

CORRELATIVE MATERIALS CHARACTERIZATION WORKSHOP 2023

BRNO, 9-10 NOVEMBER 2023

PROGRAM

THURSDAY - 9.11.2023

12:30 - 12:40 (10 min) - Welcome - Tomáš Šikola, Jan Neuman, Petr Přikryl - Organizers

12:40 - 12:50 (10 min) - Regional Microscopy Innovation Ecosystem - Petr Střelec, Radka Martínková, Markéta Shánělová - Brnoregion Microscopy Platform

12:50 - 13:10 (20 min) - Correlative Microscopy: from Data to Information - Dirk van der Wal - TESCAN Group

Correlative On-Surface analysis - chair Jan Neuman

13:10 - 13:30 (20 min) - The eukaryotic proteome as a driver for multi-correlative method development - Adrian Nievergelt - Max Planck Institute, Dresden

13:30 - 13:50 (20 min) - Exploring the sub-picoscale in forces and distances - Franz Giessibl - University of Regensburg

13:50 - 14:00 (10 min) - Advanced Nanoscale Chemical Analysis using Photothermal AFM-IR & Correlated Mapping of Mechanical Properties - Dušan Novotný - Burker / Měřící Technika Morava

14:00 - 14:20 (20 min) - 3D multiphase SEM-AFM correlative microscopy - Bohuslav Rezek - CTU

14:20 - 14:40 (20 min) - Light, tips, and molecules: SPM on the path to direct nano-optical measurements - Martin Švec - FZU CAS

14:40 - 15:10 (30 min) – Break

Correlative Tomography and cryo-EM – chair Pavel Tomancak

15:10 - 15:30 (20 min) - Enterovirus cell entry and genome delivery - Pavel Plevka - CEITEC MU

15:30 - 15:50 (20 min) - Tomographic Imaging Capabilities with hard X-Rays at BAMline (Bessy II) - Henning Markötter - BAM Berlin

15:50 - 16:00 (10 min) - High-resolution 3D imaging of materials and structures - Ehrenfried Zschech - deepXscan

16:00 - 16:20 (20 min) - Correlating Structure and Dynamics to Understand Nuclear Self-Assembly - Alexander von Appen - MPI-CBG

16:20 - 16:30 (10 min) - X-Ray Microscopy as a correlative imaging technique - Mohsen Khoshkhoo - ZEISS

16:30 - 16:50 (20 min) - AI in microscopy: Coping with multiple scales and multiple modalities - Michal Kozubek - Masaryk University

16:50 - 17:10 (20 min) - Unlocking Insights: X-ray Micro Computed Tomography as a Correlative Imaging Technique - Jakub Lázňovský - CEITEC BUT

17:10 - 18:00 (50 min) - Poster Session

19:00 - 22:00 - Workshop Informal Dinner (Restaurant Baroko, Orli 17, Brno)

FRIDAY - 10.11.2023

Correlative in-situ analysis – chair Ehrenfried Zchech

9:00 - 9:20 (20 min) - Monitoring dynamic reactions inside the scanning electron microscope - Miroslav Kolíbal - CEITEC BUT

9:20 - 9:30 (10 min) - In-Situ Correlative Microscopy by AFM-in-SEM - Jan Neuman - NenoVision

9:30 - 9:50 (20 min) - Cellulose nanocrystals: from self-assembly to electronic, photonic and energy harvesting devices inspired by nature - Luís Pereira - CENIMAT

9:50 - 10:10 (20 min) - In-situ electron microscopy in the service of fundamental science: the formation of WS₂ inorganic nanotubes – Vojtěch Kunderát - Thermo Fisher Scientific

10:10 - 10:30 (20 min) - Insulating and Metallic Nanostructured Vanadium Dioxide Probed by Electron Energy-Loss Spectroscopy - Andrea Konečná - CEITEC BUT

10:30 - 10:40 (10 min) - Empowering innovation in science with TESCAN solutions - Michal Klášterecký
- TESCAN

10:40 - 11:10 (30 min) – Break

Correlative Multimodal and multiscale analysis – chair Tomas Sikola

11:10 - 11:30 (20 min) - 2D Layered Materials for High-Kinetics Energy Storage - Minghao Yu - TU Dresden

11:30 - 11:40 (10 min) - Living Cell Observation under Different Conditions by Quantitative Phase Imaging - Aneta Křížová - Telight

11:40 - 12:00 (20 min) - Correlation of hiQPI and LSCM as a tool for revealing molecular mechanisms in cell biology - Radim Chmelík - CEITEC BUT

12:00 - 12:10 (10 min) – LVEM Multimodal Imaging: A Quick Way to Comprehensive Sample Analysis – Jan Dobeš - DeLong Instruments

12:10 - 12:30 (20 min) - Correlative Characterization – Bridging 2D/3D Imaging with Micro-Structuring - Alexey Boubnov - KIT

12:30 - 12:50 (20 min) - AI in Microstructure Characterization: Analyzing Real-World Data - Grzegorz Korpala - MiViA GmbH

12:50 - 13:00 (10 min) - Final word, remarks - Tomáš Šikola, Jan Neuman, Pavel Tomančák



The event is held under the auspices of Mrs. Marketa VAŇKOVÁ, the Mayor of Brno, and Mr. Jiri HLAVENKA, the Councillor of the South Moravian Region for Science, Research, Innovation and IT.