

7:30 - 8:20 REGISTRATION

8:20 - 8:40 OPENING OF THE CONFERENCE

**SESSION I (in NLT) Chair: František Tureček (University of Washington, United States)**

8:40 - 9:30 **Computational and Gas-phase Studies in Service of Catalysis Research: Identification of the "Aristocratic Atoms"**

*Helmut Schwarz (Technische Universität Berlin, Germany)*

9:30 - 10:00 **Mass Spectrometry at the J. Heyrovský Institute of Physical Chemistry**

*Miroslav Polášek (Heyrovský Institute of Physical Chemistry of the CAS, Czech Republic)*

10:00 - 10:30 **Gas Phase Ion-molecule Reactions in Czechia over 60 Years**

*Patrik Španěl (Heyrovský Institute of Physical Chemistry of the CAS, Czech Republic)*

**COFFEE BREAK**

**SESSION II (in NLT) Chair: Michal Holčapek (University of Pardubice, Czech Republic)**

11:00 - 11:30 **Past, Present and Future of Orbitrap Mass Spectrometry** (virtual presentation)

*Alexander Makarov (Thermo Fisher Scientific, Germany)*

11:30 - 12:00 **Development of Novel Ion-less Matrices for Profiling and Imaging Mass Spectrometry**

*Aleš Svatoš (Max Planck Institute for Chemical Ecology, Germany)*

12:00 - 12:30 **Mass Spectrometry at the Institute of Organic Chemistry and Biochemistry & Museum Opening**

*Josef Cvačka (Institute of Organic Chemistry and Biochemistry of the CAS, Czech Republic)*

**LUNCH BREAK**

**SESSION III (in NLT) Chair: Miroslav Polášek (Heyrovský Inst. of Physical Chemistry of the CAS, Czech Republic)**

14:00 - 14:50 **High-resolution Native Mass Spectrometry**

*Albert J. R. Heck (Utrecht University, The Netherlands)*

14:50 - 15:20 **Noncanonical Ionized DNA Nucleobases and Nucleosides. A Dark Matter of DNA Ionization?**

*František Tureček (University of Washington, United States)*

15:20 - 15:50 **Mass Spectrometry at the University of Pardubice: Focus on Lipidomics**

*Michal Holčapek (University of Pardubice, Czech Republic)*

15:50 - 16:20 **Forty Year Evolution of High Throughput Mass Spectrometry: A Perspective** (virtual presentation)

*Tom Covey (SCIEX, Canada)*

**BREAK**

**POSTER SESSION & DINNER (in OWTP)**

17:30 - 19:00 **POSTER SESSION**

19:00 - 23:00 **SOCIAL EVENT** - Conference dinner, concert performance, guided underground tours

**SESSION IV (in NLT) Chair: Jan Preisler (Masaryk University, Czech Republic)**

- 8:40 - 9:30 FT ICR Mass Spectrometry. Is There Room for Further Improvements?** (virtual presentation)  
*Evgeny Nikolaev (Skolkovo Institute of Science and Technology, Russia)*
- 9:30 - 10:00 Mass Spectrometry: from Metabolites to Art**  
*Karel Lemr (Palacký University Olomouc, Czech Republic)*
- 10:00 - 10:30 Historical Perspectives on Bruker's Involvement in Mass Spectrometry and the Development of Modern Q-TOF Mass Spectrometry**  
*Gary H. Kruppa (Bruker, Czech Republic)*
- COFFEE BREAK**

**SESSION V – YOUNG SCIENTISTS (in NLT) Chair: Karel Lemr (Palacký University Olomouc, Czech Republic)**

- 11:00 - 11:15 Identification of Novel Fatty Acids in Vernix Caseosa using UV Photodissociation Mass Spectrometry in Combination with Fixed-charge Photo-labile Derivatives**  
*Lukáš Cudlman (Institute of Organic Chemistry and Biochemistry of the CAS, Czech Republic)*
- 11:15 - 11:30 Mass Spectrometry-based Chemical Proteomics in Protein Post-translational Modifications Analysis**  
*Pavel Kielkowski (Ludwig-Maximilians-Universität München, Germany)*
- 11:30 - 11:45 Mapping of Regional and Subregional Unbound Drug Transport Across Blood-Brain Barrier Enabled by Quantitative Mass Spectrometry Imaging**  
*Dominika Luptáková (Uppsala University, Sweden)*
- 11:45 - 12:00 Visualization of Polyamines and Amino Acids Alterations in Neonatal Brain Hypoxic-Ischemic Injury in Rats by Mass Spectrometry Imaging**  
*Hynek Mácha (Institute of Microbiology of the CAS, Czech Republic)*
- 12:00 - 12:15 Temperature-Controlled Electrospray: A Window into Solution Thermochemistry of Non-Canonical Nucleic Acid Complexes**  
*Adam Pruška (ETH Zurich, Switzerland)*
- 12:15 - 12:30 Freeing *Aspergillus fumigatus* of Polymyovirus Infection renders it More Resistant to Competition with *Pseudomonas aeruginosa* due to Altered Iron-acquiring Tactics**  
*Rutuja Patil (Institute of Microbiology of the CAS, Czech Republic)*
- LUNCH BREAK**

**SESSION VI (in NLT) Chair: Aleš Svatoš (Max Planck Institute for Chemical Ecology, Germany)**

- 14:00 - 14:50 Native Ambient Mass Spectrometry: Mass Spectrometry Imaging of Intact Proteins and Protein Complexes** (virtual presentation)  
*Helen J. Cooper (University of Birmingham, United Kingdom)*
- 14:50 - 15:20 A (Time of) Flight from Ames to Brno: Laser Desorption Mass Spectrometry at Masaryk University**  
*Jan Preisler (Masaryk University, Czech Republic)*
- 15:20 - 15:50 The History of Time-of-Flight Mass Spectrometry at: VG - Micromass - Waters** (virtual presentation)  
*Mike Morris (Waters Corporation, Manchester, United Kingdom)*
- 15:50 - 16:20 Mass Spectrometry Innovation at Agilent Technologies** (virtual presentation)  
*George Stafford (Agilent Technologies, United States)*
- 16:20 - 16:30 CONFERENCE CLOSING**

**IOCB ChemBioDrug Workshop (in NLT) Chair: Josef Cvačka (IOCB, Czech Republic)**

**17:00 - 17:05** OPENING

**17:05 - 17:25** Orbitrap Fusion Lumos: A Versatile Mass Spectrometer for Biomolecules

*Martin Hubálek (Institute of Organic Chemistry and Biochemistry of the CAS, Czech Republic)*

**17:25 - 17:45** Protein Structure and Interactions Studied by Cross-Linking Mass Spectrometry

*Petra Junková (Institute of Organic Chemistry and Biochemistry of the CAS, Czech Republic)*

**17:45 - 18:05** Protein Structure and Interactions Studied by Hydrogen Deuterium Exchange Mass Spectrometry

*Jakub Sýs (Institute of Organic Chemistry and Biochemistry of the CAS, Czech Republic)*

**18:05 - 18:30** HPLC/ESI-MS<sup>2</sup> – Based Lipidomic Analysis and MALDI Imaging of Lipids

*Vladimír Vrkošlav, Štěpán Strnad (Institute of Organic Chemistry and Biochemistry of the CAS, Czech Republic)*

**18:30 - 19:00** Discussion / User Meeting

**WORKSHOP CLOSING**