00. Lunch

15:00-15:20. News and recent developments at MSPD BL.

15:20-15:40. News and recent developments at CLAEISS BL.

15:40-16:00. Jose L. Jordá. “ITQ-52, a new microporous zeolite with interconnected small and medium pores obtained using an aminophosphonium dication as structure directing agent” 15’ + 5’.

16:00-16:20. Daniel Errandonea. “Exploring the structure of materials under high pressure at BL04-MSPD beamline” 15’ + 5’.

16:20-16:40. Atul Bansode. “Operando X-ray absorption spectroscopic studies on high-pressure and electrochemical heterogeneous catalytic reactions towards CO_2 utilization” 15’ + 5’.

16:40-17:10. Miguel A. G. Aranda ‘ALBA phases II and III’. 20’ + 10’.

17:10-17:30. Inma Ramos ‘ALBA user office’. 15’ + 5’.

ALBA award to the best oral contribution (award & diploma)

17:30-19:00. Coffee and poster discussion

Continue the selection for the prizes to the best posters

21:00- Congress diner, including the awarding of the best poster prizes and oral contributions

Satellite Workshops (ALBA)

Friday-19th, June 2015

Satellite #1: workshop on X-ray Photoemission Electron Microscopy (X-PEEM) at ALBA

The PEEM endstation at the CIRCE-BL in ALBA offers a range of experimental possibilities in Surface Science, Spectromicroscopy and Micromagnetism. This tool, being unique in Spain, is publically available for Users through calls for proposals. The purpose of this workshop is to introduce interested groups to the experimental capabilities of the end station and facilitate networking between current and future users and ALBA scientists. Extended practical parts will be devoted on the use of the Microscope as well as data handling and analysis based on different software packages.

09:30 - 10:00	Registration
10:00	Welcome: Salvador Ferrer
10:10	Introduction to LEEM-PEEM: working principles (MF/LA)
10:40	Invited talk: Juan de la Figuera (IFQR) : LEEM-PEEM in surface science
11:40	<i>Coffee break</i>
12:00	Invited talk: Florian Kronast (HZB) : X-PEEM for micromagnetism and device physics
13:00	<i>Lunch</i>
14:15	Practical module I in two groups (A/B) (Lucia Aballe & Michael Foester)
16:00	<i>Coffee break</i>
16:15	Practical module II in two groups (A/B) (Lucia Aballe & Michael Foester)
18:00	end

Practical modules are

A) Basic PEEM operation and sample mounting

B) Training on PEEM data analysis software

Satellite #2: workshop on High Pressure Powder Diffraction at ALBA

The High Pressure/Micro diffraction station of the Materials Science Powder Diffraction (MSPD) beamline has seen intense users' program activity over the last two years. The first friendly and official users' experiments on MSPD were performed on the HP station in June 2012. The intense activity in the High Pressure field is supported by a rich and dynamic community of users' originating from various groups in Spain, which gathered in the so-called MALTA consolder research project. The aim of the proposed workshop is to review the past 3 years of High Pressure activities at ALBA. The program will cover presentation of results obtained on the HP station of the MSPD beamline as well as technical developments performed at ALBA to support HP experiments. It will be discussed prospective orientations to apply on the HP-MSPD station, in particular for what concern sample environment and laboratory support. Finally, it will be introduced alternative High Pressures techniques susceptible to be settled in on the existing X-ray absorption beamline (CLAESS) and the forthcoming Infrared Microscopy and Spectroscopy beamline (MIRAS).

09:30 - 10:00	Registration
10:00	Welcome: Miguel A. G. Aranda
10:10 – 10:40	An introduction to BL04-HP: activity & instrumentation (MSPD BL staff)
10:40 – 11:30	Invited talk: Daniel Errandonea (Valencia) : 'Exploring the structure of materials under high pressure at BL04-MSPD beamline'
11:30 – 12:00	<i>Coffee break</i>
12:00 – 12:50	Invited talk: Michael Hanfland (ESRF) : 'Structural studies at high pressure, where are we today?'
13:00	<i>Lunch</i>
14:15	Visit to the BL
15:00 – 15:30	Catalin Popescu (MSPD BL) 'High Pressure structural investigation of promising optical materials'
15:30 – 16:00	Laura Simonelli (CLAESS BL) 'HP in XAS, prospects for HP on CLEASS'
16:00 – 16:30	Ibraheem Yousef (MIRAS BL): "High-pressure phase transition in Witherite: Simultaneous study by synchrotron Infrared and Raman microspectroscopy"
16:30 – 17:30	Open discussion/exchange on HP activity, future directions, etc.
17:30	end