

# ECASIA·26

EUROPEAN CONFERENCE ON APPLICATIONS OF SURFACE AND INTERFACE ANALYSIS 13-18 SEPT  
BRUSSELS, BELGIUM



# PROGRAM

[www.ecasia2026.com](http://www.ecasia2026.com)

# WELCOME

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The Vrije Universiteit Brussel and Université Libre de Bruxelles are pleased to welcome you to the 2026 edition of the European Conference on Applications of Surface and Interface Analysis. After 19 years, the capital of Europe once again hosts one of the most dynamic conferences in the field of surface and interface science.

This year's conference will not only feature the latest advancements in traditional surface and interface analysis, but will also highlight cutting-edge research in areas such as in situ and operando measurements, combined surface analysis and electrochemical assessments, and spectroscopic modeling under real-world conditions.

In short, the 2026 edition promises to be an exciting and thought-provoking event.

**Welcome in Brussels!**



**Prof. Tom Hauffman**  
*Chair of the conference*

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## CONFERENCE VENUE

### Flagey

Address:

Place Sainte Croix, 1050 Ixelles

## CONFERENCE SECRETARIAT

### GUARANT International spol. s r.o.

Českomoravská 19

190 00 Prague 9

Czech Republic



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# EXHIBITION

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## Opening hours

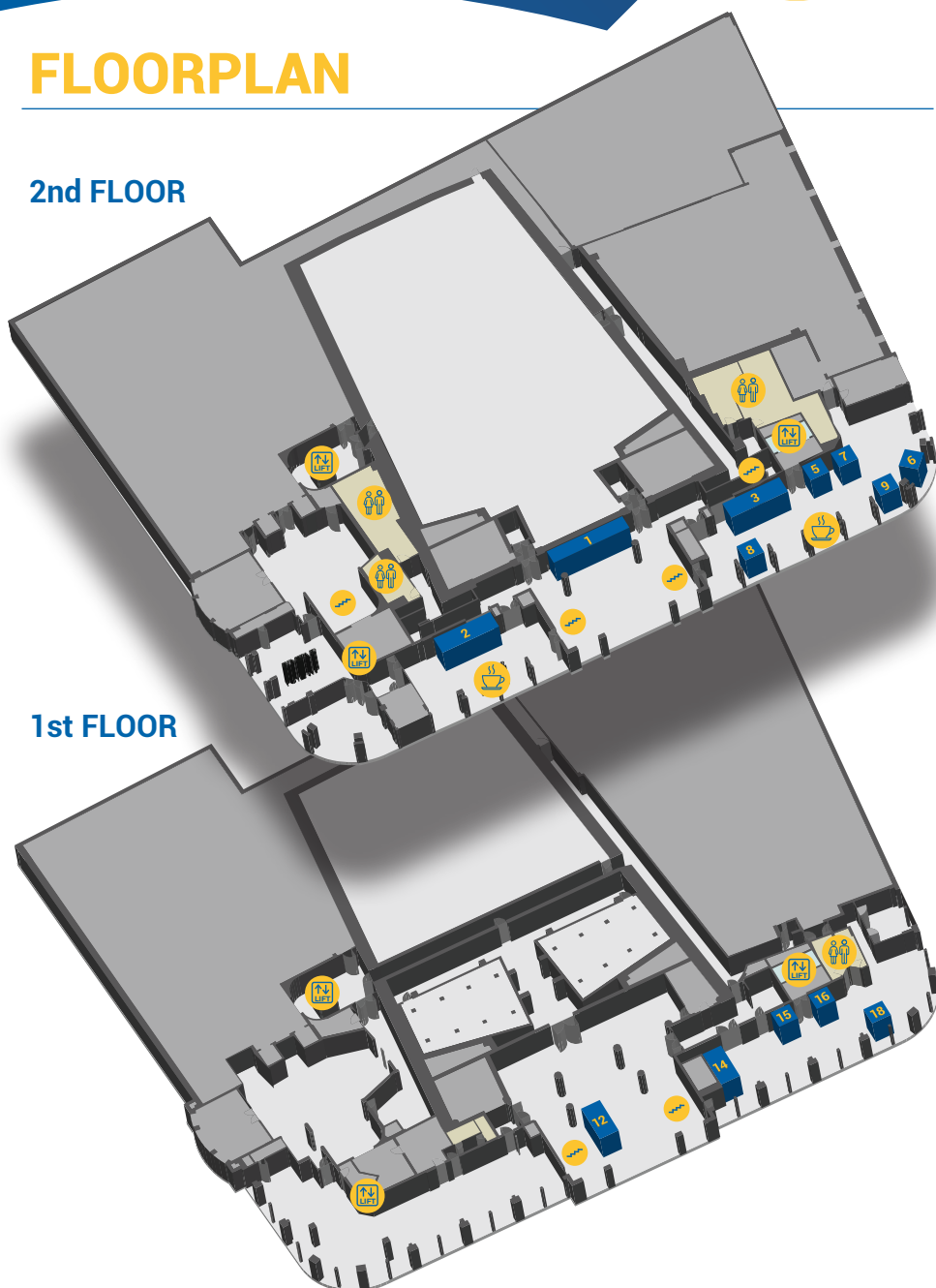
|                                       |                     |
|---------------------------------------|---------------------|
| <b>Monday</b> , September 14, 2026    | <b>9:30 – 19:30</b> |
| <b>Tuesday</b> , September 15, 2026   | <b>9:00 – 17:00</b> |
| <b>Wednesday</b> , September 16, 2026 | <b>9:00 – 17:00</b> |
| <b>Thursday</b> , September 17, 2026  | <b>9:00 – 14:00</b> |

## List of exhibitors

- 1** Physical Electronics, Inc.
- 2** FEI EUROPE B.V. | THERMO FISHER SCIENTIFIC
- 3** JEOL (Europe) BV
- 5** Dylan James Ltd
- 6** IONOPTIKA LTD.
- 7** ST Instruments B. V.
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- 9** CAMECA
- 12** SPECS Surface Nano Analysis GmbH
- 14** Kratos Analytical LTD.
- 15** Metrohm Analytical
- 18** HIDEN

# FLOORPLAN

## 2nd FLOOR



## 1st FLOOR

# REGISTRATION

## On-site registration fees

### REGISTRATION FEES

Standard

### PRICE

950 EUR

Student

590 EUR

### The registration fee includes:

- Access to all sessions and the exhibition area
- Refreshments during coffee breaks
- Lunches
- Reception exhibition opening (Monday evening)
- Poster session + reception (Tuesday evening)
- Guided tours (Thursday afternoon)

## Options for guided tours

1. Art Nouveau, the pride of Brussels

2. Street Art in Brussels

3. Additional tour (If the previous capacity is reached):  
Brussels Major Sights

**Please plan to reach the meeting point on your own; transportation is not provided or arranged.**

### Meeting place (for each tour):

the central station (Europakruispunt) at 2 PM (please be there on time with your badge)

**The excursion offer is valid only until 10 September (or until capacity is full); after this date, availability cannot be guaranteed.**



## Registration desk opening hours

|                                       |                     |
|---------------------------------------|---------------------|
| <b>Monday</b> , September 14, 2026    | <b>7:30 – 17:00</b> |
| <b>Tuesday</b> , September 15, 2026   | <b>8:00 – 17:00</b> |
| <b>Wednesday</b> , September 16, 2026 | <b>8:30 – 17:00</b> |
| <b>Thursday</b> , September 17, 2026  | <b>8:30 – 12:00</b> |
| <b>Friday</b> , September 18, 2026    | <b>9:00 – 12:00</b> |

## Speakers ready room

|                                       |                     |
|---------------------------------------|---------------------|
| <b>Monday</b> , September 14, 2026    | <b>7:30 – 17:00</b> |
| <b>Tuesday</b> , September 15, 2026   | <b>8:00 – 17:00</b> |
| <b>Wednesday</b> , September 16, 2026 | <b>8:30 – 17:00</b> |
| <b>Thursday</b> , September 17, 2026  | <b>8:30 – 12:00</b> |
| <b>Friday</b> , September 18, 2026    | <b>8:30 – 12:00</b> |



# CONFERENCE DINNER

**VENUE:** Albert Rooftop  
(Kunstberg 28, 1000 Brussels)  
**DATE:** 16th September, 2026  
**TIME:** 7-11 PM  
**TICKET PRICE:** 110 EUR per person

Join us for an unforgettable Conference Dinner at Albert Rooftop, a stunning rooftop venue located on the 5th floor of the Royal Library of Belgium. Enjoy delicious seasonal cuisine, carefully selected drinks, and breathtaking panoramic views over Brussels while networking with fellow conference participants in a relaxed and elegant atmosphere.

The ticket includes entry, food, and drinks. The capacity is limited.



# SCIENTIFIC PROGRAMME

## 14 September 2026 (Monday)

07.30–10.00 Registration

### 10.00–11.20 Studio 4

10.00–10.15 **Welcome**  
Tom Hauffman (chair of ECASIA 2026)

10.15–10.20 **Introduction to the laureate of the ECASIA Award 2026**  
Philippe Marcus (President of the ECASIA Association and Chair of the ECASIA International Steering Committee)

10.20–11.20 **PLENARY LECTURE**  
Hendrik Bluhm (ECASIA award laureate)

11.20–11.30 **To rooms**

### 11.30–12.30 Thin films and coatings (Studio 4)

11.30–11.50 **ALD Cr2O3 layers for corrosion protection of Al alloys: an XPS, ToF-SIMS and electrochemical study**  
Philippe Marcus, Raul, Xueying Wang, Mathilde Michaux, Jhonatan Rodriguez-Pereira, Sandrine Zanna, Antoine Seyeux, Jan Macák, Dimitri Mercier

11.50–12.10 **Surface and Interface Characterization of ALD-Grown Ultrathin Oxides on Hybrid Perovskites by XPS and HAXPES**  
Yanis Pisi, Elodie, Abdul Khaleed, Thomas Riedl, Cedric Kreusel, Marcus Bär, Regan Wilks, Nathanaelle Schneider, Mathieu Frégnaux, Muriel Bouttemy

12.10–12.30 **Study of the densification of TiO2 film deposited by atmospheric dielectric barrier discharge plasma**  
Nicolas Fosseur, Didier Robert, Loïc Malet, Stéphane Godet, François Reniers

### 11.30–12.30 Technique development and metrology (Studio 1)

11.30–11.50 **Evaluation of high-energy-resolution spectrum imaging by a fast hemi-spherical analyzer (f-HSA)**  
Tatsuya Uchida, Noboru Taguchi, Fuyuki Nabeshima, Konomi Ikita, Akihiro Tanaka, Kazushiro Yokouchi, Toshiyuki, Kenichi Tsutsumi

11.50–12.10 **Multimodal Characterization of Polymer Surface Crystallinity using Scanning Helium Atom Microscopy and Cluster SIMS**  
Naoko Sano, Jack Kelsall, Kate McHardy, Paul Blenkinsopp, David J Ward, Paul C Dastoor

12.10–12.30 **Advances in Electron Spectroscopy for Characterizing GaN-Based HEMTs**  
Kirène Gaffar, Solène Bechu, Guillaume Monier, Romain Jouanneaud, Christine Robert-Goumet, Anna Krystianiak, Olivier Heintz, Arnaud Etcheberry, Farid Medjoud, Gilles Patriarche, Muriel Bouttemy

## 11.30–12.30 Biomaterials engineering and analysis (Studio 5)

- 11.30–11.50 **Interfacial Analysis of ExoPolymeric Substance (EPS) Adsorption on Chromium by Coupled QCM–ARXPS**  
Sandrine Zanna, Julien Jaume, Alexandre Alves, Dimitri Mercier, Jean Guezenec, Philippe Marcus
- 11.50–12.10 **Reactive landing of peptides on tailored surfaces using gas cluster ion beams**  
Mehdi Lakhdar, Benjamin Tomasetti, Christine Dupont-Gillain, Arnaud Delcorte
- 12.10–12.30 **Enzymatic Surface Nanostructuring of Biopolymer-Silica Hybrid Materials**  
Alexia Etchecopar, Cecile Courreges, Sophie Nolivos, Regis Grimaud, Nagore Gabilondo, Joachim Allouche

## 11.30–12.30 Surfaces of porous materials (Studio 2)

- 11.30–11.50 **Sustainable carbon membranes made from lignin with autonomously formed pore structure**  
Jiří Duchoslav, Rene Zahnhuber, Christoph Unterweger, Christian Fürst, David Stifter
- 11.50–12.10 **Fractographic Analysis of Al–Si High-Pressure Die Castings in Mega Casting Applications**  
Maria Margarita Mitsi, Johan Ahlström, Lars Nyborg, Yu Cao
- 12.10–12.30 **Synthesis of mesoporous TiO<sub>2</sub> diphosphonate for 5-HMF production: From sol-gel nanoparticles to mesoporous catalyst**  
Chandana Chandran, Richa Tomer, Nick Gys, Apostolos Fanourgiakis, Anthony Morena, Carmela April, Sophie Hermans, Tom Hauffman, Vera Meynen

## 12.30–14.00 Lunch

## 14.00–15.30 Thin films and coatings (Studio 4)

- 14.00–14.30 **KEYNOTE**  
**Exchange of thiol containing molecules in chemisorbed monolayers: a XPS and ToF-SIMS study**  
Kathrin Küster, Sabrina Steffens, Tolga Acartürk, Ulrich Starke, Hagen Klauk
- 14.30–14.50 **Contact Electrification at Silica-Gold Interface in Ultra-High Vacuum**  
Nisha Ranjan, Tolga Acartürk, Kathrin Küster, Ulrich Starke
- 14.50–15.10 **Rapid thermal annealing of amorphous GeSe<sub>2</sub>-Bi<sub>2</sub>Se<sub>3</sub> thin films and wave-guides**  
Anupama Viswanathan, Youssef Ghandaoui, Jan Gutwirth, Tomas Halenkovic, Stanislav Slang, Radwan Chahal, Joel Charrier, Petr Nemec, Virginie Nazabal
- 15.10–15.30 **Fabricating High quality superconducting NbN thin film by radio frequency reactive magnetron sputtering**  
Dushyant Dabhi, Emila Panda

## 14.00–15.30 Machine learning in surface science; Technique development and metrology (Studio 1)

### 14.00–14.30 KEYNOTE

**Domain Expertise as the Key to ML-Driven Corrosion Insights: A SECCM Case Study on 316L**

Leonardo B. Coelho, Daniel Torres, Aleksei Makogon, Frédéric Kanoufi, Viacheslav Shkirskiy, Jon Ustarroz

### 14.30–14.50 ML-framework for deconvolution in X-ray Photoelectron Spectroscopy

Loay Akmal Madbouly, Alexander Kister, Jibin James, Vasile-Dan Hodoroaba, Jörg Radnik

### 14.50–15.10 Intensity-energy response function of Al/Cr-K

Rémi Lazzari, David Alamarguy, Damien Aureau, Thierry Conard, Nicolas Gauthier, Frédéric Georgi, Stéphane Guilet, Samar Hajjar-Garreau, Olivier Heintz, Guillaume Rémi Monier

### 15.10–15.30 An interlaboratory study on a test material for the evaluation of area selection fidelity in small-area XPS measurements

Jörg Manfred Stockmann, Thomas Weimann, Sebastian Bütefisch, Vasile-Dan Hodoroaba, Jörg Radnik

## 14.00–15.30 Biomaterials engineering and analysis (Studio 5)

### 14.00–14.30 KEYNOTE

**Grafting of anti-adhesive polydentate polymers onto gold surface**

Anouk Galtayries, Thomas Smagghe, Stephanie Deville-Foillard

### 14.30–14.50 Interaction of protein-functionalized silica with f-block elements using surface analysis

Vanele Audrey Tsapi Metchop, Diane Rebiscoul, Fabrice Giusti, Michael Odorico, Nicolas Bremond, Philip Gutfreund, Antoine Leydier, Robert Winkler, Catherine Berthomieu

### 14.50–15.10 Effect of Salicylic Acid Treatment on Human Keratinized Skin Investigated by XPS Cluster Depth Profiling

Adel Sarolta Racz

## 14.00–15.10 Surfaces of porous materials (Studio 2)

### 14.10–14.30 Investigating Cs-implanted graphite using dual-source XPS supported with DFT

Alex Theodosiou, Ben F Spencer, Abbie N Jones

### 14.30–14.50 Quantitative XPS Analysis of Electronic Inhomogeneous Samples

Maximilian Franz, Reinhard Denecke

### 14.50–15.10 Adsorbate-Selective Diffusion Modulation in TMA-Modified ZIF-8

Nick Gys, Margot Verstreken, Leen Boullart, Kristof Marcoen, Tom Hauffman, Rob Ameloot

## 15.30–16.00 Coffee break

## 16.00–17.10 Corrosion (Studio 4)

16.00–16.30 **KEYNOTE**

**Control of stiction phenomena at the rotor/pad interface in automotive braking systems**

Francesco Andreatta, Michele Motta, Agusti Sin, Lorenzo Fedrizzi

16.30–16.50 **Femtosecond Laser Ablation (fs-LA) XPS Depth Profiling for the Study of Oxidation and Prevention of Wear**

Mark A Baker, Charlie W Chandler, Tony T Fry, Stefanie Hoja, Oliver Parlour, Joseph Tegile, Tim S Nunney

16.50–17.10 **Analysis of Sodium Phosphate as a Corrosion Inhibitor for Grey Cast Iron Brake Discs in Automotive Applications**

Michele Motta

## 16.00–17.30 Technique development and metrology (Studio 1)

16.00–16.30 **KEYNOTE**

**Testing the Consistent Retardation Assumption for XPS transmission function determination**

Neal Fairley, Pascal Bargiela, Vincent Fernandez, Hannah Levene, Olivier Heintz, Robert W Hengstebeck, Muriel Bouttemy, Solene Bechu, Yusuf Koçak, Guillaume Sauthier, Anna Kallistova, David Morgan, Huanyong Li, Isidoro Lopez Marin, Anna Krystianiak, Jonas Baltrusaitis, Ryan Thorpe, Christopher J. Kiewer, Timothy A. Livingston Large, Aurélien Renard, David J. H. Cant, Benjamin P. Reed, Alexander G. Shard

16.30–16.50 **Developing a tiered approach to reviewing and reporting XPS data and results**

Donald R Baer

16.50–17.10 **New methods for XPS depth profiling using femtosecond laser ablation**

Tim S Nunney, Paul Mack, Charlie W Chandler, Mark A Baker

17.10–17.30 **Resolving Interface-Driven Properties in hybrid materials by Correlative XPS, AES and ToF-SIMS Analysis**

Joachim Allouche

## 16.00–17.30 Biomaterials engineering and analysis (Studio 5)

16.00–16.30 **KEYNOTE**

**Cryo-XPS analyses of membrane vesicles from bacterial cells**

Kateryna Hirmanova, Andrey Shchukarev, Madeleine Ramstedt

16.30–16.50 **Mapping Surface Topographies in Biofilms Using Neutral Atom Microscopy**

Nick A von Jeinsen, Jack Kelsall, Ben J Butler, David J Ward, Katherine A Brown, Paul C Dastoor

16.50–17.10 **Cost effective corrosion resistant and biocompatible coatings for Ti-6Al-4V biomedical implant**

Sarmistha Bhattacharjee, Priya Mahato, Emila Panda

## 16.00–17.30 Heritage and geology (Studio 2)

16.00–16.30 **KEYNOTE**

**A Study of the chemistry of Mary-Rose timber hull core samples using XPS and ToF SIMS**

Marie-Laure O C Abel, Eleanor Schofield, Alastair Miles, Darcey Holmes, Wiktor Kawala, Michael Absolon, John Watts

16.30–16.50 **Using XPS to Determine Iron Oxidation State in Metamorphic Fe-Ti-oxides, Adirondack Mts, New York**

Jennifer E Mann, David Valley, Kateryna Artyushkova, William O. Nachlas, John W. Valley

16.50–17.10 **Marble Waste Reuse for Wastewater Treatment: a Contribution of XPS**

Enrica Tuveri, Deborah Biggio, Nicola Careddu, Bernhard Elsener, Giulio Casula, Marzia Fantauzzi, Antonella Rossi

## 17.30–19.30 Opening reception

# 15 September 2026 (Tuesday)

## 08.55–09.50 Studio 4

08.55–09.00 **Welcome**

Tom Hauffman (chair of ECASIA 2026)

09.00–09.50 **PLENARY LECTURE**

**Electronic Structure and Depth-Resolved Chemical State Analysis of Functional Materials by Laboratory XPS and HAXPES**

Claudia Cancellieri

09.50–10.00 **To rooms**

## 10.00–11.00 Catalysis (Studio 4)

10.00–10.20 **Characterizing Nickel state in Oxide-Free Nickel- Nitrogen Compounds: A Comparative XPS, XRD, and TEM Study**

Alex Bondarchuk, Aleksandr Kryshtal, Rosalía Cid, Elvira Paz, André Fonseca, Lifeng Liu

10.20–10.40 **Titanium sulfide-based 2D nano(photo-)catalysts under reactive conditions**

Niko Kruse, Marc Kobbenbring, Justin Klimek, Aaron R. von Seggern, Martin Hedevang, Sergi C. Jara, Jeppe V. Lauritsen, Lars Mohrhusen

10.40–11.00 **Tuning TiO<sub>2</sub>/AlInP Interfaces by Surface Preparation and ALD Chemistry for Unassisted Photoelectrochemical Applications**

Negin Mogharehabed, Mohammad Amin Zare Pour, Christian Höhn, Oleksandr Romanyuk, Helene Reichel, Alexander Klyushin, Roel van de Krol, Thomas Han-nappel, Agnieszka Paszuk

## 10.00–11.00 Thin films and coatings (Studio 1)

10.00–10.20 **Chemisorption-driven superlubricity on engineering steel enabled by nitrogen-doped graphene nanosheets**  
Irfan Nadeem, Matjaž Finšgar, Mitjan Kalin

10.20–10.40 **XPS Depth Profiling of Multilayer Stacks using Femtosecond Laser Ablation (fs-LA)**  
Charlie W Chandler, Dhilan S Devadasan, Robin Simpson, Paul Mack, Tim S Nunney, Mark A Baker

10.40–11.00 **An influence of flux on reflow melting of the tinplated steel**  
Erdni Batyrev, Ruud Pattiasina, Arnoud de Vooy, Quinten Hekelaar, Michel Meinders

## 10.00–11.00 Technique development and metrology (Studio 5)

10.00–10.20 **Non-Destructive Characterization of Film Thickness and Fractional Coverage Utilizing XPS and StrataPHI**  
Kateryna Artyushkova, Norb Biderman, Amy Ferryman

10.20–10.40 **Effect of ambient humidity on scanning electrochemical cell microscopy measurements**  
Luiza Zudina, Alexander S. Darsow, Ariba Aziz, Vaishali Shrivastav, Simon Sprenkel, Weishan Wu, Wojciech Nogala, Dmitry Momotenko

10.40–11.00 **On the Application of Ambient SKPFM for Surface Electrochemical Studies**  
 Reynier Revilla

## 10.00–11.00 Semiconductor materials (Studio 2)

10.00–10.20 **Quantitative study of ion beam-enhanced reactivity of MoS<sub>2</sub>**  
Francesco Laudani, Markus Sauer, Annette Foelske

10.20–10.40 **Surface Analysis of GaN After Ar Ion Irradiation**  
Takahiko Ikarashi, Chizuru Asahara, Sara Mizuno, Haruka Hidaka, Shinya Yazaki, Hideaki Mizusaki, Tomohiro Sakata

10.40–11.00 **pARXPS investigations of HCl-deoxidized InP surfaces exposed to different atmospheres**  
Georges Al Hoyek, Victor Lumineau, Virginie Loup, Bernard Pelissier

## 11.00–11.30 Coffee break

## 11.30–12.30 Energy storage and conversion (Studio 4)

11.30–11.50 **Accelerating Advanced Materials Innovation in the age of Artificial Intelligence**  
 Mesfin Haile Mamme

11.50–12.10 **Developing Cost effective low-Emissivity coating as energy saving window**  
Priyanka Hemani, Emila Panda

12.10–12.30 **The role of oxygen in the degradation of the Cu(In<sub>x</sub>Ga<sub>1-x</sub>)Se<sub>2</sub> solar absorber**  
 Anna Gagliardi, Jean-Jacques Gallet, Fabrice Bournel, Arnaud Etcheberry, Jean-François Guillemoles, Muriel Bouttemy, Solene Bechu

## 11.30–12.30 Thin films and coatings (Studio 1)

- 11.30–11.50 **Interfacial Oxidation-State Control in ALD-Based CeO<sub>x</sub>/WO<sub>3</sub> Heterostructures**  
Dominic Guttman, Rudi Tschammer, Carlos Morales, Małgorzata Kot, Michał Mazur, Damian Wojcieszak, Paulina Kapuścik, Wiktoria Kołodzińska, Jarosław Domaradzki, Jan Ingo Flege
- 11.50–12.10 **Determining oxidation state via Auger line shape analysis: Defect engineering of ALD-SnO<sub>x</sub> films for ambient H<sub>2</sub> sensing**  
Rudi Tschammer, Dominic Guttman, Carlo Tiebe, Karsten Henkel, Carlos Morales, Jan Ingo Flege
- 12.10–12.30 **Correlative surface analytics of ultrathin Ti-based conversion layers on pre-treated hot-dip galvanized steel**  
Martin Regnat, Jiri Duchoslav, Georg Mayr, Bernhard Strauss, David Stifter

## 11.30–12.30 Technique development and metrology (Studio 5)

- 11.30–11.50 **Cryo-XPS Characterisation and Advancing Solution-Representative Analysis of Functional Nanoparticles**  
Liam Soomary, Simon Hutton, Chris Blomfield
- 11.50–12.10 **High Sensitivity Analysis of Reflection Electron Energy Loss Spectra Using Spectrum Image**  
Konomi Ikita, Fuyuki Nabeshima, Tatsuya Uchida, Akihiro Tanaka, Noboru Taguchi, Toshiyuki Ohama, Kazushiro Yokouchi, Kenichi Tsutsumi, Junichi Fujita
- 12.10–12.30 **Unveiling the Water/Solid Interface in Low-Carbon Cements through Cryo-XPS**  
Isidoro López, Yannick Demeusy, Sandrine Gauffinet, Christophe Labbez

## 11.30–12.30 Semiconductor materials (Studio 2)

- 11.30–11.50 **Nondestructive Analysis of Al<sub>2</sub>O<sub>3</sub>/SiO<sub>x</sub>/Si Passivation Layers for Photovoltaics Using Angle-Resolved HAXPES Techniques**  
Hsun-Yun Chang, I-Chia Huang, Ting-Jia Yang, Taiga Hirota, Wei-Chun Lin, Shin-ichi Iida
- 11.50–12.10 **Study of time-resolved photoemission dynamics in semiconductor materials for photovoltaic cells**  
Margaux Le Coq, Mathieu Frégnaux, Philip Schulz, Mathieu SILLY, Damien Aureau
- 12.10–12.30 **Extended study of Metal / p-HgCdTe Interface combining HAXPES and ToF SIMS analysis**  
Alexandra Colas-Reuillon, Marc Veillerot, Clément Lobre, Eugénie Martinez, Sarah Petit, Olivier Gravrand

## 12.30–14.00 Lunch

## 14.00–15.10 Energy storage and conversion (Studio 4)

14.00–14.30 KEYNOTE

### Operando SIMS to Monitor Degradation in Solid-State Batteries

Pascal Dippell, Johannes Hubl, Sascha Kremer, Johannes Schubert, Johannes Westphal, Maximilian Kissel, Janis K. Eckhardt, Juergen Janek, Marcus Rohnke

14.30–14.50 **Unveiling reactivity differences between Cd and Te faces in CdTe(111) by coupling XPS photopeaks and X-AES transitions**

Antonin Frappreau, Arnaud Etcheberry, Pauline Derory, Muriel Bouttemy, Solène Béchu

14.50–15.10 **Operando XPS: A novel approach to study sulfide based all solid-state-batteries in realistic condition**

Giulia Serafino, Xinhua Zhu, Guillaume Dolphijn, Annick Hubin

## 14.00–15.30 Catalysis (Studio 1)

14.00–14.30 KEYNOTE

### Surface and Interface Analysis as a Key to Understanding ZnFe<sub>2</sub>O<sub>4</sub>@TiO<sub>2</sub> Direct Z-Scheme Photocatalysts for CO<sub>2</sub> Reduction

Samar Al Jitan, Axel Breugelmans, Pegie Cool, Vera Meynen

14.30–14.50 **U–Ce charge transfer in ceria-uranium mixed oxide: implications for thermo-chemical water splitting**

Carlos Morales, Rudi Tschammer, Thomas Gouder, YongMan Choi, Hicham Idriss, Jan Ingo Flege

14.50–15.10 **Reaction of Reduced Ti-Centers with N<sub>2</sub>O in Hetero- & Homogeneous Coordination: From Oxides to Organometallic Environment**

Justin Klimek, Filip Hallböök, Niko Kruse, Fangliang Li, Sara Blomberg, Malte Fischer, Katharina Al-Shamery, Lars Mohrhusen

15.10–15.30 **Correlating Surface Science and Catalysis Data: Enantioselective Hydrogenation, Deoxygenation and Olefin Metathesis**

Peter H McBrean, Sonali Balasaheb Khomane, Yi Dong, Tianchi Zhang

## 14.00–15.30 Technique development and metrology (Studio 5)

14.00–14.30 KEYNOTE

### A multiple X-ray beam approach for angle-resolved photoelectron analysis of dielectric thin film stacks

Anja Vanleenhove, Ilse Hoflijk, Thierry Conard

14.30–14.50 **Microscopic Origins of Surface Loss in Thin Silicon Nitride Membranes: A Multi-Technique Profiling Approach**

Antonius Armanious, Gunnar Jeschke, Arnold Müller, Artur Glavic, Claudia Cancellieri, Nicola Cavalleri, Premysl Marsik, Geena Benga, Ariane Giesriegl, Silvan Schmid, Lars Jeurgens, Alexander Eichler

14.50–15.10 **Applications of Spectrum Imaging Using a Fast Hemispherical Analyzer (f HSA)**

Noboru Taguchi, Tatsuya Uchida, Fuyuki Nabeshima, Konomi Ikita, Akihiro Tanaka, Kazushiro Yokouchi, Toshiyuki Ohama, Kenichi Tsutsumi

## 14.00–15.30 Metals (Studio 2)

14.10–14.30 **Applications of XPS in an industrial production environment**  
Kevin Ploner

14.30–14.50 **Quasi in situ monitoring of GaAsSb Plasma Surface Preparation**  
Ali Ahmad, Nicolas Coudurier, Hervé Boutry, Bernard Pelissier

14.50–15.10 **Effect of Microstructure and Surface Orientation of Cu Substrate on Interfacial Reaction in Cu Sinter Bonding Process**  
Jun Hyeong Yoon, Minki Kim, Hyun-Soon Park, Min-Su Kim

15.10–15.30 **Determination of oxide-layer-thickness on ~50 µm high-alloyed steel spheres by use of XPS**  
Jakob Rath, Alexander Holzer, Markus Sauer, Francesco Laudani, Christian Gierl-Mayer, Annette Foelske

## 15.30–16.00 Coffee break

## 16.00–17.00 Energy storage and conversion (Studio 4)

16.00–16.20 **Cryo ToF-SIMS to Study Sodium Transport and Storage in Hard Carbon Anodes**  
David Schäfer, Pascal Dippell, Alexander Weiß, Lysander Wagner, Bernd Smarsly, Thomas Demuth, Kerstin Volz, Anja Bielefeld, Jürgen Janek, Marcus Rohnke

16.20–16.40 **Probing surface reactivity of carbon group anodes for sodium-ion batteries by XPS and SEM**  
Tim Michel, Romain Jouanneaud, Noah Keim, Anu Adamson, Anass Benayad

16.40–17.00 **In situ XPS investigation of the lithium/solid electrolyte interfaces in all-solid-state batteries**  
Rémi Dedryvère, Lucía Pérez Ramírez, Jonas Sottmann, Benjamin Hennequart, Muath Radi, Lenart Dudy, Jean-Pascal Rueff, Maxime Hallot, Christophe Lethien

## 16.00–17.00 Catalysis (Studio 1)

16.00–16.20 **Ce-Induced Nanod defect Engineering and Electronic Regulation for Efficient CO<sub>2</sub> Electroreduction to Formate over Bi<sub>2</sub>O<sub>2</sub>CO<sub>3</sub>**  
Jichuang Wu, Young Dok Kim

16.20–16.40 **Effect of Pt Decoration and its Thickness on Catalytic Properties of Cu–Zn Electrocatalysts**  
Tsubasa Kemmizaki, Taguchi Hirohisa

16.40–17.00 **Revealing the Impact of pH on Nanoscale Hydrogen Evolution Catalysis via Operando Optical Microscopy**  
Nikan Afsahi, Zhu Zhang, Manas Ranjan Panda, Mainak Majumder, Naimeh Naseri, Jean-François Lemineur, Frédéric Kanoufi

## 16.00–17.00 Technique development and metrology (Studio 5)

- 16.00–16.20 **A combined Hyperspectral Imaging – Multivariate Analysis approach to surface analysis**  
Markus Sauer, Florian Fahrnberger, Jakob Rath, Francesco Laudani, Markus Ostermann, Pierluigi Bilotto, Carsten Gachot, Edoardo Marquis, Marko Piljevic, Annette Foelske
- 16.20–16.40 **Operando ORP-EIS/ATR FTIR for real-time monitoring of interfacial degradation of coatings under cathodic polarization**  
Zahra Jiryaisharahi, Benny Wouters, Peter Visser, Herman Terry, Annick Hubin, Tom Hauffman
- 16.40–17.00 **Multimodal Submicron IR microscopy for Comprehensive Materials Characterization**  
Carolin Borbeck, Miriam Unger

## 16.00–17.00 Metals (Studio 2)

- 16.00–16.20 **In situ XPS analysis of iron oxide reduction for hydrogen detection in advanced high-strength steels**  
Benedikt Wolfsjäger, Tom Rak, Jiri Duchoslav, Philipp Kürsteiner, Reza Sharif, Thomas Steck, David Stifter, Heiko Groiss
- 16.20–16.40 **Stretch Induced Evolution of Gallium Oxide in Liquid Metal Interconnects in flexible stretchable electronic devices**  
Parth Sewlikar, Lennert Purnal, Maximilian Krack, Rathul Nengminza Sangma, Wim Deferme, Monika Rai, Seppe Terry, Bram Vanderborght, Iris De Graeve, Tom Hauffman
- 16.40–17.00 **Multimodal Submicron IR microscopy for Comprehensive Materials Characterization**  
Carolin Borbeck, Miriam Unger

## 17.00–19.30 Poster session

# 16 September 2026 (Wednesday)

## 08.55–09.50 Studio 4

- 08.55–09.00 **Welcome**  
 Tom Hauffman (chair of ECASIA 2026)
- 09.00–09.50 **PLENARY LECTURE**  
**The need for speed in adsorbent evaluation: Rapid measurements of multicomponent isotherms and kinetics**  
 Rob Ameloot
- 09.50–10.00 **To rooms**

## 10.00–11.00 Technique development and metrology (Studio 4)

- 10.00–10.20 **Disentangling Beam-Induced Artefacts in Chemically Amplified Resist ToF-SIMS and OrbitrapTM-SIMS Depth Profiling**  
Judith Widart, Rita Tilmann, Anna Kotowska, David Scurr, Claude Poleunis, Arnaud Delcorte, Danilo De Simone, Alexis Franquet, Claudia Fleischmann
- 10.20–10.40 **Study of ion transmission in OrbiSIMS to detect molecular structure**  
 Margaret Moloney
- 10.40–11.00 **Correlative XPS and SEM/EBSD with Cluster Ion Etching for Enhanced Surface Preparation**  
Simon Bacon, Helen Oppong-Mensah, Robin Simpson, Paul Mack, Tim Nunney

## 10.00–11.00 Thin films and coatings (Studio 1)

- 10.00–10.20 **Analysis of superhydrophobic biopolymer coatings through combination of green chemistry and laser texturing**  
Pieter Samyn, Patrick Cosemans, Olivier Malek
- 10.20–10.40 **Fluorinated Silane Layers on SiO<sub>2</sub>: Surface Coverage and Thermal Stability Probed by Combined LEIS and XPS**  
Stanislav Průša, Samira Jafari, Matthew Linford, David Slovák, Pavel Bábík, Tomáš Šíkola
- 10.40–11.00 **Effect of C5 insulating coatings on the fatigue performance of adhesively bonded electrical steel stacks**  
Thomas Luger, Gernot Wallner, Martin Rosner, Michael Pock

## 10.00–10.40 Nanomaterials and nanostructuring (Studio 5)

- 10.00–10.20 **Relationship between the dry surface state of CuO nanopowders and its zeta-potential in solution**  
Lars P.H. Jeurgens, Anastasia Batenkova, Eric Hirschman, Claudia Cancellieri, Patrik Schmutz
- 10.20–10.40 **Reliable ToF SIMS Depth profiling of Hybrid nanomaterials via Reactive high-energy per molecule Oxygen GCIB sputtering**  
 Giuseppe Ragusano, Marcus Rohnke, Alessandro Auditore, Nunzio Tuccitto, Alberto Bossi, Marta Penconi, Antonino Licciardello, Valentina Spampinato

## 10.00–11.00 Corrosion (Studio 2)

- 10.00–10.20 **Development of High quality functionally graded coating (FGC) on Ti-6Al-4V as biomedical implant**  
Sarmistha Bhattacharjee, Priya Mahato, Emila Panda
- 10.20–10.40 **How Late Can Corrosion Inhibitors Be Released? Local inhibiting layer formation and re-immersion stability**  
 Marlon Mopon, Arjan Mol, Santiago J. Garcia
- 10.40–11.00 **A computer vision approach for linking outdoor surface wetting states to atmospheric corrosion sensor signals**  
Vincent Vangrunderbeek, Leonardo Bertolucci Coelho, Mats Meussen, Herman Terryn, Mesfin Haile Mamme

## 11.00–11.30 Coffee break

## 11.30–12.30 **Technique development and metrology (Studio 4)**

11.30–11.50 **Use of XPS-CREM for detecting hydration-driven changes in the electrical conductivity of La<sub>2</sub>Ce<sub>2</sub>O<sub>7</sub> thin films**

Daniel Freidzon, Hadar Dessau, [Ayelet Vilan](#), Hagai Cohen, Ellen Wachtel, Anna Kossoy, David Ehre, Isaac Abrahams, Igor Lubomirsky

11.50–12.10 **X-Ray Photon Electron Spectroscopy degradation study on insulating samples**

[Fernandez Vincent](#), Hekking Sarah, Counsell Jonathan, Maheu Clément, Granier Agnès, Goullet Antoine, Stafford Luc, Richard-Plouet Mireille, Fairley Neal

12.10–12.30 **Combined XPS and HAXPES for Overlayer Analysis**

[David J. H. Cant](#), Benjamin P. Reed, Jonathan D.P. Counsell, Anna Matiushkina, Robin Schuermann, Joerg Radnik, Ute Resch-Genger, Alexander G. Shard

## 11.30–12.30 **Thin films and coatings (Studio 1)**

11.30–11.50 **Van der Waals interactions as driving forces in interphase formation of polymer thin films**

[Dorothee Silbernagl](#), Özlem Özcan

11.50–12.10 **XPS characterization of artificial saliva droplets on common substrates: the role of surfactants**

[Rosaria Anna Picca](#), Daniele Remoli, Nicola Cioffi, Zhenyu Jason Zhang

12.10–12.30 **XPS and Hydrogen Permeation Analyses of Nanostructured Multilayer Coatings**

[Deborah Biggio](#), Bernhard Elsener, Orlaw Massler, Marzia Fantauzzi, Antonella Rossi

## 11.30–12.30 **Nanomaterials and nanostructuring (Studio 5)**

11.30–11.50 **Operando X-ray Photoemission Microscopy: Unveiling the Energy Landscape of 2D Material-Based Devices**

[Debora Pierucci](#), Dario Matrippolito, Mariarosa Cavallo, Erwan Bossavit, Pavel Dudin, Jose Avila, Emmanuel Lhuillier

11.50–12.10 **Direct Visualization of Buried Surface Chemistry in the van der Waals Gap between Graphene and Platinum by In Situ SEM**

Sayed Hossein Mirdamadi Khouzani, Rui Wang, Jiri David, Tianle Jiang, Yanming Wang, Karel Vareka, Michal Dymacek, Petr Babor, Tomas Sikola, [Miroslav Kolibal](#)

12.10–12.30 **Quantitative and spectral analysis of electron transmission through stacked bi-layer graphene**

Giorgio Orlandini, Florian M. Brunbauer, Domenica Convertino, Neeraj Mishra, Camilla Coletti, Ulrich Starke, Eraldo Oliveri, [Marcel Himmerlich](#)

## 11.30–12.30 *In-situ* and near ambient pressure analysis (Studio 2)

11.30–11.50 **XPS of wet samples: past, present and future**  
Andrey Shchukarev, Madeleine Ramstedt

11.50–12.10 **What is the Role of Water in the Electrochemical Double Layer of Emerged Electrodes?**  
Adèle Debono, Cristiano Kasdorf Giesbrecht, Martin Stratmann, Michael Rohwerder

12.10–12.30 **Soft X-ray Spectroscopy of Spinel Oxides for Photocatalytic Water Splitting**  
David C Grinter, Charlotte Hall, Pilar Ferrer, Santosh Kumar, Matthijs A van Spronsen, Ricardo Grau-Crespo, Georg Held

## 12.30–14.00 *Lunch*

## 14.00–15.10 **Energy storage and conversion (Studio 4)**

14.00–14.30 **KEYNOTE**  
**Depth-resolving the pSEI formation and Redox Mechanisms of Delithiated NMC 811 Electrodes by Lab-Based Soft and Hard XPS**  
Yanis Jugie, Roberto Fantin, Mohammed Raghbi, Ambroise Van Rookeghem, Renaud Bouchet, Anass Benayad

14.30–14.50 **ToF-SIMS for the analysis of interfaces in liquid and solid state Li-ion batteries**  
Cecile Courreges, Karama Ghamgui, Abdelfettah Lallaoui, Muath Radi, Antonin Gajan, Remi Dedryvere, Herve Martinez

14.50–15.10 **Operando XPS with Coupled Mass Spectrometry on Dual Electrolyte Solid-State Batteries**  
Leonardo Merola, Joachim Sann, Sebastian L L Benz, Felix H Richter, Linda F Nazar, Jürgen Janek, Burak Aktekin

## 14.00–15.10 **Thin films and coatings (Studio 1)**

14.00–14.30 **KEYNOTE**  
**Characterization of Ultrathin ALD-Grown  $\text{VS}_x$  Films for Electrical Contacts to  $\text{MoS}_2$**   
Gabriel Prado Da Silva, Nicolas Gauthier, Stéphane Cadot, Gianluca Ciatto, Hubert Renevier

14.30–14.50 **Thermal stability of engineered Al oxide layers on an AM Al-Fe-Zr alloy**  
Rene Pfister, Noemie Ott

14.50–15.10 **How Sub-nm Binary Oxide Overlayers Shape Surface Dipoles, Thermochemical Stability & Morphology of (La,Sr)CoO<sub>3-d</sub>**  
Florian Fahrnberger, Matthäus Siebenhofer, Michael Hahn, Markus Sauer, Annette Foelske, Gernot Friedbacher, Herbert Hutter, Markus Kubicek

**14.00–15.10 Nanomaterials and nanostructuring (Studio 5)**
**14.00–14.30 KEYNOTE**
**Electrochemical Additive Manufacturing of Sub–100 nm Metals via Chemical Focusing**
Dmitry Momotenko, Karuna Aurel Kanes, James L. Mead, Marie Claussen, Peng Zeng, Luiz Morales, Vita Solovyeva

**14.30–14.50 Reliable Workflows for the elemental analysis of Graphene-Related 2D Materials with SEM/EDS and XPS**
Paul Mrkwitschka, Vasile-Dan Hodoroaba, Jörg Radnik
**14.50–15.10 Electrochemical probing of the radiation damage caused by an electron beam**
Suzanne Delfosse, Souheil Mourtada, Daniel Torres, Aleksei Leontev, Juliette Zveny, Alejandro Gomez-Perez, François Reniers, Jonathan Quinson, Jon Ustaroz

**14.00–15.10 In-situ and near ambient pressure analysis (Studio 2)**
**14.00–14.30 KEYNOTE**
**An evolution in standard operando surface chemical analysis**
Paul M. Dietrich, Emilie G rouville, Andreas Thissen

**14.30–14.50 Monitoring reversible surface modifications of SrMoO<sub>3</sub> thin films by combining laboratory and synchrotron NAP-XPS**
Rosinel Alfonso, Mathieu Fr gniaux, Bruno Berini, Yves Dumont, Vincent Polewczyk, Pardis Simon, Damien Aureau

**14.50–15.10 Operando APXPS Reveals Distinct Wet and Dry Carbonation Pathways of Ca(OH)<sub>2</sub>**
Anna Stedt, Xiangrui Kong, Romana Viktoria Szakal, Maria Arizaleta, Raoul Blume, Jean-Fran ois Boily, Erik Thomson, Zareen Abbas

**15.10–15.40 Coffee break**
**15.40–16.20 Energy storage and conversion (Studio 4)**
**15.40–16.00 XPS investigation of trapping functionalities in Li-ion batteries**
Bruna Canu, Margarita Bosmi, Alexis Martin, Dominique Foix, Christel Laberty-Robert, R mi Dedryv re

**16.00–16.20 Guide to Improving XPS Analysis for Studying the SEI in Li-ion Batteries**
Audunn Elvarsson, Sofia Reiner, Julia Maibach

## 15.40–17.00 Thin films and coatings (Studio 1)

- 15.40–16.00 **Layer-by-layer growth of copper-based SURMOFs on functionalized SiO<sub>2</sub>: a comprehensive surface characterization study**  
Alessandro Auditore, [Valentina Spampinato](#), Roberta Ruffino, Alexis Franquet, Nunzio Tuccitto, Antonino Licciardello
- 16.00–16.20 **From Oxide Dissolution to SAMs: Mechanistic Insights into NHC Adsorption on Naturally Oxidized Copper**  
[Mathilde Michaux](#), Dimitri Mercier, Dominique Costa, Sandrine Zanna, Antoine Seyeux, Salem Ba Sowid, François Ribot, Louis Fensterbank, Philippe Marcus
- 16.20–16.40 **A complementary approach to the interfacial studies between organosolv lignin and aluminium oxide**  
[Jan Derhaeg](#), Görkem Eylul Kaya, Niko Van den Brande, Benjamin Wilson, Mari Lundström, Tom Hauffman, Iris De Graeve
- 16.40–17.00 **The role of topcoat curing on the adhesion of UV-cured primers**  
[Libby Ward](#), Marie-Laure Abel, Mark Baker, Charlie Chandler, John Watts

## 15.40–17.00 Nanomaterials and nanostructuring (Studio 5)

- 15.40–16.00 **Engineering Silica Capsules via Pickering Emulsion Templating: Advances in Porosity and Surface Functionality**  
Duclos Rémi, [Lofficial Dina](#), Proriot David, Dalmazzone Christine, Lerouge Frédéric
- 16.00–16.20 **Revealing Distributed Kinetics in Electrochemical Nucleation and Growth through Local Electrochemistry**  
[Daniel Torres](#), Jon Ustarroz
- 16.20–16.40 **Nanoscale Observation of Ag Nanowire Growth at the Step Edges of Atomically Flat Si(111) Surface**  
[Az Zahrah Fitriana Syafira](#), Hana Kyouda, Naoko Momono, Kouji Inagaki, Kenta Arima
- 16.40–17.00 **Advanced Glass Surfaces: Optical, Wetting, and Biological Control via Texturing and Chemistry**  
Wageesha Senaratne

## 15.40–17.00 In-situ and near ambient pressure analysis (Studio 2)

- 15.40–16.00 **Size- and shape-dependent reactivity: a NAP-XPS study of Cu<sub>2</sub>O nanoparticles as model catalysts**  
[Michele De Rocco](#), Sylvain Cristol, Pardis Simon, Héloïse Tissot
- 16.00–16.20 **Oxidation behaviour of model 304 stainless steel exposed to water vapour at 500°C: An in situ XPS study**  
[Sudharsan Sundar](#), Frédéric Wiame, Vincent Maurice, Philippe Marcus
- 16.20–16.40 **Microfluidic Chip for In Situ Surface Mass Spectrometry**  
Shadi bazazordeh, Thomas Reichert, Alexis Franco, Laurane Lamouline, Claude Poleunis, Ioulia Tzouvadaki, Arnaud Delcorte

19.00 **Conference dinner**

## 17 September 2026 (Thursday)

### 08.55–09.50 Studio 4

08.55–09.00 **Welcome**  
Tom Hauffman (chair of ECASIA 2026)

09.00–09.50 **PLENARY LECTURE**  
**Interpreting Thin Film Characterization Using AI-enhanced Atomistic Modeling**  
Vladyslav Turlo (Young Plenary Lecture Award)

### 09.50–10.00 To rooms

### 10.00–11.00 Energy storage and conversion (Studio 4)

10.00–10.20 **Fatigue crack growth kinetics of PV relevant laminates based on polyolefinic encapsulants and tinned copper substrates**  
Gernot M Wallner, Florian Fenyvesi, Gabriel Riedl

10.20–10.40 **Advances of secondary ion mass spectrometry metrology in battery applications**  
Yundong Zhou, Rudra N. Samajdar, Mina Jung, Rita Tilmann, Andrew J. Wain, Mauro Pasta, Alexis Franquet, Ian S. Gilmore

10.40–11.00 **Femtosecond Laser Ablation (fs-LA) XPS Depth Profiling of Lithium-Ion Batteries**  
Matthew Houchell, Charlie Chandler, Daniel Commandeur, Mark Baker, Paul Mack, Dhilan Devadasan

### 10.00–11.00 Semiconductor materials (Studio 1)

10.00–10.20 **Enlarged chemical characterization of III-V material heterostructures for advanced communication devices**  
Guy Tsamo-Tagougue, Eugénie Martinez, Franck Bassani, Mickael Martin, Thierry Baron, Vincent Thoréton, Marc Veillerot

10.20–10.40 **High sensitivity, in situ analysis of hydrogen using dynamic SIMS**  
Paula Peres, Seoyoun Choi, Kilian Soulard, Jinlei Ren, Céline Defouilloy, Flore Barbier, Aurélien Thomen, Anne-Sophie Robbes, Emmanuel Camescasse

10.40–11.00 **Monitoring of Wafer Contamination in European Research Facilities: An Inter-laboratory Field Study**  
Annika Franziska Wandesleben, Nicole Nagy, Ivan Madarevic, Heini Saloniemi, Delphine Truffier-Boutry

## 10.00–11.00 Corrosion (Studio 5)

- 10.00–10.20 **Passivation and Corrosion of AlCoCrFeNi HEA Revealed by Hard and Soft XPS**  
Pei-Chen Huang, Po-Chih Chu, Ting-Jia Yang, Wei-Chun Lin
- 10.20–10.40 **Quantitative and Time-Resolved Low Energy Ion Scattering of Thin Oxide Film Growth on HEA**  
Marcus Valtiner, Julian Pichler, Camil Bocaniciou, Markus Ostermann, Matthias Kogler, Alper T Celebi
- 10.40–11.00 **Selective Oxidation of Low Cu and Cu Enriched EAF Steels: A Combined SEM–XCT Study**  
Amal Chethimattam Abraham, Joseph Kish, Andre Phillion

## 10.00–11.00 Modelling (Studio 2)

- 10.00–10.20 **Atomistic Insights into Surface Reactivity: From Thermochemical Energy Storage to Catalysis and Biomineral Interfaces**  
Frederik Tielens
- 10.20–10.40 **Facet- and defect-dependent adsorption of toluene on CeO<sub>2</sub> surfaces: a DFT study**  
Amanda Fernandes Gouveia, Monica Calatayud
- 10.40–11.00 **XPS–REELS Analysis and KMC Modeling: Toward Controlled Organization and Chemical Composition of InGaN Droplets on GaN**  
Hydrice Dylane Nzomo, Guillaume Monier, Luc Bideux, Alberto Pimpinelli, Christine Robert-Goumet, Simon Falvard, Emmanuel Gardes

## 11.00–11.30 Coffee break

## 11.30–12.30 Energy storage and conversion (Studio 4)

- 11.30–11.50 **Probing the Local Electrochemistry of Li-ion Batteries Using Scanning Electrochemical Cell Microscopy**  
Xinhua Zhu, Joan Roca Busacker, Rodrigo Lopez Baez, Oussama Maach, Daniel Brussels Torres Morillo, Stanislav Trashin, Annick Hubin, Jon Ustarroz
- 11.50–12.10 **Accurate quantification of transition metal ratios in battery materials using combined XPS and HAXPES**  
Benjamin P. Reed, Yves Ménesguen, Sascha Nowak, Sofia Marchesini, Alexander G Shard, Andrew J Wain
- 12.10–12.30 **Surface interaction of hydrogen isotopes with native iron oxide studied by ToF-SIMS**  
Minli Chen, Dimitri Mercier, Antoine Seyeux, Sandrine Zanna, Theodorus De Bruin, Gaurav Joshi, Dominique Costa, Philippe Marcus

## 11.30–12.30 Semiconductor materials (Studio 1)

### 11.30–11.50 Wafer-Scale Metrology of buried layers by XPS/HAXPES and Multi-Energy Glancing-Angle XRF

Emmanuel Nolot, Carmen Prieto O'Mullony, Yann Mazel, Elouan Le Cun, Julien Patouillard, Paul Dietrich, Andreas Thissen, Messaoud Bedjaoui, Rémy Gassiloud

### 11.50–12.10 Quantification of the reduction of sputter deposited vanadium oxide under XPS analysis conditions

Hannah Levene, Spyros Stathopoulos, Andreas Tsiamis, Peter Lomax

### 12.10–12.30 XPS study on $\beta$ -aluminum-gallium oxide: composition, bandgap, and substrate dependence

Lukas Schewe, Jana Rehm, Ming-Chao Kao, Vedran Vonk, Zbigniew Galazka, Saud Bin Anooz, Andreas Popp, Carlos Morales Sánchez, Raquel Sánchez-Barquilla, Jan Ingo Flege

## 11.30–12.10 Corrosion (Studio 5)

### 11.30–11.50 Effect of hydrogen on the native oxides of steels

Chiara Menegus, Jan Kollender, Andreas Borgschulte, Lars P.H. Jeurgens, Claudia Cancellieri

### 11.50–12.10 Functionally graded corrosion resistant coatings on Ti-6Al-4V for biomedical implant applications

Kartikey Chaturvedi, Priya Mahato, Emila Panda

## 11.30–12.30 Modelling (Studio 2)

### 11.30–11.50 Defect mediated surface modification of TiO<sub>2</sub> surface using Grignard reagent in explicit solvation model

Krithika Ganesan, Erik C Neyts

### 11.50–12.10 Simulation of Corrosive Processes at Electrified Interfaces by Ab Initio Molecular Dynamics

Andreas Kretschmer, Samuel Mattoso, Jing, Ahmed Abdelkawy, Mira Todorova, Jörg Neugebauer, Markus Valtiner

### 12.10–12.30 Prediction of in-service behavior of aerospace aluminum alloys

Mats Meeusen, Nourhan Abdelrahman, Rene Böttcher, Herman Terryn, Mesfin Haile Mamme

## 12.30–14.00 Lunch

## 14.00 Excursion

## 18 September 2026 (Friday)

### 08.55–09.50 Studio 4

08.55–09.00 **Welcome**  
Tom Hauffman (chair of ECASIA 2026)

09.00–09.50 **PLENARY LECTURE**  
**Adsorption at the Atomic Scale: Unraveling Surface Interactions Through Theory and Experiment**  
Dominique Costa

09.50–10.00 *To rooms*

### 10.00–10.40 Technique development and metrology (Studio 4)

10.00–10.20 **Hard X-ray photoelectron spectroscopy with photon energy up to 40 keV for characterization of deeply buried interfaces**  
Satoshi Yasuno, Okkyun Seo, Yasumasa Takagi, Shinichi Komaba

10.20–10.40 **Quantification challenges of binary compounds using Hard X-ray Photoemission Spectroscopy (HAXPES)**  
Mario Ghostine, Olivier Renault, Nicolas Gauthier, Rémi Lazzari

### 10.00–10.40 Biomaterial engineering and analysis (Studio 1)

10.00–10.20 **Surface chemistry of Lipid Nanoparticles polymorphic transitions induced by -80 °C freeze-thaw cycle**  
Francesco Fumagalli, Maximilian Huber, Julia Klüpfel, Carmen Pedri, Jessica Ponti, Giuditta Guerrini, Henry Dehne, Natalia Ivleva, Dora Mehn

10.20–10.40 **Interfacial Reactivity of ZnO-coated 3D Titanium Scaffolds**  
Samantha Soulé, Malobi Seth, Flora Lemaire, Halima Kerdjoudj, Marius Colin, Laurent Weiss

### 10.00–10.40 Semiconductor materials (Studio 5)

10.00–10.20 **Growth of In<sub>0.3</sub>Ga<sub>0.7</sub>N nanodots droplet epitaxy on GaAs(111)A monitored by in situ XPS and ex situ microscopy**  
Romain Jouanneaud, Guy Tsamo Tagougue, Luc Bideux, Hydrice Dylane Nzomo, Alberto Pimpinelli, Simon Falvard, Emmanuel Gardes, Mamour Sall, Christine Robert-Goumet, Guillaume Monier

10.20–10.40 **Surface and Bulk Characterisation of Organic Semiconductors Using X-ray and Ultraviolet photoemission spectroscopies**  
Adam Roberts, Jonathan Counsell

### 10.00–10.40 Polymers (Studio 2)

10.00–10.20 **XPS fs-laser depth profiling of polymer materials and polymeric samples**  
Robin E Simpson, Tim Nunney, Charlie Chandler

10.20–10.40 **Efficiency and UV stability of interference-pigmented thermoplastic encapsulants for double-glass photovoltaic modules**  
Martin Huemer, Matthias Posch, Gernot M Wallner, Andreas Brandstaetter

10.40–11.10 *Coffee break*

## 11.10–11.50 **Technique development and metrology (Studio 4)**

11.10–11.30 **When HAXPES gets vertical: sidewall-specific lab-scale analysis of GaN LED pixels after plasma etching**

Olivier Renault, Sandra Kozuch, Simon Ruel, David Vaufrey

11.30–11.50 **Multi Dimensional Electron Energy Spectroscopy: Rapid Scan Auger Electron Spectroscopy Development for Next Generation**

Kenichi Tsutsumi, Konomi Ikita, Fuyuki Nabeshima, Tatsuya Uchida, Kazushiro Yokouchi, Akihiro Tanaka, Toshiyuki Ohama, Noboru Taguchi

## 11.10–12.10 **Biomaterial engineering and analysis (Studio 1)**

11.10–11.30 **Surface-Functionalized Nanoparticles for Amplified QCM Detection of *Listeria monocytogenes***

Chloé Richet, Delphine Larose, Philippe Trossat, Thérèse Leblois, Vincent Humblot

11.30–11.50 **Development of a microfluidic separation device to recover CD34+ stem cells**

Paul K. M. Sarpong, Agathe Figarol, Thérèse Leblois, Vincent Humblot

## 11.10–12.10 **Semiconductor materials (Studio 5)**

11.10–11.40 **KEYNOTE**

**Surface and Interface Study of ENEPIG Metallization on AlSiCu Pads for SiC Power Devices**

Valentina Spampinato, Alessandro Auditore, Anna Bassi, Antonino Licciardello

11.40–12.00 **A Digital Workflow for Sulfur 2p XPS Materials Analysis**

Hira Tauqeer, John Anderson McLeod, Jeffrey Daniel Henderson, Mark Carl Biesinger

## 11.10–12.10 **Polymers (Studio 2)**

11.10–11.30 **Fluorine Quantification in Polymer Matrices via TOF-SIMS: Supporting Compliance with Emerging EU PFAS Regulations**

Elmar Gull, David Ken Gibbs, Herbert Hutter, Andreas Limbeck

11.30–11.50 **Impact of PDMS molecular weight and crosslinker functionality on mechanical and surface properties of soft PDMS networks**

Mathieu Bugaut, Sophie Bistac, Maurice Brogly, Olivier Noël, Luc Prieur, Christophe Fond, Jaroslav Lukes

11.50–12.10 **Gadolinium sorption on chitosan: an XPS investigation**

Giulio Casula, Nicolò Aramu, Bernhard Elsener, Antonella Rossi, Marzia Fantauzzi

12.30–13.00 **Best Oral and Poster contribution award (Studio 4)**

# POSTERS

| Number of poster                                  | Name                   | Title                                                                                                                    |
|---------------------------------------------------|------------------------|--------------------------------------------------------------------------------------------------------------------------|
| <b>Biomaterial engineering and analysis (BIO)</b> |                        |                                                                                                                          |
| 1                                                 | Seungkyu Ha            | Chemical vapor deposition of self-assembled monolayer films at wafer-scale for bio-applications                          |
| 2                                                 | Miguel Hernández       | Electrogravimetric analysis of chondrocyte-laden electrospun polymer-hydroxyapatite scaffolds using EQCM                 |
| 3                                                 | Simon Uzoni            | Secondary ion yield enhancement for lipids in frozen hydrated lymphoma tissue samples using Cryo-H2O-GCIB-SIMS           |
| <b>Catalysis (CAT)</b>                            |                        |                                                                                                                          |
| 4                                                 | Stephan Bartling       | CO oxidation on size-selected Pt clusters on TiO2 and SnO2: metal-support interaction and size effect studied by NAP-XPS |
| 5                                                 | Apostolos Fanourgiakis | Towards greener titanium phosphonate catalysts for 5-HMF: influence of HCl concentration and diphosphonate structure     |
| 6                                                 | Jannat Farooq          | Interfacial Characterization of Carbon-Based Anodes for Electrochemical Allylic Oxidation                                |
| 7                                                 | Nahal Ghanemnia        | Zirconium (IV) layered phosphonate-phosphate as catalysts for the valorization of glycerol                               |
| 8                                                 | Anthony Morena         | Acidity-Activity Relationships in Metal-Doped Silica Catalysts Probed by 31P Solid-State NMR                             |
| 9                                                 | David Morgan           | Chemical Mapping of Sub-Monolayer Oxygen Species on Acid Treated HOPG Surfaces Through Photo-Induced Force Microscopy    |
| 10                                                | Miguel Mota-Bernal     | Surface analysis of anion exchange membranes after operation in a water electrolysis cell                                |
| 11                                                | Martina Saitta         | Activity versus Stability in Porous Metal Phosphonates: Insights from Glycerol Conversion to Solketal                    |
| 12                                                | Alessia Tonelli        | Synthesis of Carbon-Based Bifunctional Lewis/Brønsted Acid Catalysts for 5-Hmf Production from Cellobiose                |
| 13                                                | Zoé Vanboucq           | Design of sulfonated-silica based acid catalysts for biomass valorization                                                |
| 14                                                | Anton Voronkin         | Designing Spatially Heterogeneous Catalyst Surfaces for Accelerated Screening of Alkaline Water Splitting by SECCM       |
| 15                                                | Shufang Zhao           | Mechanistic Insights into Phenol Hydrodeoxygenation via Precisely Engineered Metal-Acid Bifunctional Catalysts           |

### Corrosion (COR)

- |    |                         |                                                                                                                        |
|----|-------------------------|------------------------------------------------------------------------------------------------------------------------|
| 16 | Maria Pia Casaletto     | Outdoor bronze surfaces investigations linking corrosion, materials and heritage science                               |
| 17 | M.A. Hernández-Gallegos | Microstructural modification of a Al-12Zn-12Mg-xCu anode to promote galvanic corrosion in the as-cast condition        |
| 18 | Maximilian Franz        | UNIFIT 2027 – Improved Spectrum Processing, Analysis and Presentation Software for XPS, AES, XAS, RAMAN Spectroscopy   |
| 19 | Carlos Morales          | Quantitative Ce 3d XPS analysis in cerium oxide: background effects, fitting strategies, and comparison to theory      |
| 20 | Rudi Tschammer          | Estimating peak fitting errors in XPS: Influence of line shape, mixing parameter, and noise on measurement uncertainty |
| 21 | Takeshi Watanabe        | Structural and chemical degradation of DNTT-based OTFTs under UV exposure studied by GIXD and tender XAS measurements  |

### Glasses, Ceramics, and Oxides (GCO)

- |    |                   |                                                                                                                   |
|----|-------------------|-------------------------------------------------------------------------------------------------------------------|
| 22 | Klára Beranová    | Lutetium sulphide powders studied by X-ray photoelectron spectroscopy                                             |
| 23 | Kerry Hazeldine   | In Situ NAP XPS of Hydrogen Driven Reduction in PtCoO <sub>2</sub> : Impact of Organic Surface Functionalisation  |
| 24 | Bouchain Joao     | Surface analysis of a mixed oxide phase of Chromium(VI) and Molybdenum(VI) supported on Ytria-Stabilized Zirconia |
| 25 | Jerzy Kubacki     | Impact of water molecules on the near-subsurface region of lead chromate PbCrO <sub>4</sub> mineral.              |
| 26 | Florentine Scholz | TOF-SIMS 2H Isotope Distribution Analysis of Mechanically Induced Cracks in Soda-Lime Glass                       |

### In-situ and near ambient pressure analysis (INSITU)

- |    |                                  |                                                                         |
|----|----------------------------------|-------------------------------------------------------------------------|
| 27 | Sylvie Harel                     | Near Ambient Pressure-X-ray Photoemission study of Water-GaAs interface |
| 28 | Hariprasad Parayil Kalappurackal | In situ and operando APXPS study of hafnicon MLD.                       |
| 29 | Agata Sabik                      | NAP-XPS - new end station at SOLARIS synchrotron                        |

### Machine learning in surface science (ML)

- |    |                  |                                                                                                                        |
|----|------------------|------------------------------------------------------------------------------------------------------------------------|
| 30 | Shun Koibuchi    | Evaluation of lubricant dispersibility in films using non-negative matrix factorization (NMF) and Voronoi tessellation |
| 31 | Camilla Marzuoli | Beyond Ridge Patterns: ToF-SIMS and Machine Learning for Chemically Augmented Fingerprint Analysis in Forensics        |

## Metals (MET)

|    |                   |                                                                                                                                                        |
|----|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| 32 | Martin Arndt      | Quantification of Zn/Fe intermetallic phases on top of steel                                                                                           |
| 33 | Minki Kim         | DIC based surface analysis to characterize material behavior for polymer coated steel sheets                                                           |
| 34 | David Köpplinger  | Visualization of Grains and Grain Boundaries in Zinc Foils Using ToF-SIMS Imaging Mode                                                                 |
| 35 | Johannes Westphal | Operando XPS Investigation of Interphase Formation at the In/(InLi) <sub>x</sub> Li <sub>6</sub> PS <sub>5</sub> Cl Interface in Solid-State Batteries |

## Nanomaterials and nanostructuring (NANO)

|    |                     |                                                                                                                     |
|----|---------------------|---------------------------------------------------------------------------------------------------------------------|
| 36 | Anusha Chaudhary    | Advanced Microscopy as a Quantitative Analysis Method for (Nano) Particle Number Concentration in Liquid Suspension |
| 37 | Paweł Dąbczyński    | Synthesis and characterization of ZnTe nanoparticles for highly efficient chemical reduction                        |
| 38 | Francesco Fumagalli | Physicochemical characterisation of iron oxides and hydroxides applied as food additive E 172                       |
| 39 | Tamara Petkova      | Synthesis and Characterization of 2D Mo-based Dichalcogenides for Advanced Optoelectronics                          |
| 40 | Rosaria Anna Picca  | Electrosynthesis of Zinc-based inorganic antimicrobials and their XPS characterization                              |
| 41 | Jennifer Theissen   | Isorecticular Expansion in Porous Aluminum(III) Phosphonates: From Synthesis to Structure–Property Relationships    |
| 42 | Lia Vanzetti        | Surface Characterization of PLA Composite Films Reinforced with Micro- and Nano-crystalline Cellulose               |
| 43 | Alenka Vesel        | Reduction of graphene oxide with hydrogen plasma                                                                    |

## Semiconductor materials (AM)

|    |                 |                                                                                                                  |
|----|-----------------|------------------------------------------------------------------------------------------------------------------|
| 44 | Mourad Kaddeche | Study of p-i-n solar cells based on InGaN/GaN Heterojunction                                                     |
| 45 | Rishikesh Maity | The effect of surface treatment on the SiC-metal band alignment studied by in-situ XPS of ultrathin metal layers |

## Surfaces of porous materials (POR)

|    |                      |                                                                                                                        |
|----|----------------------|------------------------------------------------------------------------------------------------------------------------|
| 46 | Samuel Eyley         | Tunable Metal-Organic Coordination Network at the Liquid-Solid Interface                                               |
| 47 | Patrick Rupper       | Spatially resolved surface characterization of grafted Nickel catalysts inside nanochannels                            |
| 48 | Maria Stefania Russo | Growth and Physico-Chemical Characterization of Layer-by-Layer Cu-BTC Sur-MOF Thin Films for Organic Pollutant Removal |

## Technique development and metrology (TECH)

|    |                    |                                                                                                              |
|----|--------------------|--------------------------------------------------------------------------------------------------------------|
| 49 | Lara Farkas        | A High-Energy-Resolution Approach to AMES for Chemical State Identification at the Sub-micron Scale          |
| 50 | Noah Jäggi         | Combined AMES and XPS Analysis of In-Vacuum Transferred Solar Wind Irradiated Minerals                       |
| 51 | Janez Kovač        | European Metrology project SMURFnano: Standardized measurements of surface functionalities on nanoparticles  |
| 52 | Toamsz Strączek    | Evolving STXM Capabilities at the DEMETER Beamline of the SOLARIS Synchrotron for Nanoscale Characterization |
| 53 | Dilshadbek Usmanov | Development of a Thermal Ionization Method for Organic Compounds in a Strong Electric Field                  |
| 54 | Lukasz Walczak     | Integrated UHV Platforms for Thin Film Growth and In-Vacuo Surface Analysis                                  |

## Theoretical modeling of surfaces and interfaces (MOD)

|    |                    |                                                                                                |
|----|--------------------|------------------------------------------------------------------------------------------------|
| 55 | Romain Jouanneaud  | Beyond the kinetic nucleation theory: spatial organisation of self-assembled InGa nanodroplets |
| 56 | Andreas Kretschmer | Why Zinc is a good Barrier for Hydrogen                                                        |
| 57 | Nicolas Pauly      | Local inverse inelastic mean free path for interface excitation determination                  |

## Thin films and coatings (COAT)

|    |                   |                                                                                                                   |
|----|-------------------|-------------------------------------------------------------------------------------------------------------------|
| 58 | Jan Atlanov       | Atmospheric Plasma Jet-Assisted Surface Engineering of Glass Fibres for Improved Fibre-Matrix Interfaces          |
| 59 | Jennifer Emara    | Surface and Interface Investigation of Amorphous Nb2O5 ISFET layers using ToF-SIMS, XPS and XRD                   |
| 60 | Mojdeh Fallahpour | Morphological changes of SiC nanostructures on Si substrate grown under UHV conditions                            |
| 61 | Sandra Gołbiowska | Interface analysis and adhesion of tetravinylsilane plasma polymer films on polypropylene                         |
| 62 | JR González-Parra | Surface and Electrochemical characterization of SiN thin films deposited on Ni-based alloys using RF-M sputtering |
| 64 | Lothar Veith      | Secondary Ion Mass Spectrometry in Automotive Coatings: New Analytical Approaches                                 |
| 65 | Takuma Yamada     | Structural control of CZA catalysts by Al vapor deposition                                                        |

# ECASIA 26 SPECIAL ISSUE OF SURFACE AND INTERFACE ANALYSIS

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Surface and Interface Analysis (SIA) is proud to have a Special Issue devoted to papers presented at the biennial ECASIA Conference.

The deadline for submission of papers presented at the ECASIA 26 Conference is **30<sup>th</sup> January 2027**.

We would like to encourage all who made oral and poster presentations at ECASIA 26 to consider submitting their paper to Surface and Interface Analysis.

We look forward to receiving your contribution, and wish you a very enjoyable and productive ECASIA 26.

To submit your manuscript please follow this link and select ECASIA 26 from the drop-down options: <https://authors.wiley.com/journal/SIA>



# Explore the surface in depth

Featuring innovative femtosecond laser ablation (fs-LA) technology, the Thermo Scientific™ Hypulse™ Surface Analysis System delivers exceptional depth profiling for thin films, coatings, and multi-layered structures.

This advanced instrument offers accurate, reliable depth profile measurements without the risk of damage to sample chemistry from the analysis, making it easier to precisely optimize the properties of technologically important materials, develop new devices, and gain a deeper understanding of the causes of failures in production.

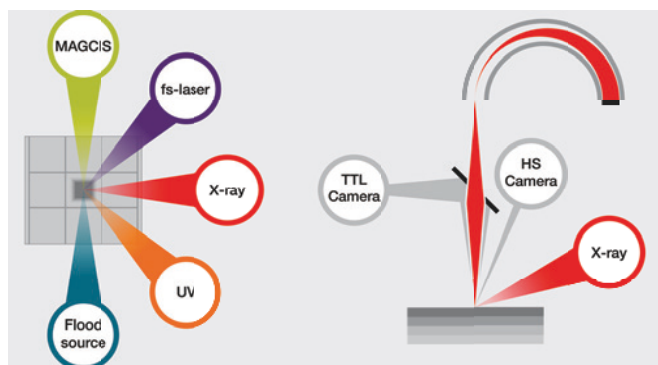
## Key benefits

- **Damage-free analysis:** Preserve the original chemical composition throughout the depth profile
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- **Enhanced depth profiling capabilities:** Profile to depths of more than 30 micrometers
- **Time efficiency:** Create profiles faster than traditional ion beam methods to enhance productivity and efficiency

The Hypulse System integrates fs-LA technology with advanced analytical features from the Thermo Scientific™ Nexsa™ G2 Surface Analysis System, including the MAGCIS dual-mode ion source, for a significant advancement in XPS depth profiling and excellent routine surface analysis.

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Arrangement of the sources around the sample holder in the Hypulse System.



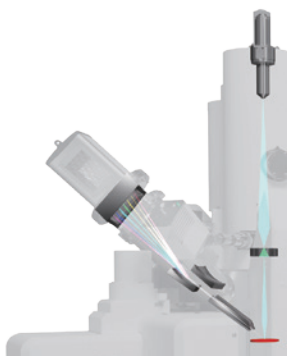
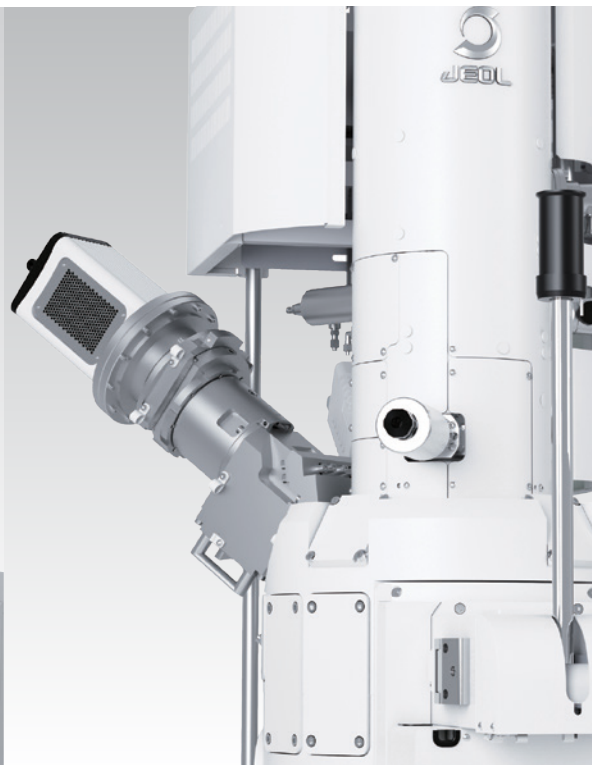
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**Handbook of Soft X-ray Emission Spectra Ver. 9.0** (May 2025)

[https://www.jeol.com/whitepaper/handbook\\_soft\\_xray\\_php](https://www.jeol.com/whitepaper/handbook_soft_xray_php)



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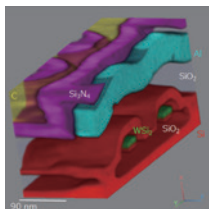
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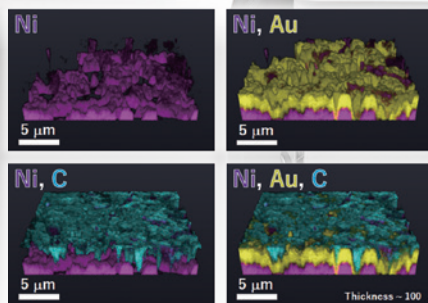
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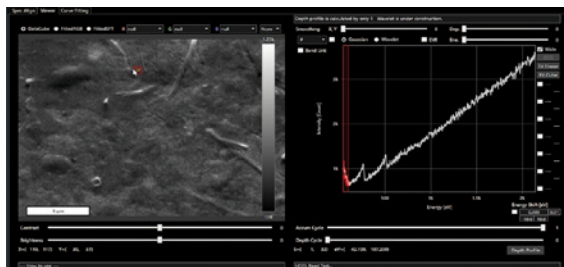


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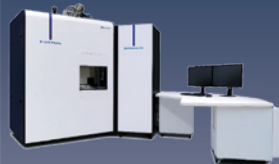
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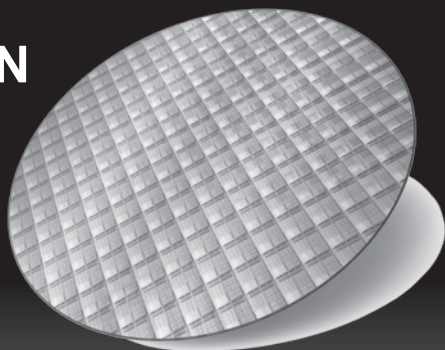


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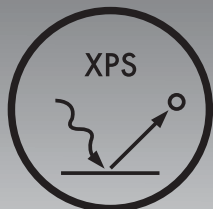
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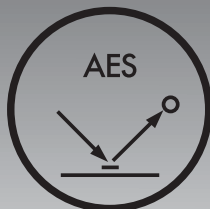
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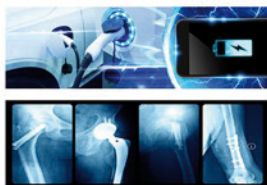
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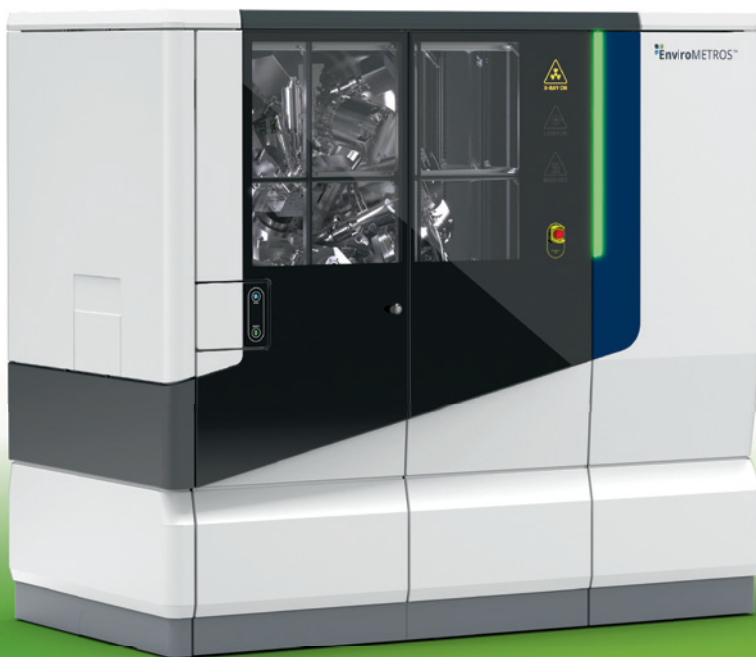
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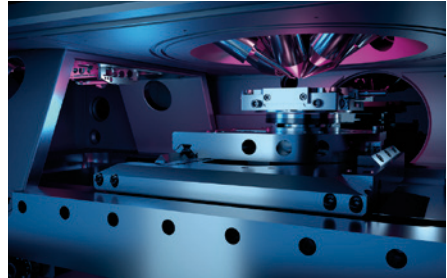
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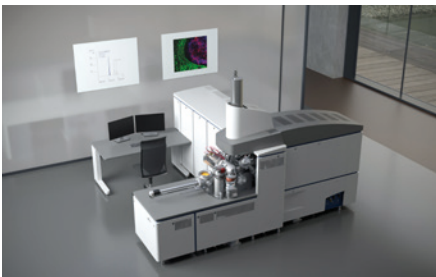
## M6 Plus



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## NOTES

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