



Programme

Wednesday, January 18 - **SOLEIL AUDITORIUM**

14:00 – 17:00 **Tutorial:** *XAS data treatment – Part I (Gautier Landrot – SAMBA)*

Basic functions of the software and concerns the users who want to discover XAS data treatment and / or the new software developed by the SAMBA beamline.

Thursday, January 19 **SOLEIL AUDITORIUM**

09:00 – 10:00 Registration & coffee

10:00 – 10:10 Welcome / Introduction, ORGUES Chair – Rozenn LE HIR

10:10 - 10:20 The word of SOLEIL General Director - Jean DAILLANT

10:20 – 11:05 **Andrès SANTANDER-SYRO** – Surfaces/Interfaces
“Itinerant-to-localized transmutation of electrons across the metal-to-insulator transition”

11:05 - 11:50 **Véronique ARLUISON** – Biology/Health
“Functional consequences of a bacterial amyloid interaction with single stranded DNA”

11:50 - 12:10 Peer Review Committee 5 (Biology/Health) – **Thibaud CREPIN**
 Peer Review Committee 6 (Ancient Materials) – **Emmanuelle MONTARGES-PELLETIER**
 Questions 10mn

12:10-12:30 Projection vidéo HELIOBIO (Tatiana ISABET / Frédéric JAMME / Aurélien THUREAU)

12:30 - 14:00 **Lunch**

14:00 – 16:00 Parallel sessions – 3 different auditoriums (see the detailed programme below)

- New Materials (Structure / Electronic Properties / Surfaces & Interfaces)
- Dynamic, Reactivity & Chemical analysis (Diluted Matter & Chemistry)
- Life & Earth Sciences (Biology / Cultural heritage / Health & Environment / Geoscience)

16:00 - 16:30 **Coffee break**

16:30 - 18:00 Parallel sessions - 3 different auditoriums (see the detailed programme below)

- New Materials (Structure / Electronic Properties / Surfaces & Interfaces)
- Dynamic, Reactivity & Chemical analysis (Diluted Matter & Chemistry)
- Life & Earth Sciences (Biology / Cultural heritage / Health & Environment / Geoscience)

18:00 - 20:00 Posters session / Visit of 3 Beamlines (LUCIA / METROLOGY / PROXIMA-2A)

20:00 - 21:30 Award of the best student poster / *Dinner*



Programme

Friday, January 20

- 9:00 – 10:45 Parallel sessions - 3 different auditoriums (see the detailed programme below)
- Ancient & New Materials (Structure / Electronic Properties / Surfaces & Interfaces)
 - Dynamic, Reactivity & Chemical analysis (Diluted Matter & Chemistry)
 - Life & Earth Sciences (Biology / Cultural heritage / Health & Environment / Geoscience)
- 10:45 - 11:15 **Coffee break – Cafeteria Space near SOLEIL AUDITORIUM**
- 11:15 - 12:30 Round Table - **SOLEIL AUDITORIUM**
- Data analysis management (Brigitte GAGEY / Emmanuel FARHI / Majid OUNSY / Ana VALCARCEL ORTI / Andy GOETZ):*
- Open science tools
 - Data service
 - E-learning / training
- 12:30 - 14:00 **Lunch**

SOLEIL AUDITORIUM

- 14:00 – 17:00 *XAS data treatment – Part II (Gautier LANDROT – SAMBA)*

Advanced functions of the software (Chemometry, PCA,...) and concerns all users (beginners as well as confirmed)

Room LIBRA

- 14:00 – 17:00 *Tricks and Tips in using Micro-beams for Crystallography Experiments (Bill SHEPARD – PROXIMA 2A)*



Parallel Session Schedule

Dynamic, Reactivity & Chemical analysis (Diluted Matter & Chemistry)

Chairpersons: A. TOUGERTI, P. ASSELIN, F. CARN, H. DOSSMANN

Thursday, January 19th, 2023

Invited talk

14:00 - 14:30
(25'+5') **Edcel SALUMBIDES** - "Precision UV spectroscopy for astronomy and search of new physics"
University Amsterdam. - Amsterdam (Netherlands)

14:30 - 14:55
(20'+5') **David SIMONNE** - "Catalytic properties at the nanoscale probed by surface x-ray diffraction and coherent diffraction imaging"
Synchrotron SOLEIL. – Gif sur Yvette (France)

14:55 - 15:20
(20'+5') **Bastien LUTET-TOTI** - "Study of post collision interaction effect following K shell photoionization of solvated ions"
Lab. Chimie Physique - Mat et Rayt. - Paris (France)

15:20 - 15:45
(20'+5') **Marion GIRAUD** - "Green synthesis of IrO₂ nanocages for the production of hydrogen : a Contribution of in situ QUICK X-ray absorption spectroscopy"
Interfaces, Traitements, Organisation et DYnamique des Systèmes. - Paris (France)

15:45 - 16:15 Coffee break

Invited talk

16:15 - 16:45
(25'+5') **Antoine PALLANDRE** - "Microfluidic analysis at the Paris-Saclay Institute of Physical Chemistry"
Lab. de Chimie Physique. - Orsay (France)

16:45 - 17:10
(20'+5') **Christian ENDRES** - "The SOLEIL view on and astronomical detection of the ¹³C isotopic species of ethyl cyanide in vibrational excitation"
Max Planck Inst. for Extraterrestrial Physics. - Garching (Germany)

17:10 - 17:35
(20'+5') **Elizaveta KOZYR** - "Evolution of active species in homogenous Ru-based catalyst in liquid phase under high pressures and temperatures"
Univ. di Torino. - Torino (Italy)

17:35 - 18:00
(20'+5') **Nicolas SOLEM** - "Reactivity of the HCO⁺/HOC⁺ isomers as a function of photon and collision energy for astrochemistry"
Inst. de Chimie Physique. - Orsay (France)



Parallel Session Schedule

Dynamic, Reactivity & Chemical analysis (Diluted Matter & Chemistry)

Chairpersons: A. TOUGERTI, P. ASSELIN, F. CARN, H. DOSSMANN

Friday, January 20th, 2023

Invited talk

09:00 - 09:30
(25'+5')

Cyrille HAMON - *"Shaping plasmonic supercrystals by nesting shapes"*
Univ Paris-Sud. - Orsay (France)

09:30 - 9:55
(20'+5')

Gildas GOLDSZTEJN - *"Phthalocyanines in the gas-phase from valence to core-shell electron spectroscopy"*
Inst. des Sciences Moléculaires d'Orsay. - Orsay (France)

9:55– 10:20
(20'+5')

Yang HU - *"Study chemical & structural evolution of Mn and Ti in disordered rocksalt $\text{Li}_2\text{Mn}_{1-x}\text{Ti}_x\text{O}_2\text{F}$ cathode materials by Operando XAFS"*
Helmholtz Institute Ulm. - Ulm (Germany)

10:20 – 10:45
(20'+5')

Madhusree ROY-CHOWDHURY - *"Probing the photodynamics of cyano-PAHs in the vacuum-ultraviolet range"*
Synchrotron SOLEIL. – Gif sur Yvette (France)

10:45 - 11:15

Coffee break



Parallel Session Schedule

Life & Earth Sciences (Biology / Cultural heritage / Health & Environment / Geoscience)

Chairpersons: B. MASQUIDA, R. LE HIR and R. MARSAC, S. RANERI

Thursday, January 19th, 2023

Invited talk

- 14:00 - 14:30
(25'+5') **Charlotte CATROUILLET** - "The interactions between metal(loid)s and environmental plastics: chromium and arsenic examples"
Inst. de Physique du Globe de Paris. - Paris (France)
- 14:30 - 14:55
(20'+5') **Marion REVEL** - "Lanthanide distribution in *Daphnia magna* via micro and nano S-XRF imaging"
Hamburg University of Applied Sciences. - Hamburg (Germany)
- 14:55 - 15:20
(20'+5') **Xiaoquan QIN** - "Probing chromium and manganese speciation in Chinese RED Soils"
Inst. de physique du globe de Paris. - Paris (France)
- 15:20 - 15:45
(20'+5') **Géraldine SARRET** - "Unravelling the pathways of cadmium in cacao"
Inst. des Sciences de la Terre. - Grenoble (France)
- 15:45 - 16:15 **Coffee break**
- Invited talk**
- 16:15 - 16:45
(25'+5') **Ermanno AVRANOVICH CLERICI** - "Synchrotron-based X-ray imaging of pigments and secondary products in Cimabue's ceiling paintings of the upper basilica of Assisi"
Antwerpen University. - Antwerpen (Belgium)
- 16:45 - 17:10
(20'+5') **Alessandra GIANONCELLI** - "Synchrotron μ -XRF imaging and μ -XANES spectroscopy at the Cultural Heritage dedicated PUMA beamline at SOLEIL"
ELETTRA - Sincrotrone Trieste. - Trieste (Italy)
- 17:10 - 17:35
(20'+5') **Jose TAPIA** - "Chemical imaging at PUMA, SOLEIL, of samples of polychrome cave art from Font-De-Gaume cave to validate in-situ results"
IRCP Chimie ParisTech. - Paris (France)
- 17:35 - 18:00
(20'+5') **Pierre GUERIAU** - "Synchrotron X-ray spectro-imaging clarifies the anatomy and taphonomy of amphibians from the Montceau-les-Mines lagerstätte"
Inst. photonique d'analyse non-destructive européen des matériaux anciens. - Gif sur Yvette (France)



Parallel Session Schedule

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Chairpersons: B. MASQUIDA, R. LE HIR and R. MARSAC, S. RANERI

Friday, January 20th, 2023

- 09:00 - 09:30
(25'+5') **Invited talk**
Félix REY - "Strutural studies of antibody antigen complexes"
Inst. Pasteur - Paris (France)
- 09:30 - 9:55
(20'+5') **Matthieu CHOURROUT** - "Why do we see amyloid- β plaques in phase-contrast imaging?" "
Univ. Claude Bernard. - Villeurbanne (France)
- 9:55 - 10:20
(20'+5') **David LEGLAND** - "Synchrotron based X-ray microtomography reveals cellular morphological features of developing wheat grain"
INRA Nantes. - Nantes (France)
- 10:20 - 10:45
(20'+5') **Cameron FYFE** - "Multimetal methyl transferase making methanogenesis" "
MICALIS Inst. - Jouy en Josas (France)
- 10:45 - 11:15 *Coffee break*



Parallel Session Schedule

New Materials (Structure / Electronic Properties / Surfaces & Interfaces)

Chairpersons: E. FRANTZESKAKIS, A. BORDAGE, D. PIERUCCI, F. CHEYNIS

Thursday, January 19th, 2023

Invited talk

14:00 - 14:30
(25'+5') **Victor BALEDENT** - "From multiferroicity to superconductivity: 1D Fe spin ladder under pressure"
LPS - Orsay (France)

14:30 - 14:55
(20'+5') **Anastassiya KHAN** - "Operando XAS investigation of Bimetallic Iron-Molybdenum Sulfide Electrocatalysts for the Hydrogen Evolution Reaction in Proton Exchange Membrane Electrolyzer"
Synchrotron SOLEIL. - Gif sur Yvette (France)

14:55 - 15:20
(20'+5') **Azmat ALI** - "UV and X-ray stability of CsPbBr₃ perovskite nanocrystals"
Univ. Pierre Marie Curie, Inst. INSP Master Nanomat. - Paris (France)

15:20 - 15:45
(20'+5') **David BATCHELOR** - "The effect of side chain structure on self-organization properties and the electronic structure of low band gap polymers"
Karlsruhe Institute of Technology. - Eggenstein-Leopoldshafen (Germany)

15:45 - 16:15 *Coffee break*

Invited talk

16:15 - 16:45
(25'+5') **Emmanuel LHUILLIER** - "Multi beamlines investigation of HgTe nanocrystals electronic structure"
INSP. - Paris (France)

16:45 - 17:10
(20'+5') **Federico Giovanni CAPONE** - "In situ XPS synchrotron study of solid-liquid interphase in lithium-ion batteries"
Lab. PHYSICO-chimie des Electrolytes et Nanosystèmes Interfaciaux. - Paris (France)

17:10 - 17:35
(20'+5') **Fredrik JOHANSSON** - "Resonant auger spectroscopy on adsorbed xenon on gold, silver and copper substrates"
Inst. des NanoSciences de Paris. - Paris (France)

17:35 - 18:00
(20'+5') **Patrick ROSA** - "Self-assembled monolayers of functionalised spin crossover complexes"
Inst. de Chimie de la Matière Condensée de Bordeaux. - Bordeaux (France)

The banner features a background image of the SOLEIL synchrotron facility's undulator building, a long, curved structure with a grid of windows. The image is overlaid with a semi-transparent red and green geometric pattern. The text '17th SOLEIL USERS' MEETING' is prominently displayed in the upper left corner.

**17th SOLEIL
USERS'
MEETING**

19-20 January 2023



Parallel Session Schedule

New Materials (Structure / Electronic Properties / Surfaces & Interfaces)

Chairpersons : E. FRANTZESKAKIS, A. BORDAGE, D. PIERUCCI, F. CHEYNIS

Friday, January 20th, 2023

Invited talk

09:00 - 09:30
(25'+5')

Bärbel KRAUSE - *"Fundamental mechanisms of stress-build-up during thin films formation: multimethod real time synchrotron experiments"*
Karlsruhe Inst. - Karlsruhe (Germany)

09:30 - 9:55
(20'+5')

Sara GONZALEZ - *"Structural, chemical and electronic structure interplay in BaTiO₃ ultrathin films probed using X-ray and electron spectroscopies"*
Institut des nanotechnologies. - Lyon (France)

9:55 - 10:20
(20+5')

Yeonsoo CHO - *"Carbon-based defects in pristine α boron"*
Laboratoire des solides irradiés. - Palaiseau (France)

10:20 - 10:45
(20'+5')

Alexandre LLOPEZ - *"Band structure and Rashba effect of ferroelectric α -GeTe as function of the thickness"*
Inst. de Nanotechnologies de Lyon. - Lyon (France)

10h45 - 11:15

Coffee break