

Programme

Thursday, January 18

EDF LAB PARIS-SACLAY - AUDITORIUM

- 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 Materials:
Mikhail Eremets - *Max Planck Institute for Chemistry*
Molecular semimetallic hydrogen and high temperature superconductivity
- 11:05 - 11:50 Cultural heritage:
John K. Delaney - *National Gallery of Art, Washington DC*
Tri-modal (x-Ray Fluorescence, Reflectance and Molecular Fluorescence Imaging Spectroscopy) investigation of works of art
- 11:50 - 12:10 Peer Review Committee Chairman 3 (5mn) – René Guinebretière
Peer Review Committee Chairman 4 (5mn) – Fabienne Testard
Questions 10mn
- 12:10 - 13:45 **Lunch**
- 13:45 – 15:15 Parallel sessions (see the detailed programme below)
- Ancient & New Materials (Cultural heritage / Structure / Electronic Properties / Surfaces & Interfaces): **AUDITORIUM**
 - Dynamic, Reactivity & Chemical analysis (Diluted Matter & Chemistry): **AMPHIS 1 & 2**
 - Life & Earth Sciences (Biology / Health & Environment / Geoscience): **Rooms A1.116 - A1.140**
- 15:15 - 15:45 **Coffee break**
- 15:45 - 17:15 Parallel sessions (see the detailed programme below)
- Ancient & New Materials (Cultural heritage / Structure / Electronic Properties / Surfaces & Interfaces): **AUDITORIUM**
 - Dynamic, Reactivity & Chemical analysis (Diluted Matter & Chemistry): **AMPHIS 1 & 2**
 - Life & Earth Sciences (Biology / Health & Environment / Geoscience): **Rooms A1.116 - A1.140**

Transfer to SOLEIL (17h30)

- 17:45 - 20:00 Posters session / Commercial exhibition / ORGUES and AFURS Booth
- 18:30 - 20:00 Visit of 3 Beamlines (ANATOMIX / NANOSCOPIUM / PUMA)
- 20:00 - 21:30 *Buffet / Award of the best student poster*



Friday, January 19

EDF LAB PARIS-SACLAY - AUDITORIUM

9:00 – 9:45

Diluted matter:

Christine Joblin - *Observatoire Midi-Pyrénées, Toulouse*
VUV photoprocessing of PAHs and PAH clusters of astrophysical interest

9:50 – 10:50

Parallel sessions (see the detailed programme below)

- Ancient & New Materials (Cultural heritage / Structure / Electronic Properties / Surfaces & Interfaces): **AUDITORIUM**
- Dynamic, Reactivity & Chemical analysis (Diluted Matter & Chemistry): **AMPHIS 1 & 2**
- Life & Earth Sciences (Biology / Health & Environment / Geoscience): **Rooms A1.116 - A1.140**

10:50 - 11:20

Coffee break

11:20 - 13:10

Parallel sessions (see the detailed programme below) and Conclusion

- Ancient & New Materials (Cultural heritage / Structure / Electronic Properties / Surfaces & Interfaces): **AUDITORIUM**
- Dynamic, Reactivity & Chemical analysis (Diluted Matter & Chemistry): **AMPHIS 1 & 2**
- Life & Earth Sciences (Biology / Health & Environment / Geoscience): **Rooms A1.116 - A1.140**

13:10 - 14:30

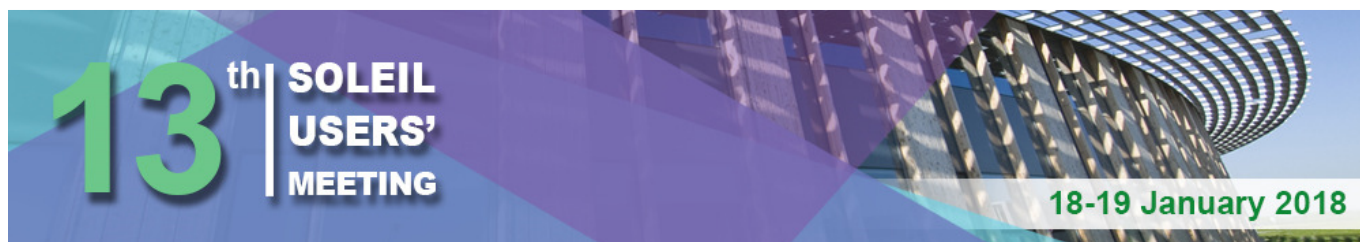
Lunch

Transfer to SOLEIL (14h45)

15:00 – 18:00

2 Tutorials

- « *FOXTROT software: from detector images to measurements, first steps after data acquisition in SWING beamline* »: **Libra, room A2.1.32**
- « *Processing of multi-modal x-ray imaging datasets on the Nanoscopium beamline* »: **Training room, T5 Building**



Parallel Session Schedule

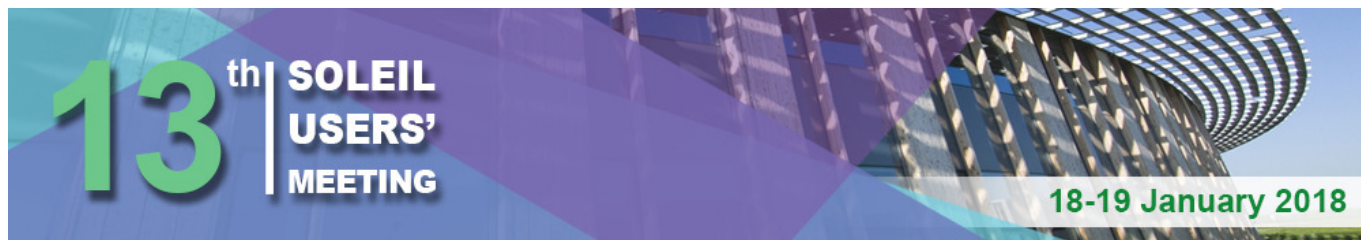
Ancient & New Materials (Cultural heritage / Structure / Electronic Properties / Surfaces & Interfaces)

Chairpersons: M. d'Angelo, K. Provost, N. Carmona-Tejero, T. Maroutian & F. Datchi

EDF Lab Paris-Saclay - AUDITORIUM

Thursday, January 18th, 2018

- 13:45 - 14:15
(25'+5')
- Probing a microelectronic device's active atoms through operando experiments at SOLEIL
Martin Bowen - IPCMS, Strasbourg (France)
- 14:15 - 14:35
(15'+5')
- In-Situ X-Ray Diffraction Studies On Piezoelectric Thin Films
Thomas Cornelius - IM2NP, Marseille (France)
- 14:35 - 14:55
(15'+5')
- Amorphous - Crystalline Transition Mechanism of Phase Change Materials: GeTe Thin Films
Manon Gallard - SOLEIL, Saint-Aubin & IM2NP, Marseille (France)
- 14:55 - 15:15
(15'+5')
- Reversible strain alignment and reshuffling of nanoplatelet stacks confined in a lamellar block copolymer matrix
Emmanuel Beudoin - LPS, Orsay (France)
- 15:15 – 15:45
- Coffee break
- 15:45 - 16:15
(25'+5')
- Nanoparticle-Based Resistive Strain Gauges: Fabrication and Characterization by Small Angle X-ray Scattering Coupled With In-situ Electromechanical Measurements
Laurence Ressler - LPCNO, Toulouse (France)
- 16:15 - 16:35
(15'+5')
- Investigation by X-Ray Natural Linear Dichroism (XNLD) and X-ray Magnetic Circular Dichroism (XMCD) towards Magnetic Properties of 6nm CsNiCr(CN)₆ Nanoparticles Single Layer Assembled on Graphite
Luqiong Zhang - ICMMO, Orsay & IMPMC, Paris (France)
- 16:35 - 16:55
(15'+5')
- Chemical Nature And Beam Sensitivity Of Photochromatic Images Investigated By Ag K-edge Quick Spectroscopy
Victor de Seauve - CRC, Paris (France)
- 16:55 - 17:15
(15'+5')
- Time resolved X-ray diffraction for stress measurements during ultrasonic fatigue tests
Nicolas Ranc - PIMM, Paris (France)



Parallel Session Schedule

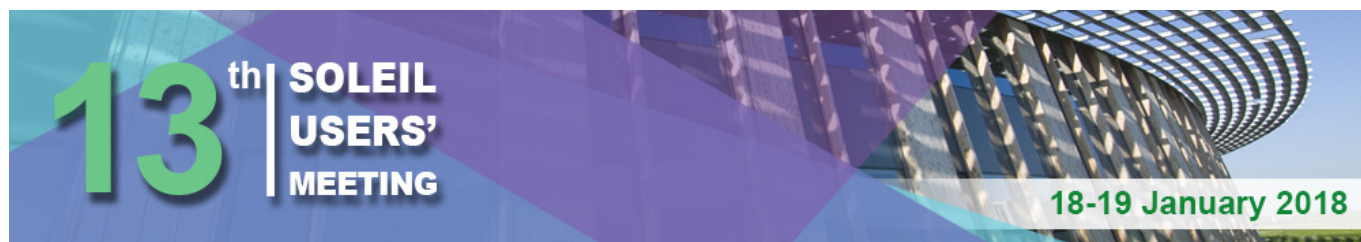
Ancient & New Materials (Cultural heritage / Structure / Electronic Properties / Surfaces & Interfaces)

Chairpersons: M. d'Angelo, K. Provost, N. Carmona-Tejero, T. Maroutian & F. Datchi

EDF Lab Paris-Saclay - AUDITORIUM

Friday, January 19th, 2018

- 09:50 - 10:10 (15'+5') *Structural and magnetic phase diagram of magnetocaloric $Y_{0.9}Gd_{0.1}Fe_2Hy$ hydrides*
Valérie Paul-Boncour - ICMPE, Thiais (France)
- 10:10 - 10:30 (15'+5') *Phase diagram of ammonia monohydrate at high pressure and temperature*
Haiwa Zhang - IMPMC, Paris (France)
- 10:30 - 10:50 (15'+5') *Spectroscopic evidence of a new scale for superconductivity in HfS*
Benjamin Langerome - SOLEIL, Saint-Aubin (France)
- 10:50 - 11:20 *Coffee break*
- 11:20 - 11:50 (25'+5') *Interfacing Magnetic Oxides – Insights by Photoelectron Spectroscopy "*
Martina Müller - Research Centre Jülich & Technical University Dortmund (Germany)
- 11:50 - 12:10 (15'+5') *Electronic Structure of Two-Dimensional WS_2 /Graphene van der Waals Heterostructures*
Julien Rault - SOLEIL, Saint-Aubin (France)
- 12:10 - 12:30 (15'+5') *Increasing the Magnetic Anisotropy Through Onion-Like Magnetic Nanoparticles*
Kevin Sartori - IPCMS, Strasbourg & SOLEIL, Saint-Aubin(France) (To be confirmed)
- 12:30 - 12:50 (15'+5') *Direct Measurement of Lateral Correlations Under Controlled Nano-Confinement: The Long-Range Attraction Between Hydrophobic Surfaces*
Patrick Kékicheff - ICS, Strasbourg (France)
- 12:50 - 13:10 *Conclusion*



Parallel Session Schedule

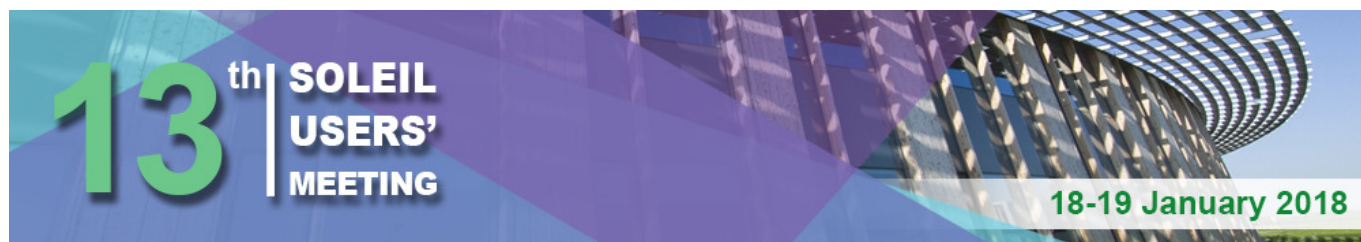
Dynamic, Reactivity & Chemical analysis (Diluted Matter & Chemistry)

Chairpersons: J.S Girardon, N. Delsuc, V. Boudon and R. Guillemin

EDF Lab Paris-Saclay - Amphis 1 & 2

Thursday, January 18th, 2018

- 13:45 - 14:15
(25'+5')
- Study of electrochemical mechanisms in batteries: contribution and limits of X-ray absorption spectroscopy
Lorenzo Stievano – *Institut Charles Gerhardt Montpellier (France)*
- 14:15 - 14:35
(15'+5')
- Decoupling Cationic-Anionic Redox Processes in Lithium-Ion Battery Cathodes via Operando XAS
Gaurav Assat – *College de France (Chimie du solide et de l'énergie)- (France)*
- 14:35 - 14:55
(15'+5')
- Electrochemical and Spectroscopic Study of Eu(III)/(II) Redox Couple in the Ehtylmethylimidazolium Bis(trifluoromethanesulfonyl)imide Ionic Liquid
David Bengio – *CEA Marcoule (France)*
- 14:55 - 15:15
(15'+5')
- Shape-controlled Nanoparticle Assembly Mediated By Electrostatic Complexation With Long Polyelectrolyte Chains
Florent Carn – *Université Paris Diderot (France)*
- 15:15 – 15:45
- Coffee break*
- 15:45 - 16:15
(25'+5')
- Creation of double K-shell vacancies with a single photon: how and why?
Francis Penent – *UPMC Univ Paris 06 (France)*
- 16:15 - 16:35
(15'+5')
- Multistep ultrafast dissociation and its control by hard x-ray photons
Oksana Travnikova – *Laboratoire de Chimie Physique-Matière et Rayonnement (LCPMR) (France)*
- 16:35 - 16:55
(15'+5')
- Structural study of uranyl bisphosphonate-based ligands as potential uranium decorporation agents
Gaoyang Ye – *Institut de Physique Nucléaire d Orsay(France)*
- 16:55 - 17:15
(15'+5')
- Approaching the limits of cationic and anionic electrochemical activity with the Li-rich layered rocksalt Li3IrO4
Antonella Iadecola – *RS2E – SOLEIL Saint-Aubin (France)*



Parallel Session Schedule

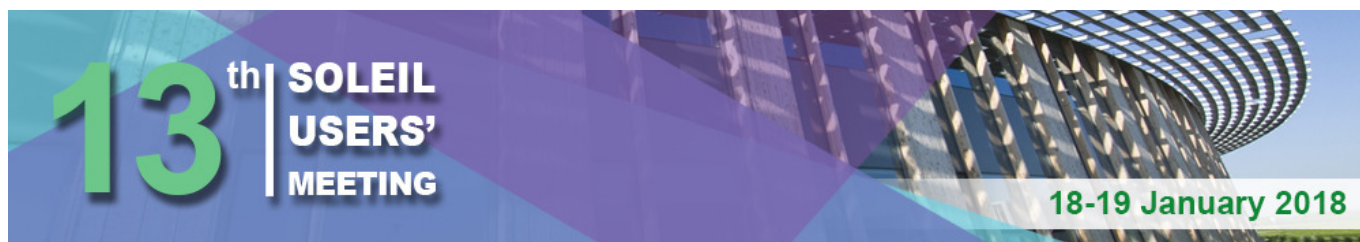
Dynamic, Reactivity & Chemical analysis (Diluted Matter & Chemistry)

Chairpersons: J.S Girardon, N. Delsuc, V. Boudon and R. Guillemin

EDF Lab Paris-Saclay - Amphis 1 & 2

Friday, January 19th, 2018

- | | |
|---------------------------|---|
| 09:50 - 10:10
(15'+5') | <i>Enhanced catalytic activity of RhHx/C with respect to Rh/C investigated by operando XAS</i>
Claudia Zlotea – ICMPE CNRS (France) |
| 10:10 - 10:30
(15'+5') | <i>Tailoring the reactivity of oxide-supported Pd-based nanoparticles</i>
Alina Vlad – SOLEIL – Saint-Aubin (France) |
| 10:30 – 10:50
(15'+5') | <i>Evidencing the Mo/W regioselectivity at the pentagonal motifs within giant polyoxometalates</i>
Emmanuel Cadot – Institut Lavoisier de Versailles (France) |
| 10:50 – 11:20 | <i>Coffee break</i> |
| 11:20 - 11:50
(25'+5') | <i>Multimodal imaging of lipids and metals on liver tissue sections</i>
François Le Naour – Hôpital Paul Brousse, Villejuif (France) |
| 11:50 - 12:10
(15'+5') | <i>Labeling Of Hyaluronic Acids With A Re-tricarboxyl Tag And Percutaneous Penetration Into Human Skin Studied By Multimodal Imaging</i>
Lucas Henry – École normale supérieure, Paris (France) |
| 12:10 - 12:30
(15'+5') | <i>Exploring The Surface And Reactivity Of Copper Nanoparticles With in situ FT-IR</i>
Xavier Frogneux – UPMC/Collège de France – LCMCP (France) |
| 12:30 - 12:50
(15'+5') | <i>Electronic Effects Of Phosphines Bound to Molybdenum Complexes</i>
Héloïse Dossmann – Université Pierre et Marie Curie, Paris (France) |
| 12:50 - 13:10 | <i>Conclusion</i> |



Parallel Session Schedule

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

Chairpersons: B. Masquida, Y. Gohon, and R. Marsac

EDF Lab Paris-Saclay – Rooms A1.116 – A1.140

Thursday, January 18th, 2018

- 13:45 - 14:15
(25'+5')
- Structural model of PRORP2-tRNA complex interaction build it by the combination of crystal, in solution structures with biophysical characterization
Pablo Fernandez-Millan – *Autonomous univeristy of Barcelona. , Cerdanyola del Vallès, Spain*
- 14:15 - 14:35
(15'+5')
- Structure and Regulation of a GTPase System that Regulates Bacterial Motility
Christian Galicia – *Laboratoire de Biologie et Pharmacologie Applique'e, CNRS -ENS Paris-Saclay , Cachan , France*
- 14:35 - 14:55
(15'+5')
- Soft X-ray imaging and spectroscopy for biological samples on HERMES beamline
Camille Rivard – *Soleil Synchrotron, Saint-Aubin, France*
- 14:55 - 15:15
(15'+5')
- Determinants of neuroglobin plasticity highlighted by high pressure crystallography and crystallography under moderate gas pressure
Nathalie Colloc'h – *ISTCT CNRS UNICAEN CEA Normandie univ., CERVOxy team, centre Cyceron, Caen, France*
- 15:15 – 15:45
- Coffee break*
- 15:45 - 16:15
(25'+5')
- Exploring the speciation of thallium in soil using synchrotron-based X-ray (micro)spectroscopies
Andreas Voegelin – *Eawag Institut fédéral pour l'aménagement, l'épuration et la protection des eaux, Dübendorf Zurich, Switzerland*
- 16:15 - 16:35
(15'+5')
- Structure and oxidation of moderately volatile elements (Sn and Zn) in natural silicate melts
Paolo Sossi – *Institut de physique du globe, IPGP, Paris, France*
- 16:35 - 16:55
(15'+5')
- Magnetotactic Bacteria Studied With Scanning Transmission X-ray Microscopy
Lucas Le Nagard – *Department of Physics and Astronomy, McMaster University, Hamilton, Canada*
- 16:55 - 17:15
(15'+5')
- Overcoming Radiation Artifacts In X-ray Cryomicrospectroscopy: Case Study Of Thallium Speciation In Soil Manganese Concretions
Francesco Femi Marafatto – *Paul Sherrer Institut, Villigen, Switzerland*



Parallel Session Schedule

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

Chairpersons: B. Masquida, Y. Gohon, and R. Marsac

EDF Lab Paris-Saclay - Rooms A1.116 – A1.140

Friday, January 19th, 2018

- 09:50 - 10:20
(25'+5')
- The Archaeal Acetoacetyl-CoA-Thiolase/HMG-CoA-Synthase Complex Channels The Intermediate Via A Fused CoA-Binding Site
Tristan Wagner – *Microbial Protein Structure Group, Max Planck Institute for Terrestrial Microbiology, Marburg, Germany*
- 10:20 - 10:50
(25'+5')
- Structural basis for alternate substrate recognition and processing by a bifunctional viral protease/deubiquitinase
Stéphane Bressanelli – *Institute for Integrative Biology of the Cell, CEA, CNRS, Univ Paris Sud, Université Paris-Saclay, Gif sur Yvette, France*
- 10:50 – 11:20
- Coffee break*
- 11:20 - 11:50
(25'+5')
- The ascent of sap and xylem vessel (dis)content: 4 centuries of debate
Sylvain DELZON – *UMR Biodiversité Gènes et Communautés, Université de Bordeaux, Talence, France*
- 11:50 - 12:10
(15'+5')
- Structure-function analysis of the R2TP cochaperone complex, recruiting HSP90 for macromolecular complex assembly.
Julien Henri – *Laboratoire de Biologie Moléculaire et Cellulaire des Eucaryotes, Institut de Biologie Physico-Chimique, Paris, France*
- 12:10 - 12:30
(15'+5')
- Membrane-Active Properties of an Amphitropic Peptide from the CyaA Toxin Translocation Region
Alexis Voegele – *Département de Biologie Structurale et Chimie, Institut Pasteur, Unité de Biochimie des Interactions Macromoléculaires, Paris, France*
- 12:30 - 12:50
(15'+5')
- Multimodal analysis from the DUV to the NIR of the endogenous fluorescence of brain tumor biopsies
Fanny Poulon – *Imagerie et Modélisation en Neurobiologie et Cancerologie, IMNC, Paris-Saclay University, Orsay, France*
- 12:50 - 13:10
- Conclusion