

# CORRELATIVE MATERIALS CHARACTERIZATION WORKSHOP 2025

## TUESDAY, 21 OCTOBER

- 11:30–12:30 Registration
- 12:30–12:40 **CMC Workshop Opening**
- 12:40–12:50 **David Uhlř** (JIC) – Introduction Brno region and Microscopy Platform
- 12:50–13:00 **Silvie Skyvová** (Czech Optical Cluster) – Introduction of the Czech Optical Cluster
- 13:00–13:40 **Pavel Tomančák, Jan Neuman, Tomáš Šikola, Robert Filipek** (CMC Scientific Committee) – Introduction into Correlative Material Characterization
- CORRELATIVE IN-SITU ANALYSIS**
- 13:40–14:00 **Andre Clausner** (IKTS Fraunhofer) – Correlated study of copper exposed to extreme heat pulses using lab-based nano-X-ray tomography and Synchrotron-based techniques
- 14:00–14:20 **Martin Zouhar** (ISI Brno) – From LOM to SEM - from correlative microscopy to a SW-based image transformation tool
- 14:20–14:30 Sponsor's Talk: **Petr Horodyský** (Crytur) – KARMEN in-situ BSE detector for high temperatures
- 14:30–14:50 **Pavel Pořızka** (CEITEC VUT) – Beyond LIBS, the arduous ways in correlating chemical and structural imaging
- 14:50–15:00 Sponsor's Talk: **Jaroslav Maniš** (ThermoFisher Scientific) – Correlative microscopy in Failure Analysis of semiconductor devices
- 15:00–15:20 **Maciej Bik** (AGH University of Science and Technology) – Confocal Raman Imaging as a promising tool to resolve complicated multiphase scales formed in high-temperature corrosion conditions
- 15:20–15:45 Coffee Break
- CORRELATIVE TOMOGRAPHY AND CRYO-EM**
- 15:45–16:05 **Thomas Keller** (DESY NanoLab) – Bridging X-Ray Experiments at Brilliant Photon Sources and Lab-Based Microscopy
- 16:05–16:15 Sponsor's Talk: **Tomáš Šamořil** (TESCAN Group) – Advancing Lithium-Ion Battery Research Through Multiscale and Multimodal Characterization
- 16:15–16:35 **Miroslav Vořechovský** (Brno University of Technology) – Mathematical modeling of growing biological tissues: studies of organoids and mouse incisors
- 16:35–16:45 Sponsor's Talk: **Philipp Wollmann** (PVA Tepla) – PVA Vision GmbH – Innovation in Metrology
- 16:45–17:05 **Juliana Martins-Schalinski** (ML University Halle) – From X-ray CT Data to Function: Correlating 3D Architecture with Macroscopic Material Performance
- 17:05–17:15 Sponsor's Talk: **Ivana Burianová** (ZEISS Group) – Correlative Multiscale Microscopy
- 17:15–17:35 **Jiri Nováček** (CEITEC MU) – Advancing cryo-volume EM for multiscale biological research
- 17:35–18:30 Posters & Spot the People
- 19:00–22:00 Workshop Dinner
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# CORRELATIVE MATERIALS CHARACTERIZATION WORKSHOP 2025

**WEDNESDAY, 22 OCTOBER**

## CORRELATIVE ON-SURFACE ANALYSIS

**09:00–09:20** **Sidney Cohen** (Weizmann Institute of Science) – Scanning Probe Microscopy at the Weizmann Institute of Science – Correlation, Collaboration, and Realization

**09:20–09:30** Sponsor's Talk: **Měřicí Technika Morava** (Bruker)

**09:30–09:50** **Rosine Coq Germanius** (University Caen) – Capabilities of correlative near-field characterizations on an AFM with the electrical modes: KPFM, sMIM and SCM for SiC devices

**09:50–10:00** Sponsor's Talk: **Veronika Hegrová** (NenoVision) – AFM-in-SEM Technology: The Next Level of In-Situ Correlative and Multimodal Analysis

**10:00–10:20** **Georg Fantner** (EPFL) – Correlative Light/Electron/Atomic-Force Microscopy

**10:20–10:40** **Petr Klapetek** (Czech Metrology Institute) – Data fusion with Gwyddion

**10:40–11:00** Coffee Break

## MULTISCALE AND MULTIMODAL CORRELATIVE ANALYSIS

**11:00–11:20** **Jan Příbyl** (CEITEC MU) – Multimodal Correlative Characterization of Soft and Hydrated Biosamples Using AFM, Optical, Raman Microscopy, and Cellular Electrophysiology

**11:20–11:40** **Philipp Wollmann** (PVA Vision GmbH) – Hyperspectral Vision - a fast, non-destructive and comprehensive tool for material characterization

**11:40–11:50** Sponsor's Talk: **Jaromír Bačovský** (DeLong Instruments) – Low-Voltage, High Versatility: Multimodal Low-Voltage Electron Microscopy for Materials and Life Sciences

**11:50–12:10** **Daniel Khaykelson** (Weizmann Institute of Science) – Approaches for unsupervised clustering of 4DSTEM data sets

**12:10–12:20** Sponsor's Talk: **Matyáš Krijt** (Telight) – Telight – Explore the unseen

**12:20–12:40** **Cedric Corley-Wiciak** (European Synchrotron Radiation Facility) – X-ray Diffraction Microscopy in Multi-Modal Approaches for Semiconductor Devices

**12:40–12:50** Closing Remarks

**12:50–13:30** Final Coffee Break



WEBSITE