Programme

Thursday, January 17th

09:00 - 10:00  Registration & coffee

10:00 - 10:10  Welcome / Introduction
  Jean-Sébastien Girardon - ORGUES Chairperson

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

10:20 - 11:05  Biology:
  Biomimetic self-assemblies: 10 years of collaboration with SOLEIL
  Frank Artzner - Institut de Physique de Rennes, France

11:05 - 11:50  SOLEIL Evolution
  - Science directors (Organisation of the Upgrade Project)
  - Felisa Berenguer (Opportunities exploiting the improved coherence of beam from SOLEIL 2)
  - François Polack (Optics for a high brilliance MBA source)

11:50 - 12:10  Peer Review Committee Chairman 5 (5mn) - Thibaut Crépin
  Peer Review Committee Chairman 6 (5mn) - Jörg Göttlicher
  Questions 10mn

12:10 - 13:45  Lunch

Parallel sessions (see the detailed programme below)

13:45 - 15:15  • Ancient & New Materials (Cultural heritage / Structure / Electronic Properties / Surfaces & Interfaces)
  • Dynamic, Reactivity & Chemical analysis (Diluted Matter & Chemistry)
  • Life & Earth Sciences (Biology / Health & Environment / Geoscience)

15:15 - 15:45  Coffee break

Parallel sessions (see the detailed programme below)

15:45 - 17:15  • Ancient & New Materials (Cultural heritage / Structure / Electronic Properties / Surfaces & Interfaces)
  • Dynamic, Reactivity & Chemical analysis (Diluted Matter & Chemistry)
  • Life & Earth Sciences (Biology / Health & Environment / Geoscience)
17:15 - 18:45 Posters session / Commercial exhibition / ORGUES and AFURS Booth and Coffee break

Transfer to SOLEIL 18:45

Visit of Beamlines (SAMBA / SEXTANTS / DISCO) or Forum – Discussion

19:00 - 20:00
• Data Policy for users – (Amphithéâtre SOLEIL) B. Gagey, J-P. Itié (SOLEIL) K. Provost (ORGUES)
• Upgrade: “Low energy” perspectives for users – (Bâtiment d’accueil) A. Thompson, A. Taleb (SOLEIL), V. Boudon, N. Delsuc et R. Marsac (ORGUES)

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

Friday, January 18th

CENTRALE-SUPELEC-GIF-SUR-YVETTE - MICHELIN AUDITORIUM #2

Surfaces/Interfaces:
9:00 - 09:45 Magnetic skyrmions: When topology meets spintronics
Vincent Cros - Unité Mixte de Physique CNRS/Thalès, Palaiseau, France

Parallel sessions (see the detailed programme below)

9:50 - 10:50
• Ancient & New Materials (Cultural heritage / Structure / Electronic Properties / Surfaces & Interfaces)
• Dynamic, Reactivity & Chemical analysis (Diluted Matter & Chemistry)
• Life & Earth Sciences (Biology / Health & Environment / Geoscience)

10:50 - 11:20 Coffee break

Parallel sessions (see the detailed programme below)

11:20 - 12:50
• Ancient & New Materials (Cultural heritage / Structure / Electronic Properties / Surfaces & Interfaces)
• Dynamic, Reactivity & Chemical analysis (Diluted Matter & Chemistry)
• Life & Earth Sciences (Biology / Health & Environment / Geoscience)

13:10 - 14:30 Lunch

Transfer to SOLEIL 14:45

2 tutorials at SOLEIL Synchrotron (see the detailed programme below)

15:00 - 18:00
• Photoemission - (Salle Formation – Bât. T5)
• Coherence - (Salle Libra – Bât. Central)
Parallel Sessions Schedule

**Ancient & New Materials**
(Cultural heritage / Structure / Electronic Properties / Surfaces & Interfaces)

Chairpersons:
Marie d’Angelo, Karine Provost, Noemi Carmona-Tejero, Thomas Maroutian & Frédéric Dachi

**Thursday, January 17th**

**CENTRALE-SUPELEC-GIF-SUR-YVETTE - MICHELIN AUDITORIUM #3**

<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Speaker</th>
<th>Affiliation</th>
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</thead>
<tbody>
<tr>
<td>13:45 - 14:15</td>
<td>Dynamics in narrow band gap nanocrystals</td>
<td>Emmanuel LHUILLIER</td>
<td>INSP, Paris, France</td>
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<td>(25'+5')</td>
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<tr>
<td>14:15 - 14:35</td>
<td>Real time study of Si(111)-7×7 room temperature oxidation by near ambient pressure XPS</td>
<td>Lucia Perez Ramirez</td>
<td>LCPMR, Paris, France</td>
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<td>(15'+5')</td>
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<tr>
<td>14:35 - 14:55</td>
<td>A tunable and robust two-dimensional electron system at the (110) surface of SnO₂</td>
<td>Ji Dai</td>
<td>CSNSM, Orsay, France</td>
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<td>(15'+5')</td>
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<tr>
<td>14:55 - 15:15</td>
<td>Defects investigation and engineering in 2D materials: A spectroscopic study</td>
<td>Debora Pierucci</td>
<td>ALBA Synchrotron, Barcelona, Spain</td>
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<td>(15'+5')</td>
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<tr>
<td>15:15 - 15:45</td>
<td>Coffee break</td>
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<tr>
<td>15:45 - 16:15</td>
<td>Self-assembled resonant nanostructured surfaces for optics: The precious role of X-rays</td>
<td>Virginie PONSINET</td>
<td>CRPP, Pessac, France</td>
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<td>(25'+5')</td>
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<tr>
<td>16:15 - 16:35</td>
<td>Structural resolution of inorganic nanotubes with complex stoichiometry</td>
<td>Geoffrey Monet</td>
<td>LPS, Orsay, France</td>
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<td>(15'+5')</td>
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<tr>
<td>16:35 - 16:55</td>
<td>Origin of the low value onset potential in nanostructured hematite photoanodes</td>
<td>Stefan Stanesescu</td>
<td>Synchrotron SOLEIL, Saint Aubin, France</td>
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<td>(15'+5')</td>
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<tr>
<td>16:55 - 17:15</td>
<td>The formation of catalytically active interfacial Pt-NiO1-x nanostructures on Pt₃Ni(111) under CO oxidation reaction</td>
<td>Bongjin Simon Mun</td>
<td>SOKENDAI, Tsukuba, Japan &amp; GIST, Gwangju, Korea</td>
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Parallel Sessions Schedule

**Ancient & New Materials**
(Cultural heritage / Structure / Electronic Properties /Surfaces & Interfaces)

Chairpersons:
Marie d’Angelo, Karine Provost, Noemi Carmona-Tejero, Thomas Maroutian & Frédéric Datchi

**Friday, January 18th**

**CENTRALE-SUPELEC-GIF-SUR-YVETTE - MICHELIN AUDITORIUM #3**

09:50 - 10:10
(15′+5′)
An insider view on pressure induced amorphisation of molecular crystals
*Emiliano Fonda* - Synchrotron SOLEIL, Saint Aubin, France

10:10 - 10:30
(15′+5′)
Influence of applied pressure on the structural and magnetic properties of $Y_{1-x}Tb_xFe_2D_y$ compounds
*Valérie Paul-Boncour* - ICMPE, Thiais, France

10:30 - 10:50
(15′+5′)
Water/ammonia ice mixtures under high pressure and temperature
*Léon Andriambariarijaona* - IMPMC, Paris, France

10:50 - 11:20 Coffee break

11:20 - 11:50
(25′+5′)
X-ray diffraction and Cultural Heritage materials - Adaptive crystallography
*Catherine DEJOIE* - ESRF, Genoble, France

11:50 - 12:10
(15′+5′)
3D mapping by Laue micro-diffraction
*Loïc Renversade* - INAC Grenoble, France

12:10 - 12:30
(15′+5′)
Synchrotron based THz spectroscopy to probe magneto-electric effects in multiferroics
*Sophie Debrion* - Institut Néel, Grenoble, France

12:30 - 12:50
(15′+5′)
XMCD Spectroscopy at ultra-low temperature on DEIMOS beamline (SOLEIL)
*Weibin Li* - Synchrotron SOLEIL, Saint Aubin & IMPMC, Paris, France

12:50 - 13:10 Conclusion
## Parallel Sessions Schedule

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

Chairpersons:  
Jean-Sébastien Girardon, Nicolas Delsuc, Vincent Boudon and Renaud Guillemin

**Thursday, January 17th**  
CENTRALE-SUPELEC-GIF-SUR-YVETTE - MICHELIN AUDITORIUM #2

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<tr>
<td>13:45 - 14:15 (25'+5')</td>
<td>Correlative X-ray fluorescence nano-imaging and optical microscopy to investigate chemical element compartmentalization in cells</td>
<td>Richard ORTEGA</td>
<td>CENBG, CNRS, University of Bordeaux, France</td>
</tr>
<tr>
<td>14:15 - 14:35 (15'+5')</td>
<td>Irradiation of water ice in the O 1s region: Spectral and kinetic energy signatures of photodesorbed species</td>
<td>Géraldine Féraud</td>
<td>LERMA, PSL, CNRS, Paris, France</td>
</tr>
<tr>
<td>14:35 - 14:55 (15'+5')</td>
<td>Progress around the High Resolution Heterodyne spectrometer of the AILES beamline</td>
<td>Sophie Eliet</td>
<td>IEMN, Villeneuve d’Ascq, France</td>
</tr>
<tr>
<td>14:55 - 15:15 (15'+5')</td>
<td>State-selected ion-molecule reactions with VUV Synchrotron Radiation: The O_2^+ + C_3H_6 case</td>
<td>Christian Alcaraz</td>
<td>LCP, CNRS - Université Paris-Saclay, France</td>
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<tr>
<td>15:15 - 15:45</td>
<td>Coffee break</td>
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<tr>
<td>15:45 - 16:15 (25'+5')</td>
<td>High resolution spectrometry at the AILES beamline</td>
<td>Jean VANDER AUWERA</td>
<td>Université Libre de Bruxelles, Brussels, Belgium</td>
</tr>
<tr>
<td>16:15 - 16:35 (15'+5')</td>
<td>High-resolution analysis of the 12.6 µm absorption of the nitryl chloride CINO_2 molecule</td>
<td>Anusanth Anantharajah</td>
<td>LISA, Institut Pierre Simon Laplace, Créteil, France</td>
</tr>
<tr>
<td>16:35 - 16:55 (15'+5')</td>
<td>Role of hydrogen absorption in supported Pd nanocatalysts during CO-PROX: Insights from operando X-ray absorption spectroscopy</td>
<td>Claudia Zlotea</td>
<td>ICM Paris-Est, Thiais, France</td>
</tr>
<tr>
<td>16:55 - 17:15 (15'+5')</td>
<td>Photoionization and dissociative photoionization of propynal in the gas phase: Theory and experiment.</td>
<td>Imene Derbali</td>
<td>MONARIS UMR 8233 CNRS, Sorbonne Université, France</td>
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Parallel Sessions Schedule

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

Chairpersons:
Jean-Sébastien Girardon, Nicolas Delsuc, Vincent Boudon and Renaud Guillemin

**Friday, January 18th**

**CENTRALE-SUPELEC-GIF-SUR-YVETTE - MICHELIN AUDITORIUM #2**

09:50 - 10:10 (15'+5')
Line positions and intensities in the $\nu_2$ band of sulfuryl fluoride using the C$_2v$ Top Data System (C2vTDS)

*Maud Rotger* - GSMA, UMR CNRS 7331, Univ. de Reims Champagne Ardenne, France

10:10 - 10:30 (15'+5')
In-situ XRD analysis of transient liquid assisted growth of YBa$_2$Cu$_3$O$_7$ superconducting films

*Juri Banchewski* - ICMAB-CSIC, Campus UAB, Bellaterra, Spain

10:30 - 10:50 (15'+5')
First high resolution measurement and analysis of the 83.3 $\mu$m absorption of the chlorine nitrate ClONO$_2$ molecule

*Fridolin Kwabia Tchana* - LISA, Institut Pierre Simon Laplace, Créteil, France

10:50 - 11:20 Coffee break

11:20 - 11:50 (25'+5')
Surface chemistry of colloidal surfactant-free gold nanoparticles generated by laser ablation

*Anna LEVY* - INSP Sorbonne Universités, Paris, France

11:50 - 12:10 (15'+5')
Double inner-shell vacancies in molecules

*Dimitri Koulentianos* - LCPMR, Sorbonne Université Paris, France

12:10 - 12:30 (15'+5')
The investigation of the $\nu_8$ & $\nu_{21}$ bands of propane CH$_3$CH$_2$CH$_3$ at 11.5 & 10.9 $\mu$m: Evidence of large amplitude tunnelling effects

*Agnès Perrin* - LMD/IPSL, Ecole Polytechnique, Université Paris-Saclay, Palaiseau, France

12:30 - 12:50 (15'+5')
Characterization of two-photon entanglement resulting from VUV photodissociation of H$_2$

*Baptiste Fabre* - CELIA, Talence, France

12:50 - 13:10 Conclusion
Parallel Sessions Schedule

**Life & Earth Sciences**
(Biology / Health & Environment / Geoscience)

Chairpersons:
Benoît Masquida, Yann Gohon and Remi Marsac

**Thursday, January 17th**

**CENTRALE-SUPELEC-GIF-SUR-YVETTE - MICHELIN AUDITORIUM #1**

13:45 - 14:15 (25'+5')
Structural basis of nucleotide sugar transport across the Golgi membrane
Simon NEWSTEAD - Department of Biochemistry, University of Oxford, UK

14:15 - 14:45 (25'+5')
**In vitro, in cellulo and in crystallo** enzymatic reaction from APRT
Pierre NIOCHE - Université Paris Descartes, Centre Universitaire des Saints Pères, Paris France

14:45 - 15:05 (15'+5')
Structure-function analysis of the photosynthetic ribulose epimerase CrRPE1
Julien Henri - Laboratoire de Biologie Moléculaire et Cellulaire des Eucaryotes, Paris France

15:05 - 15:45 Coffee break

15:45 - 16:15 (25'+5')
Crystal chemistry and stability of phyllosilicates: New approaches to solve old problems
Benoit DUBACQ - Institut des Sciences de la Terre, Paris, France

16:15 - 16:35 (15'+5')
Calcium control on the size and organization of iron-organic matter nano-aggregates: Impact on their surface reactivity
Anthony Beauvois - Synchrotron SOLEIL, St-Aubin, France

16:35 - 16:55 (15'+5')
Multimodal ultrastructural study of lipid droplet
Marine Froissard - INRA AgroParisTech, Paris, France

16:55 - 17:15 (15'+5')
Investigations in the CaMoO$_4$ - Na$_{0.5}$Ln$_{0.5}$MoO$_4$ (Ln = La, Eu, Yb) solid solution series
Nicolas Finck - KIT-INE, Karlsruhe, Germany
Parallel Sessions Schedule

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

Chairpersons:
Benoît Masquida, Yann Gohon and Remi Marsac

Friday, January 18th

CENTRALE-SUPELEC-GIF-SUR-YVETTE - MICHELIN AUDITORIUM #1

09:50 - 10:20 (25'+5')
Crystal chemistry of trace elements in sulfide minerals: environmental implications
Guillaume MORIN - IMPMC, Paris, France

10:20 - 10:50 (25'+5')
Abiotic synthesis of amino acids in the recesses of the oceanic lithosphere
Celine PISAPIA - IPGP, Paris, France

10:50 - 11:20
Coffee break

11:20 - 11:50 (25'+5')
Setting up an in-vivo crystallography platform at SOLEIL
Pierre MONTAVILLE - Synchrotron SOLEIL, St-Aubin, France

11:50 - 12:10 (15'+5')
Looking deep inside the phloem and xylem cell wall composition by synchrotron FTIR and raman spectroscopy
Rozenn Le Hir - Institut Jean-Pierre Bourgin, Versailles, France

12:10 - 12:30 (15'+5')
Structure of liquid crystalline nanocarriers for delivery of neuroprotective molecules
Angelina Angelova - Institut Galien Paris-Sud, Paris, France

12:30 - 13:10 Conclusion
Photoemission

X-Ray Photoemission Spectroscopy: Processing, fitting and analyzing data acquired with synchrotron light

Julien Rault & Matthieu Silly – Synchrotron SOLEIL, Gif-sur-Yvette, France

Introduction

15:00 - 15:30
• XPS at a synchrotron beamline
• Data acquisition - Spectrometer
• First data treatments - Softwares

Low energy XPS: Graphene on SiC

15:30 - 16:45
• Peak fitting: Lineshapes & background
• Energy dependence of surface & interface components

16:45 - 17:00
Coffee break

High energy XPS

17:00 - 17:45
• Buried interfaces with HAXPES
• Introduction to standing wave technique

Closing words

17:45 - 18:00
• XPS at SOLEIL beamlines
• Guidelines for XPS proposals
TUTORIALS

Friday, January 18th

Coherence

15:00 - 15:55
Introduction générale à la cohérence et les techniques associées

*Felisa Berenguer* - *Synchrotron SOLEIL, Gif-sur-Yvette, France*

15:55 - 16:05
Coffee break

16:05 - 16:35
Challenges of bio-inspired material science and perspectives in the - coherent - light of 4th generation Synchrotron sources

*Virginie Chamard* - *Institut Fresnel, Marseille, France*

16:35 - 17:05
Bragg Coherent Diffraction Imaging benefits for materials science

*Stéphane Labat* - *IM2NP, Marseille, France*

17:05 - 17:35
Benefits of coherence for imaging of complex natural and manufactured materials

*Laurent J. Michot* - *Laboratoire Phenix, Paris, France*