

50 ANS D'AVENTURE XAFS EN FRANCE

des pionniers du LURE
aux sources de 4^e génération

X - FS50.FR

50 YEARS OF XAS
IN FRANCE



PROGRAMME
DE RECHERCHE
MATÉRIAUX
ÉMERGENTS



PROGRAMME
DE RECHERCHE
INTERACTION
LUMIÈRE MATIÈRE



université
PARIS-SACLAY
GRADUATE SCHOOL
Physique

PhOM
Physique des
Ondes et de la
Matière

IRELEC
ALCEN

Program

Monday, October 5th, 2026

From LURE to the 4th Synchrotron Radiation facility History and Driving Concepts

SOLEIL Auditorium – Main Building

- 13:30 – 14:00 *Registration*
- 13:55 – 14:00 Welcome
Valérie Briois, Delphine Vantelon – UR1-CNRS & Synchrotron SOLEIL, France
- 14:00 – 14:35 Les dix premières années de l'EXAFS à LURE
Pierre Lagarde, Denis Raoux – Synchrotron SOLEIL, France
- 14:35 – 15:10 XAFS de surface et XAFS dispersif ; l'usage essentiel de la polarisation du photon dans le champ naissant des interfaces et multicouches
Dominique Chandesris, Alain Fontaine – CNRS, France
- 15:10 – 15:27 XAFS in France before synchrotron facilities
Christian Brouder – Sorbonne University, Paris, France
- 15:27 – 15:45 Apprendre à se connaître : Rayonnement synchrotron et sciences de la Terre à la fin du XX^e siècle
Georges Calas – IMPMC, Paris, France
- 15:45 – 16:00 First in situ XAFS investigation of the electrochemical interface, DCI/LURE 1991
Abderrahmane Tadjeddine – Institut de Chimie Physique, CNRS
- 16:00 – 16:30 *Coffee Break setting up in front of the SOLEIL Auditorium - Main Building*
- 16:30 – 17:05 La spectroscopie d'absorption sous pression : une spécialité française, du LURE à SOLEIL en passant par l'ESRF et SLS
Alain Polian, Jean-Paul Itié – IMPMC, Sorbonne University & Synchrotron SOLEIL, France
- 17:05 – 17:40 Chemistry & XAFS@LURE at the edge of the 80s, Science, People, Driving Concepts
Christophe Cartier Dit Moulin, Michel Verdaguer, Françoise Villain – IPCM, CNRS Sorbonne Université, Paris, France
- 17:40 – 18:15 The Journey of XAFS beamlines from the 1st to the 4th generation of Synchrotron Radiation Facilities
Jean Daillant, Michèle Sauvage – ESRF & Synchrotron SOLEIL, France
- 18:30 – 20:30 Museum visit - ACO (Anneau de Collision d'Orsay)
18:30 - Bus departure in front of the SOLEIL reception building

Tuesday, October 6th, 2026

XAFS Contribution to the Past and Today Science

SOLEIL Auditorium – Main Building

- 09:00 – 09:05 Introduction
- 09:05 – 10:00 XAFS Theory: 50 Years of Breakthroughs
John Rehr – *Department of Physics, University of Washington, United States*
- 10:00 – 10:35 XAS utilization in glass studies: potentialities, difficulties and blind corners
Stéphanie Rossano – *LGE, Université Gustave Eiffel, France*
- 10 :35 – 11 :00 *Coffee Break setting up in front of the SOLEIL Auditorium - Main Building*
- 11:00 – 11:35 X-ray Spectroscopy at the European X-ray Free Electron Laser
Sakura Pascarelli – *European XFEL, Germany*
- 11:35 – 11 :53 First-principles XANES calculations within the pseudopotential framework: 17 years of XSpectra
Delphine Cabaret – *Sorbonne Université, IMPMC, France*
- 11 :53 – 12 :29 XAFS in liquids and disordered systems: early and recent advances from LURE times to today
Andrea Di Cicco – *Università di Camerino, Italy*
- 12:30 – 14:00 *Lunch*
- 14:00 – 15:30 **Parallel sessions** – 2 different rooms
- [Disordered Materials & Cultural Heritage](#) – *SOLEIL Auditorium – Main Building*
 - [Catalysis](#) – *SOLEIL Auditorium – Reception Building*
- 15 :30 – 15 :55 *Coffee Break setting up in front of the SOLEIL Auditorium - Main Building*
- 15:55 – 16:30 Evolution of Synchrotron XAS for Heterogeneous Catalysis: From early studies to operando strategies and data analysis, at IFPEN
Christèle Legens – *IFP Energies Nouvelles, France*
- Meet our sponsors and exhibitors**
- Advanced Detection Solutions for Synchrotron Applications
Greateyes – Fenton Mann – 10'
 - Iliad: A Next-Generation EELS Platform for X-ray Absorption Spectroscopy–Like Information in the TEM by **Thermofisher - Arno Meingast – 10'**
- 16:30 – 17:40
- Dispersive Lab-based X-ray Spectrometers from LynXes by **LynXes Innovation - Zoltán Németh – 10'**
 - PEPR DIADEM
 - PEPR LUMA
 - DIM MaTerRe
 - DIM PAMIR
- 17:40 – 18:30 Poster session
- 18:30 *Bus departure in front of the SOLEIL reception building*
- 20:00 – 23:30 *Conference diner at La Coupole*

Parallel Session

Disordered Materials & Cultural Heritage

SOLEIL Auditorium – Main Building

- 14:00 – 14:18 Local Structure in Silicate Glasses and Melts at Extreme Conditions
Max Wilke – *Universität Potsdam, Germany*
- 14:18 – 14:36 From liquid to solid: The contribution of XANES at the structure and properties of glasses and melts
Daniel Neuville – *IPGP CNRS, France*
- 14:36 – 14:54 Comparative Pt L₃-edge XAS study of Pt nanoparticles with different morphologies in solution and tumor cells
Raul Magro Hernandez – *UCM, Spain*
- 14:54 – 15:12 XAFS to study Cultural Heritage Metallic Materials
Solenn Reguer – *Synchrotron SOLEIL, France*
- 15:12 – 15:30 Harnessing X-rays to Reveal Historical Productions in Late Iron Age Britain
Susan Nehzati – *Diamond Light Source, United Kingdom*

Catalysis

SOLEIL Auditorium – Reception Building

- 14:00 – 14:18 Catalyst Design Guided by XAS Spectroscopy
Xavier Carrier – *Sorbonne Université, France*
- 14:18 – 14:36 XAS's contribution to IRC(IRCELYON) research in the field of catalysis
Christophe Geantet – *CNRS, France*
- 14:36 – 14:54 Operando XAFS Reveals Interfacial Redox Chemistry of Supported Metal Catalysts as the Switch Descriptor Between Base- and Tip-Growth Carbon Filaments During Catalytic Methane Splitting
Wilson Henao – *Instituto de Tecnología Química (ITQ), Spain*
- 14:54 – 15:12 Combined XAFS/DRIFTS/MS: a powerful technique for operando catalysts investigations
Davide Salusso – *ESRF, France*
- 15:12 – 15:30 Monitoring the Formation of a Single-Atom Catalyst with Operando Quick XAFS
Franck Morfin – *IRCELYON, France*



Wednesday, October 7th, 2026

Theory and Data Analysis – Technique Evolutions

SOLEIL Auditorium – Main Building

- 09:00 – 09:05 Introduction
- 09:05 – 10:00 Simulating X-ray Absorption Spectroscopies Can Be Useful
Yves Joly – Institut Néel. Université Grenoble Alpes, France
- 10:00 – 10:35 X-ray Spectromicroscopy or Microspectroscopy? A Methodological Perspective
Jean Susini – Synchrotron SOLEIL, France
- 10:35 – 11:00 Coffee Break - setting up in front of the SOLEIL amphitheater
- Parallel sessions** – 2 different rooms
- 11:00 – 12:30
- [Energy Related Materials](#) – SOLEIL Auditorium – Main Building
 - [Geosciences Part I](#) – SOLEIL Auditorium – Reception Building
- 12:30 – 14:00 Lunch
- 14:00 – 14:35 X-ray Absorption Spectroscopy: A Key to Deciphering and Optimizing Battery Materials
Laurence Croguennec – ICMCB, France
- 14:35 – 14:53 Understanding chemical bonds with valence RIXS
Oana Bunau – ESRF, France
- 14:53 – 15:11 Orbital Engineering in Graphene/SiC: An ELNES and FDMNES Study
Vinod Kumar Paidi – CNRS, INSA Lyon, UCBL, MATEIS, UMR 5510, France
- 15:11 – 15:29 Unraveling Local Environment in Multicomponent Materials using Reverse Monte Carlo Simulations
Alexei Kuzmin – Institute of Solid State Physics, Latvia
- 15:29 – 15:47 Multiple-Edge EXAFS/RMC Refinement for 3D Local Structure in SrTiO₃
Andris Anspoks – Institute of Solid State Physics, Latvia
- 15:50 – 16:10 Coffee Break setting up in front of the SOLEIL Auditorium - Main Building
- 16:10 – 16:45 Dichroisms at LURE and SOLEIL
Philippe Saintavit – IMPMC. Sorbonne Université, France
- 16:45 – 17:03 Introducing « FITNESS »: a new program, built-in to Fastosh, to efficiently perform shell-by-shell fitting of the EXAFS
Gautier Landrot – Synchrotron SOLEIL, France
- 17:03 – 17:21 From Monometallic to Bimetallic NiCo/SiO₂: Element-Resolved Active-Site Identification by Operando XAS and MCR-ALS
Shuchi Zhang – Eindhoven University of Technology, Netherlands
- 17:21 – 17:39 Resolving the "Coloring Problem" in Crystallography: The Synergistic Power of EXAFS and Resonant Diffraction
Carmelo Prestipino – CRISMAT, France
- 17:39 – 17:57 EXAFS Unbound: Unlocking Atomic Scale Insights Beyond The Next Edge
Rene Bes – University of Helsinki, Finland
- 17:57 – 18:20 In Memoriam Prof. Alain Michalowicz
Karine Provost – ICMPE. Université Paris Est Créteil, France
Emiliano Fonda – Synchrotron SOLEIL, France
- 18:30 – 20:00 Poster session and Aperitif

Parallel Session

Energy Related Materials

SOLEIL Auditorium – Main Building

- 11:00 – 11:18 From Ex Situ to Operando Soft X-rays Microscopy of Photoactive Materials: Case of Hematite-based Photoanodes
Stefan Stanescu – Synchrotron SOLEIL, France
- 11:18 – 11:36 Operando XAS Strategies for Rational Design of Electrochemical Energy Materials
Francesco Paparoni – Synchrotron SOLEIL, France
- 11:36 – 11:54 Tuning Redox Chemistry in Gd-Doped Ceria: Gd-Driven Suppression of Ce³⁺ Formation in Reducing Condition
Alessandro Longo – ESRF, France
- 11:54 – 12:12 The Optical Dispersive EXAFS (ODE) Beamline at Soleil Synchrotron and Its Studies
Qingyu Kong – Synchrotron SOLEIL, France
- 12:12 – 12:30 Combined Operando XRD And XAS Study Of Electrochemically Active Li₂MChO Anti-perovskites
Mikhail Gorbunov – Karlsruhe Institute of Technology, Germany

Geosciences Part I

SOLEIL Auditorium – Reception Building

- 11:00 – 11:18 Coupling High-Energy Resolution Fluorescence Detected X-ray Absorption Spectroscopy (HERFD-XAS) with microfluidic cells for in situ monitoring of tungsten nanoparticles redox transformation
Melanie Auffan – CEREGE CNRS, France
- 11:18 – 11:36 Vanadium enrichment in lateritic soils: mineralogical and pedoclimatic controls
Myriam Boudieb – Sorbonne Université, France
- 11:36 – 11:54 Redox speciation of cerium in the presence of colloids
Terjini Kiththangodage – IPGP, France
- 11:54 – 12:12 XAS Studies Of Metal Transport In Hydrothermal Fluids: Autoclaves And Photons
Denis Testemale – Institut Néel, CNRS, France
- 12:12 – 12:30 Probing the Speciation of Transition Metals (Mo, W) in Hydrothermal Fluids by In-Situ XAS
Maria Kokh – Institut für Geowissenschaften Universität Potsdam, Germany



Thursday, October 8th, 2026

Technique Evolutions – 4th Generation and Beyond

SOLEIL Auditorium – Main Building

- 09:00 – 09:05 Introduction
- 09:05 – 10:00 XAS Data Analysis in the Era of Machine Learning
Janis Timoshenko – Fritz Haber Institute. Max-Planck-Gesellschaft, Germany
- 10:00 – 10:35 Tracing cadmium from soil to foodstuff using X-ray techniques
Geraldine Sarret – Institut des Sciences de la Terre. Université Grenoble Alpes, France
- 10:35 – 11:00 Coffee Break setting up in front of the SOLEIL Auditorium - Main Building
- Parallel sessions** – 2 different rooms
- 11:00 – 12:30
 - [Chemistry](#) – SOLEIL Auditorium – Main Building
 - [Geosciences Part II](#) – SOLEIL Auditorium – Reception Building
- 12:30 – 14:00 Lunch
- 14:00 – 14:35 XAFS and nuclear fuels
Philippe Martin – CEA Marcoule, DES/ISEC/DMRC, France
- 14:35 – 14:53 Beyond XAS with RIXS
Jean-Pascal Rueff – Synchrotron SOLEIL, France
- 14:53 – 15:11 Study of the genesis of HDS catalysts by in situ photon-in photon-out spectroscopy
Sylvain Cristol – Université de Lille, France
- 15:11 – 15:29 Understand 4f covalency by ab initio calculated RIXS plane
Sihan Zhang – ESRF, France
- 15:29 – 15:47 Tender X-ray photon-in/photon-out spectroscopy at ESRF ID26
Pieter Glatzel – ESRF, France
- 15:50 – 16:10 Coffee Break setting up in front of the SOLEIL Auditorium - Main Building
- 16:10 – 16:45 Multi-scale characterization of environmental colloidal materials
Laurent Michot – Laboratoire de PHENIX, France
- 16:45 – 17:03 Developments of the setup for pump-probe X-ray absorption fine structure (XAFS) and a capability of EXAFS at FXE instrument, European XFEL
Yohei Uemura – European XFEL, Germany
- 17:03 – 17:21 FAME-PIX: The Pioneering French High-Resolution Hyperspectral 3D X-Ray Microscope at the ESRF
Julio C. Da Silva – Institut Néel, CNRS, France
- 17:21 – 17:39 Operando Spatio-Temporal Study of CO oxidation reaction in Pd Catalysts using Full-Field Hyperspectral XAS imaging
Marlon Muniz Da Silva – CNPEM, Sirius, Brazil
- 17:39 – 17:57 X-ray Absorption Spectroscopy meets Imaging to Unveil Inclusion Puzzles in Deep Diamonds
Helio Tolentino – LNLS/CNPEM, Brazil
- 18:00 Conclusion & Goodbyes

Parallel Session

Chemistry

SOLEIL Auditorium – Main Building

- 11:00 – 11:18 Unraveling the fate of anticancer gold complexes in cells through HERFD-XAFS
Tom Lacoma – Sorbonne Université, France
- 11:18 – 11:36 A short retrospective of actinide hexacyanoferrate exploration initiated at LURE
Christophe Den Auwer – Université Côte d'Azur, France
- 11:36 – 11:54 Magnetic hyperthermia at the nanoscale
Jerome Fresnais – CNRS, Laboratoire PHENIX, France
- 11:54 – 12:12 Understanding Nanoparticles Formation mechanisms at ITODYS Laboratory: Insights from investigations at ROCK Beamline
Marion Giraud – ITODYS, Université Paris Cité, France
- 12:12 – 12:30 Time- and Space-Resolved Formation Stannosilicates by in situ XAS
Aram Bugaev – Paul Scherrer Institute, Switzerland

Geosciences Part II

SOLEIL Auditorium – Reception Building

- 11:00 – 11:18 Redox speciation of contaminants at magnetite surface
Rémi Marsac – Institut de physique du globe de Paris, CNRS, France
- 11:18 – 11:36 Mineralogical Controls on the Fate of Emerging Contaminants in Laterites Revealed by XAFS
Quentin Bollaert – Synchrotron SOLEIL, France
- 11:36 – 11:54 Thermal transformation of clay minerals probed by in situ soft-X-ray absorption spectroscopy
Erwan Paineau – Laboratoire de Physique des Solides, CNRS, France
- 11:54 – 12:12 Assessing the Sensitivity of X-ray Absorption Spectroscopy to Distinguish Various Forms of Nucleic Acids and Their Surface Structures on Imogolite Nanotubes
Jerome Rose – CNRS CEREGE, France
- 12:12 – 12:30 X-ray absorption spectroscopy in surface science on LUCIA
Nicolas Trcera – Synchrotron SOLEIL, France

Friday, October 9th, 2026

Fastosh & FDMNES Tutorials

SOLEIL Auditorium – Main Building

- 09:30 – 12:00 Fastosh Tutorial - Simulation of EXAFS: a live introduction to FITNESS, a new software built-in to Fastosh
Gautier Landrot – Synchrotron SOLEIL, France
- 12:00 – 13:30 Lunch
- 13:30 – 16:30 FDMNES Tutorial - Simulation Of XANES Using The FDMNES Code
Yves Joly – Institut Néel, CNRS, UGA