



Programme

Thursday, January 20th, 2022

VISIOCONFERENCE

- 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 **Geosciences:**
Studying interactions between life and minerals by scanning transmission X-ray microscopy
Karim BENZERARA - IMPMC, Sorbonne Université, Paris
- Diluted matter:**
- 11:05 - 11:50 High resolution heterodyne and dual comb molecular spectroscopy at AILES beamline
Jean-François LAMPIN - IEMN, Université de Lille
- 11:50 - 12:10 *Peer Review Committee– PRC 3 – David BABONNEAU*
Peer Review Committee– PRC 4 – Lorenzo STIEVANO
Questions 10mn
- 12:10 - 12:20 Presentation of AFURS - **Roland THISSEN**
- 12:20 - 12:30 Presentation of ESUO - **Cormac MC GUINNESS**
- 12:30 - 14:00 *Break*
- Parallel sessions** (see the detailed programme below)
- 14:00 – 15:45
- Ancient & New Materials (Cultural heritage / Structure / Electronic Properties / Surfaces & Interfaces) - **Simona Raneri, Chairperson**
 - Dynamic, Reactivity & Chemical analysis (Diluted Matter & Chemistry) - **Heloise Dossmann, Chairperson**
 - Life & Earth Sciences (Biology / Health & Environment / Geoscience) - **Benoit Masquida, Chairperson**
- 15:45 - 16:15 *Break*
- Parallel sessions** (see the detailed programme below)
- 16:15 - 18:00
- Ancient & New Materials (Cultural heritage / Structure / Electronic Properties / Surfaces & Interfaces) - **Fabien Cheynis, Chairperson**
 - Dynamic, Reactivity & Chemical analysis (Diluted Matter & Chemistry) - **Florent Carn, Chairperson**
 - Life & Earth Sciences (Biology / Health & Environment / Geoscience) - **Rémi Marsac, Chairperson**
- 18:00 - 20:00 Posters session
Asma Tougerti, Chairperson



Programme

Friday, January 21st, 2022

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Parallel sessions (see the detailed programme below)

- 9:00 – 10:45
- Ancient & New Materials (Cultural heritage / Structure / Electronic Properties / Surfaces & Interfaces) - **Emmanouil Frantzeskakis Chairperson**
 - Dynamic, Reactivity & Chemical analysis (Diluted Matter & Chemistry) - **Asma Tougeri, Chairperson**
 - Life & Earth Sciences (Biology / Health & Environment / Geoscience) - **Rozenn Le Hir, Chairperson**
- 10:45 - 11:15 *Break*
- 11:15 - 12:15
- Award of the best student poster
 - Round Table - **Rozenn Le Hir, Chairperson**
 - Update on the upgrade of SOLEIL
- 12:15 - 14:00 *Break*
- 14:00 - 17:00
- Technical workshop on STXM, XPEEM and Ptychography (HERMES beamline) - **Debora Pierucci, Chairperson**



Parallel Session Schedule

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

Chairpersons: E. Frantzeskakis, D. Pierucci, A. Bordage, F. Cheynis and S. Raneri

Thursday, January 20th, 2022

- 14:00 - 14:30
(25'+5')
- The role of SOLEIL in the study of cultural heritage materials: The case of the stained-glass windows of Notre Dame cathedral
Myrtille HUNAULT – Synchrotron SOLEIL, Saint-Aubin, France
- 14:30 - 14:55
(20'+5')
- Migration of metal ions in historical oil-based pictorial paintings
Patrick KEKICHEFF – Institut Charles Sadron, Université de Strasbourg, C.N.R.S., Strasbourg, Synchrotron SOLEIL, Saint-Aubin, France
- 14:55 - 15:20
(20'+5')
- Comparative analysis of prehistoric mammoth ivories and bones at PUMA/SOLEIL and new AGLAE/C2RMF
Laurent TRANCHANT - Synchrotron SOLEIL, Saint-Aubin, France
- 15:20 - 15:45
(20'+5')
- Topological defects in smectic thin films
Jean de Dieu NIYONZIMA – Sorbonne Université, CNRS, Institut des Nanosciences de Paris, Paris, France
- 15:45 - 16:15
- Break
- 16:15 - 16:45
(25'+5')
- Surfaces, interfaces and nano-objets: recent multi-technique studies, beamlines overview and anticipated evolutions in the context of the upgrade @SOLEIL
Alina VLAD & Pavel DUDIN – SIXS/ANTARES beamline, Synchrotron SOLEIL, Saint-Aubin, France
- 16:45 - 17:10
(20'+5')
- XAS and XMCD analysis of the interface between FeRh magnetic nanoclusters and SrTiO₃ crystals
Sara GONZALEZ - Univ Lyon, CNRS, ECL, INSA Lyon, UCBL, CPE, INL, Villeurbanne, France
- 17:10 - 17:35
(20'+5')
- Synthetic antiferromagnet materials studied by soft X-ray magnetic resonant scattering
Cyril LEVEILLE - Synchrotron SOLEIL, Saint-Aubin, France
- 17:35 - 18:00
(20'+5')
- From Synchrotron to lasers infrared photons sources for very high pressure studies: Need and complementary
Paul DUMAS - Synchrotron SOLEIL, Saint-Aubin, France & CEA, DAM, DIF, Arpajon, France



Parallel Session Schedule

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

Chairpersons: E. Frantzeskakis, D. Pierucci, A. Bordage, F. Cheynis and S. Raneri

Friday, January 21st, 2022

- 09:00 - 09:30
(25'+5') Shedding a new "light" onto the puzzles of magnetite
Hebatalla ELNAGGAR – *IMPMC, France / Utrecht Universit , Pays-bas*
- 09:30 - 9:55
(20'+5') Imaging the changes in electronic structure driving the metal-to-insulator transition in V_2O_3
Maximillian THEES - *Universit  Paris-Saclay, CNRS, Institut des Sciences Mol culaires d'Orsay, Orsay, France*
- 09:55 – 10:20
(20'+5') HAXPES study of surface/interface effects by alkali post deposition treatment of (Ag,Cu)(In,Ga)Se₂ thin film solar cell absorbers
Natalia MARTIN - *Solar Cell Technology, Department of Materials Science and Engineering, Uppsala University, Uppsala, Sweden*
- 10:20 – 10:45
(20'+5') Ultrafast light-induced strain and symmetry breaking in ferroic materials
Vincent JUVE - *Le Mans Universit , Le Mans, France*



Parallel Session Schedule

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

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

Thursday, January 20th, 2022

- 14:00 - 14:30
(25'+5')
- Providing mechanistic insights into the low-temperature oxidation chemistry by Synchrotron-based VUV PEPICO spectroscopy
Jérémy BOURGALAIS – LRGP, Nancy, France
- 14:30 - 14:55
(20'+5')
- Inner Valence photoionization of small molecules: From spectrally to temporally resolved MFPADs
Jennifer JOSEPH - Université Paris-Saclay, CNRS, Institut des Sciences Moléculaires d'Orsay, Orsay, France
- 14:55 - 15:20
(20'+5')
- Multi-electron coincidence spectroscopy of the Ar 2p² double core hole decay
Maximilian REINHARDT - University of Oulu, Oulu, Finlande
- 15:20 - 15:45
(20'+5')
- Post-collision interaction effects in sulfur KLL Auger spectra of thiophene and Thiophene-based polymers
Nicolas VELASQUEZ - Sorbonne Université, CNRS, Laboratoire de Chimie Physique Matière et Rayonnement, Paris, France
- 15:45 - 16:15
- Break
- 16:15 - 16:45
(25'+5')
- Synchrotron insights onto the formation of synthetic and biological magnetite nanoparticles
Damien FAIVRE - Institut de biosciences et biotechnologies, CEA Cadarache, France
- 16:45 - 17:10
(20'+5')
- Pentagonal gold bipyramids self-assemble with long-range triclinic order
Doru CONSTANTIN - Institut Charles Sadron, CNRS and Université de Strasbourg, Strasbourg, France
- 17:10 - 17:35
(20'+5')
- Structural evolution of PT nanoparticles during ammonia oxidation
David SIMONNE – Synchrotron SOLEIL, Saint-Aubin, France
- 17:35 – 18:00
(20'+5')
- Innovative chemical imaging speciation methodology for studying the impact of the impregnation and drying of supported CoMoP/ Al₂O₃ HDS catalysts by quick-XAS and Raman spectroscopies
Beatriz BARATA – IFPEN, Synchrotron SOLEIL, Saint-Aubin, France



Parallel Session Schedule

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

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

Friday, January 21st, 2022

- 09:00 - 09:30 (25'+5') Microfluidic tools for Synchrotron-based experiments: Applications to chemistry
Benedikt LASALLE - *Synchrotron SOLEIL, Saint-Aubin, France*
- 09:30 - 9:55 (20'+5') Photoelectron Circular Dichroism as a probe for conformational isomerism in 1-indanol
Jennifer DUPONT - *Institut des Sciences Moléculaires d'Orsay, CNRS, Univ. Paris-Saclay, Orsay, France*
- 09:55 – 10:20 (20'+5') MOSARIX: A Von Hamos spectrometer based on highly annealed pyrolytic graphite crystal in the tender X-ray domain
Roba MOUSSAOUI - *Sorbonne Université, CNRS, Laboratoire de Chimie Physique Matière et Rayonnement, Paris, France*
- 10:20 – 10:45 (20'+5') Preliminary study on migration of halide ions in metal halide perovskite induced by electrical field based on nano X-ray fluorescence
Haeyeon JUN - *Synchrotron SOLEIL, Saint-Aubin, France*
- 10:45 - 11:15 *Break*



Parallel Session Schedule

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

Chairpersons: B. Masquida, R. Le Hir and R. Marsac

Thursday, January 20th, 2022

- 14:00 - 14:30
(25'+5')
- Allosteric modulators of force production: Towards precision medicine for different classes of heart diseases
Anne HOUDUSSE - *Institut Curie, Paris, France*
- 15:00 - 15:30
(25'+5')
- HELIOBIO group
Frédéric JAMME – *Synchrotron SOLEIL, St Aubin, France*
- 15:30 - 15:55
(20'+5')
- Structural insights into RNA-mediated transcription regulation in bacteria.
Albert WEIXLBAUMER – *IGBMC, Université de Strasbourg, CRNS, INSERM, Illkirch, France*
- 15:55 - 16:15
- Break*
- 16:15 - 16:45
(25'+5')
- Spatial distribution and speciation of REE in soils and REE accumulating ferns
Emmanuelle MONTARGES-PELLETIER – *LIEC, Nancy, France*
- 16:45 - 17:10
(20'+5')
- Probing the stoichiometry of Fe₃δO₄ nanoparticles by soft XAS and XMCD
Fadi CHOUEIKANI – *Synchrotron SOLEIL, St Aubin, France*
- 17:10 - 17:35
(20'+5')
- Microfluidic production of nanomedecins with in operando SAXS structural investigation of lipid nano-emulsions formulation. Presentation of the galenic on-chip concept
Guillaume BROTONS – *Université Le Mans, France*
- 17:35 - 18:00
(20'+5')
- Dynamics and structural changes of calmodulin upon interactions with its potent antagonist calmidazolium
Corentin LEGER – *Institut Pasteur, Université Paris, France*



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Friday, January 21st, 2022

- 09:00 - 09:30
(25'+5')
- From moss to sequoia, X-rays reveal the metastability of sap transport under tension
Sylvain DELZON – *INRAe Bordeaux, France*
- 09:30 - 09:55
(20'+5')
- Deep investigation of specificities and behaviours of flax fibers and stems through different SOLEIL beamlines
Alain BOURMAUD – *Université Bretagne Sud, France*
- 09:55 – 10:20
(20'+5')
- A N7-methyltransferase hidden in the dark proteome of newly discovered nidovirus. Structure, function and evolutionary implications
François FERRON – *AFMB, Université Aix-Marseille, France*
- 10:20 – 10:45
(20'+5')
- Structural insights onto the ribosome from the human pathogen *C. albicans*
Olga KOLOSOVA - *Department of Integrated Structural Biology, Institute of Genetics and Molecular and Cellular Biology, University of Strasbourg; Illkirch, France*
- 10:45 - 11:15 *Break*



List of Posters

In blue student posters

PO-01-AM 18:00	Electronic-structure origin of the high thermoelectric coefficient in hole doped CuRhO_2 A.J. Thakur
PO-02-AM 18:07	In situ electrical and mechanical study of Indium Tin Oxide films deposited on flexible substrate: A Synchrotron investigation T. Chommaux
PO-03-DR 18:14	Bimetallic M-N-C catalysts for oxygen reduction reaction in proton exchange membrane fuel cells: An operando X-ray absorption study A. Khan
PO-04-DR 18:21	Operando study of macrocycle molecular catalysts for CO_2 reduction reaction S.T. Dong
PO-05-DR 18:28	Investigation of ligand electronic effects on iron cyclopentadienyl complexes using photoelectron spectroscopy L. Bourehil
PO-06-DR 18:35	Auger spectroscopy of fulminic acid, HCNO M. Gerlach
PO-07-LS 18:42	Morphological variations of calcite microfossils based on synchrotron microtomography data to reveal the last 200 years of environmental changes in the Danish strait C. Choquel
PO-08-LS 18:49	Monitoring food structure in plant protein gels during digestion F. Boué
PO-09-LS 18:56	X-ray compatible microfluidic platforms for in situ serial Synchrotron crystallography R. Vasireddi
PO-10-DR 19:03	Hall-petch relationship in thermosensitive micellar copolymer polycrystals with embedded colloidal nanoparticles A. Mourchid
PO-11-AM 19:10	Spectral ptychography at the SWING beamline A. Kulow
PO-12-AM 19:17	Temperature and doping dependence of the crystal field excitations in $\text{La}_{1-x}\text{Sr}_x\text{VO}_3$ family of compounds near the Mott insulator limit A. Nicolaou



- PO-13-AM**
19:24 Correlation between strain, ferroelectricity and oxidation state in epitaxial multiferroic $\text{Fe}_2\text{O}_3/\text{BaTiO}_3$ heterostructures
H. Lin
- PO-14-AM**
19:31 In-situ study of the photomagnetic effect in RbCoFe Prussian blue analogues nanoparticles embedded in an ordered SiO_2 matrix
L. Altenschmidt
- PO-15-AM**
19:38 Evolution of electronic structures and charge density wave properties in layered LaSb_2
L. Chen
- PO-16-AM**
19:45 Unveiling the electronic state interplay at organic DBP/4P-NPD exciton blocking interfaces in organic solar cells
M. Ahmad
- PO-17-AM**
19:52 Decompression failure in hydrogen-exposed rubbers: Insights from in-situ tomography at Anatomix beamline
S. Castagnet
- PO-18-AM**
19:59 Structural, magnetic and magnetocaloric transitions in $\text{Y}_{0.9}\text{Pr}_{0.1}\text{Fe}_2\text{D}_{3.5}$ deuteride
V. Paul-Boncour