



Programme

Thursday, January 18th, 2024

*SOLEIL Auditorium - Main Building
(Broadcast in Phenix and Orion Rooms)*

09:00 - 10:00 *Registration & coffee*

10:00 - 10:10 Welcome / Introduction, ORGUES Chair – **Amélie Bordage**

10:10 - 10:50 The word of SOLEIL General Director – **Jean Daillant**

10:50 - 11:35 **Dynamic, Reactivity and Chemical analysis**
Electrochemical energy storage and Synchrotron Radiation
Lorenzo Stievano - Institut Charles Gerhardt, Montpellier, France

11:35 - 12:00 Developments in robotic for process automation at SOLEIL
Yves-Marie Abiven - Synchrotron SOLEIL, Saint Aubin, France

12:00 - 12:30 Event “20 Years of LUCIA” - **Delphine Vantelon**
AFURS / ESUO / ORGUES Opened questions session
Amélie Bordage & Roland Thissen

12:30 - 13:45 *Lunch*

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

- Advanced Materials (Structure / Electronic Properties /Surfaces & Interfaces)
- Dynamic, Reactivity & Chemical analysis (Diluted Matter & Chemistry)
- Health & well-being, Environment & Geosciences, Cultural Heritage

16:00 - 16:30 *Coffee break*

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

- Advanced Materials (Structure / Electronic Properties /Surfaces & Interfaces)
- Dynamic, Reactivity & Chemical analysis (Diluted Matter & Chemistry)
- Health & well-being, Environment & Geosciences, Cultural Heritage

18:00 - 20:00 Posters session / Commercial Exhibitors

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



Programme

Friday, January 19th, 2024

09:00 -10:45 **Parallel sessions** – 3 different auditoriums (see the detailed programme below)

- Advanced Materials (Structure / Electronic Properties /Surfaces & Interfaces)
- Dynamic, Reactivity & Chemical analysis (Diluted Matter & Chemistry)
- Health & well-being, Environment & Geosciences, Cultural Heritage

10:45 - 11:15 *Coffee break* – Cafeteria Space near **SOLEIL Auditorium - Main Building**

11:15 - 12:30 PRC Round Table “Proposal / Experimental Report” - **SOLEIL Auditorium - Main Building**

12:30 - 13:45 *Lunch*

14:00 - 15:00 Visit of 3 Beamlines: ANTARES - CRISTAL - DEIMOS

14:00 - 17:00

SOLEIL Reception Building Auditorium - Ground Floor

Tutorial - On-site only

Data treatment and analysis on SIXS

15:00 - 17:00

SOLEIL Auditorium - Main Building

Round table

TEA-BAG - Exchange about the BAG projects



Parallel Session Schedule

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

Chairpersons: A. Bordage, D. Pierucci, F. Cheynis, S. Gonzalez

SOLEIL - Main Building

Thursday, January 18th, 2024

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|---------------------------|--|
| 14:00 - 14:30
(25'+5') | 10 years operations of the GALAXIES beamline: Status and perspectives
Jean-Pascal Rueff - Synchrotron SOLEIL, Saint Aubin, France |
| 14:30 - 14:55
(20'+5') | Combining Synchrotron single-crystal and powder diffraction data to tackle highly complex structures of MOFs
Nathalie Guillou - Institut Lavoisier de Versailles, France |
| 14:55 - 15:20
(20'+5') | Investigation of magneto-optical van der Waals magnet via correlative spectroscopic techniques
Victor Porée - Synchrotron SOLEIL, Saint Aubin, France |
| 15:20 - 15:45
(20'+5') | Two pathways of frosting on surfaces with varying wettability as seen by GIWAXS
Patrick Kekicheff - Institut Charles Sadron, Strasbourg, France |
| 15:45 - 16:15 | Coffee Break |
| 16:15 - 16:45
(25'+5') | Band engineering of earth abundant materials for efficient solar water splitting
Dana Stanescu - SPEC, CEA Saclay, Gif-sur-Yvette, France |
| 16:45 - 17:10
(20'+5') | Site occupancies in the quinary Co–Cr–Fe–Mn–Ni σ phase using resonant diffraction and EXAFS
Jean-Marc Joubert - Institut de Chimie et des Matériaux Paris-Est, Thiais, France |
| 17:10 - 17:35
(20'+5') | Influence of the crystal structure and nature of the ligands on the valence of uranium in chalcogenides compounds.
Thomas Stephant - Institut des Sciences Chimiques de Rennes, France |
| 17:35 - 18:05
(25'+5') | The electrodynamics properties of superconducting $\text{Nd}_{0.8}\text{Sr}_{0.2}\text{NiO}_2$ nickelate
Stefano Lupi – Department of Physics, La Sapienza University, Rome, Italy |



Parallel Session Schedule

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

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SOLEIL - Main Building

Friday, January 19th, 2024

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|---------------------------|---|
| 09:00 - 09:30
(25'+5') | Spin crossover in self-assembler monolayers
Patrick Rosa - <i>Institut de Chimie de la Matière Condensée de Bordeaux, France</i> |
| 09:30 - 09:55
(20'+5') | Synchrotron-based infrared studies of transition metal dichalcogenides at high pressure
Béatrice D'Alò - <i>Sapienza University of Rome, Italy</i> |
| 09:55 - 10:20
(20'+5') | Electric field-driven phase transition in antiferroelectric PbZrO ₃ by in situ X-ray diffraction
Alexandre Zing - <i>Centre de Nanosciences et Nanotechnologies, Palaiseau, France</i> |
| 10:20 - 10:45
(20'+5') | Using Synchrotron Radiation for probing the energy landscape of nanocrystal-based optoelectronic devices in situ and operando
Erwan Bossavit - <i>Institut des NanoSciences de Paris et Synchrotron SOLEIL, Saint-Aubin, France</i> |
| 10:45 - 11:15 | Coffee break |



Parallel Session Schedule

Dynamic, reactivity and Chemical analysis (Dilluted Matter & Chemistry)

Chairpersons: A. Tougeri, F. Carn, H. Dossmann, P. Asselin

*SOLEIL - Reception Building Auditorium
Ground Floor & PA.1.12 Rooms*

Thursday, January 18th, 2024

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|---------------------------|---|
| 14:00 - 14:30
(25'+5') | Weakly bound systems of chemical and biological relevance probed by double imaging photoelectron photoion coincidence spectroscopy
Sebastien Hartweg - <i>Institute of Physics, University of Freiburg, Germany</i> |
| 14:30 - 14:55
(20'+5') | Induced photoelectron circular dichroism onto an achiral chromophore
Etienne Rouquet - <i>Synchrotron SOLEIL, Saint Aubin et Institut des Sciences Moléculaires d'Orsay, France</i> |
| 14:55 - 15:20
(20'+5') | Double-core-hole states in CH ₃ F: Shake-up and sequential pathways
Abhishek Verma - <i>Laboratoire de Chimie Physique Matière et Rayonnement, Paris, France</i> |
| 15:20 - 15:45
(20+5') | A time-resolved mechanistic study into the effects of a partially-hydroxylated surface during atomic layer deposition of HfO ₂ on Si(111)
Rosemary Jones - <i>Department of Physics, Lund University, Sweden</i> |
| 15:45 - 16:15 | <i>Coffee break</i> |
| 16:15 - 16:40
(20'+5') | Rovibrational spectroscopy of gas phase precursors of secondary organic aerosols from high resolution synchrotron-base Fourier transform and QCL infrared measurements
Arnaud Cuisset - <i>Laboratoire de Physico-Chimie de l'Atmosphère, Dunkerque, France</i> |
| 16:40 - 17:05
(20+5') | Carburization, passivation and re-activation of Mo- and Ni/Cu-Mo-based catalysts for the upgrading of furfural: A time-resolved, in-situ XAS study
Eric Marceau - <i>Unité de Catalyse et Chimie du Solide, Lille, France</i> |
| 17:05 - 17:30
(20'+5') | Application of photoelectron spectroscopy to uracil and bromouracil molecules in liquids
Marine Fournier - <i>Laboratoire de Chimie Physique Matière et Rayonnement, Paris et Synchrotron SOLEIL, Saint-Aubin, France</i> |
| 17:30 - 17:55
(20'+5') | Evidencing an elusive conical intersection in the dissociative photoionization of methyl iodide
Sonia Marggi Poullain - <i>Departamento de Química Física, Universidad Complutense de Madrid, Spain</i> |



Parallel Session Schedule

Dynamic, reactivity and Chemical analysis
(Dilluted Matter & Chemistry)

Chairpersons: A. Tougeri, F. Carn, H. Dossmann, P. Asselin

SOLEIL - Reception Building Auditorium
Ground Floor & PA.1.12 Rooms

Friday, January 19th, 2024

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|---------------------------|--|
| 09:00 - 09:30
(25'+5') | XAS hyperspectral imaging at the ROCK beamline: Adding micrometer spatial resolution to second time resolution for chemical transformation monitoring
Valerie Briois – <i>Synchrotron SOLEIL, Saint Aubin, France</i> |
| 09:30 - 09:55
(20'+5') | Electrochemical and structural study of NiRux heterofunctional catalysts for the alkaline HER
Marie-Sophie Dias Fernandes - <i>Synchrotron SOLEIL, Saint-Aubin et Institut Polytechnique de Paris, Palaiseau, France</i> |
| 09:55 - 10:20
(20'+5') | Spectroscopic and kinetic studies of X-ray and UV induced desorption from molecular ices
Daniela Torres-Díaz - <i>Institut des Sciences Moléculaires d'Orsay et LERMA, Paris, France</i> |
| 10:20 - 10:45
(20'+5') | THz spectroscopy of radical species using the heterodyne receiver of the AILES beamline
Luan Juppert - <i>Institut des Sciences Moléculaires d'Orsay, France</i> |
| 10:45 - 11:15 | Coffee break |



Parallel Session Schedule

Health & Well-being, Environment & Geosciences, Cultural Heritage

Chairpersons: B. Masquida, C. Catrouillet, P. Fernandez Varela, S. Raneri

CEA Bloch Auditorium

Thursday, January 18th, 2024

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|---------------------------|---|
| 14:00 - 14:30
(25'+5') | <p>Extracting information on ancient manufacturing techniques and exchange networks from metallic artefacts: A case study on arms and armour</p> <p>Emilie Berard - <i>Laboratoire Archéomatériaux et Prévision de l'Altération, Gif-sur-Yvette, France</i></p> |
| 14:30 - 14:55
(20'+5') | <p>Early alterations of diabetic mouse aortas revealed by X-ray micro-CT</p> <p>Sébastien Almagro - <i>MEDyC, Université de Reims Champagne-Ardenne, France</i></p> |
| 14:55 - 15:20
(20'+5') | <p>Play it again – Recovering archived music from degraded recordings with RIXS-MCD</p> <p>Sebastian Gliga - <i>Paul Scherrer Institute, Villigen, Switzerland</i></p> |
| 15:20 - 15:45
(20'+5') | <p>A New model of niobium (Nb) enrichment in laterites revealed by X-ray absorption spectroscopies and Synchrotron diffraction</p> <p>Quentin Bollaert - <i>Institut de Minéralogie, de Physique des Matériaux et de Cosmochimie, Paris, France et CEDON, KU Leuven, Belgium</i></p> |
| 15:45 - 16:15 | <p><i>Coffee Break</i></p> |
| 16:15 - 16:45
(25'+5') | <p>Analysis of arsenic speciation in environmental samples using different Synchrotron-based techniques</p> <p>Pierre Le Pape – <i>Institut de Minéralogie, de Physique des Matériaux et de Cosmochimie, Paris, France</i></p> |
| 16:45 - 17:10
(20'+5') | <p>In-depth 3D analysis of iron age mineralised textiles using Synchrotron-based techniques</p> <p>Clémence Iacconi - <i>ENS Paris-Saclay, Gif-sur-Yvette, France</i></p> |
| 17:10 - 17:35
(20'+5') | <p>Stability field of FeO₂H_x in the Earth's mantle from in situ X-ray diffraction at extreme conditions</p> <p>Anne-Elisabeth. Marceline - <i>Institut de Minéralogie, de Physique des Matériaux et de Cosmochimie, Paris, France</i></p> |
| 17:35 - 18:00
(20'+5') | <p>Hommage à Yann Gohon</p> <p>Frédéric Jamme - <i>Synchrotron SOLEIL, Saint-Aubin, France</i></p> |



Parallel Session Schedule

Health & Well-being, Environment & Geosciences, Cultural Heritage

Chairpersons: B. Masquida, R. Le Hir, R. Marsac, S. Raneri

CEA Bloch Auditorium

Friday, January 19th, 2024

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|---------------------------|---|
| 09:00 - 09:30
(25'+5') | Peptides inspired by the left-handed β -helix: Structural characterization by circular dichroism and X-ray diffraction
Vincent Lebrun - Institut de Chimie, Université de Strasbourg, France |
| 09:30 - 09:55
(20'+5') | Effects of environmental factors on Co speciation at the surface of magnetite
Laura Fablet - Géosciences Rennes, France et Synchrotron SOLEIL, Saint-Aubin, France |
| 09:55 - 10:20
(20'+5') | Structural resolution of the metabolic activation pathway of the antiviral drug bemnifosbuvir : From pro-drug to target
François Ferron - Aix-Marseille Université, France et European Virus Bioinformatics Center, Jena, Germany |
| 10:20 - 10:45
(20'+5') | Synchrotron radiation techniques for the characterization and conservation of painted metal objects of industrial heritage (The CoPaiM Project)
Julie Gordon - Musée du quai Branly - Jacques Chirac, Paris, France |
| 10:45 - 11:15 | Coffee Break |