

Organized by:

Grup de Tècniques de Separació, Dept. Química, Universitat Autònoma de Barcelona (GTS-UAB) and Synchrotron CELLS-ALBA under the European Project ORQUE-SUDOE (<http://www.orque-sudoe.eu>).

Organizing Committee:

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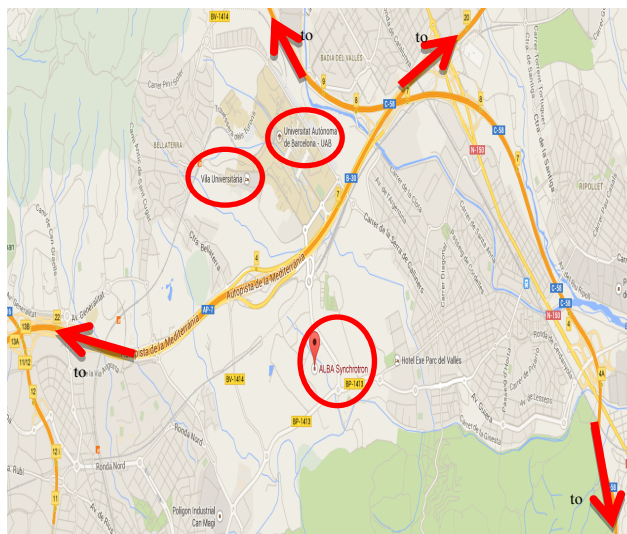
CELLS - ALBA

Carretera BP 1413, de Cerdanyola del Vallès a Sant Cugat del Vallès, Km. 3,3

08290 Cerdanyola del Vallès, Barcelona

<http://www.cells.es/>

How to get to ALBA



For accurate description visit:

<http://www.cells.es/en/about/coming-to-alba>

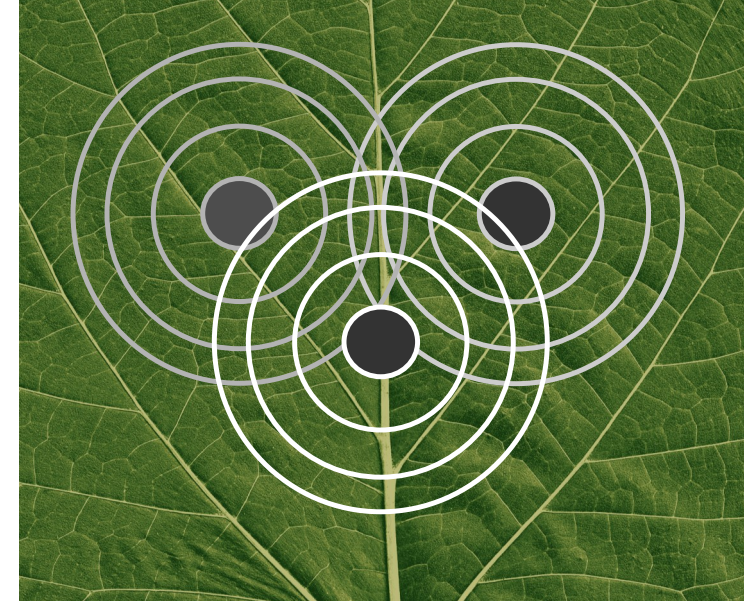
Accommodation will be located at Vila Universitaria at the Universitat Autònoma de Barcelona

The number of attendees will be limited to 25.

15 People will come from ORQUE-SUDOE partners and 10 participants will be selected from ALBA users.

If you are interested, and you are under 30 years old, please contact lcampos@cells.es including one page motivation letter.

Deadline: Friday, 12th of September 2014.



INTRODUCTORY COURSE Synchrotron EXAFS & XANES for Chemical Speciation on Environmental Systems

6th - 9th October 2014
ALBA Synchrotron facilities



Grup de Tècniques
de Separació en Química
UAB



PROGRAM

6th October

08.30-08.50 Reception (ALBA Auditorium)

09.00-09.30 Opening Session (ORQUE-ALBA-UAB Rep)

09.30-10.15 General introduction to Synchrotron (Miguel Ángel García Aranda, ALBA Synchrotron)

10.15-11.00 Soft X-Ray Synchrotron Techniques (Eric Pellegrin, ALBA Synchrotron)

11.00-11.30 Break

11.30-12.15 Hard X-Ray Synchrotron Techniques (François Fauth, ALBA Synchrotron)

12.15-13.15 XAS (XANES/EXAFS) (Laura Simonelli, ALBA Synchrotron)

13.15-15.00 Lunch

15.00-16.00 X-ray absorption spectroscopy: an element-selective structural research tool (K. Klementiev, Max IV Synchrotron)

16.00-17.00 Application of EXAFS and XANES for studies of heavy metal/metalloid interaction with mineral surfaces. (Richard Reeder, Stony Brook University)

17.00-17.15 Break

17.15-18.30 Visit beamline (Laura Simonelli, Carlo Marini and Marta Ávila, ALBA Synchrotron)

7th October

09.00-10.00 Application of total X-ray scattering and pair distribution function analysis to biominerals and environmental materials. (Richard Reeder, Stony Brook University)

10.00-11.00 Shining light on environmental technologies, a bright future for environmental scientists (Maartens Nachtegaal, Scherrel, Switzerland)

11.00-11.30 Break

11.30-12.00 The linear combination approach for XANES data treatment (Carlo Marini, ALBA Synchrotron)

12.00-12.30 Designing an experiment for XAS. Part I (Marta Ávila, ALBA Synchrotron)

12.30-13.30 Synchrotron Applications in Biomaterials and the Environment (Manuel Valiente, GTS-UAB)

13.30-15.00 Lunch

15.00-15.30 XANDA for XANES data treatment (Maria Àngels Subirana, ALBA Synchrotron)

15.30-18.00 PRACTICAL SESSION: XANES data treatment exercise (Laura Simonelli, Carlo Marini, Marta Ávila and Maria Àngels Subirana, ALBA Synchrotron)

20.30-00.00 School dinner, Barcelona

8th October

09.30-10.30 Time-resolved X-ray absorption and emission spectroscopy for determining the dynamic geometric and electronic structure of functional materials (Maartens Naagctel, Scherrel, Switzerland)

10.30-11.00 Break

11.00-12.00 Space, Earth and Environmental studies with synchrotron infrared microspectroscopy (Paul Dumas, SOLEIL Synchrotron)

12.00-13.00 Chemical speciation by principal component analysis in XAS (K. Klementiev, Max IV Synchrotron)

13.00-13.30 Designing an experiment for XAS. Part II (Marta Ávila, ALBA Synchrotron)

13.30-15.00 Lunch

15.00-16.00 Provocative session

16.00-18.00 Brokerage event

9th October

09.00-09.30 VIPER for EXAFS data treatment (Maria Àngels Subirana, ALBA Synchrotron)

09.30-12.30 PRACTICAL SESSION: EXAFS data treatment exercise (Laura Simonelli, Carlo Marini, Marta Ávila and Maria Àngels Subirana, ALBA Synchrotron)

12.30-13.30 Synchrotron infrared and cultural heritage science (Paul Dumas, SOLEIL Synchrotron)

13.30-15.00 Lunch

15.00-17.30 PRACTICAL SESSION: Individual work with real examples (Laura Simonelli, Carlo Marini, Marta Ávila and Maria Àngels Subirana, ALBA Synchrotron)

17.30-18.00 How to prepare a successful experiment proposal (Miguel Ángel García Aranda, ALBA Synchrotron)

18.00 Closing (Organizing Committee)

Lectures will take place at ALBA Auditorium

It is mandatory the use of own laptop.

The following software must be installed previously to the beginning of the course:

-Viper-dactyloscope-XAFSmass:

<http://www.cells.es/en/beamlines/bl22-claess/software>

-Feff6lite:

<http://www.fefferproject.org/fefferproject-feff-download.html>

-Demeter:

<http://bruceravel.github.io/demeter/>

For assistance with the installation of the software contact: Laura Simonelli (laura.simonelli@cells.es)