

XXXVI. European Congress on Molecular Spectroscopy (EUCMOS)
XLIV. European Meeting on Physical Organic Chemistry (EMPOC)
24 – 29 August 2025, Wrocław, Poland
(<https://eucmos2025.uwr.edu.pl/>)

Conference Programme

Wrocław, 2025

Sunday, August 24th

Faculty of Chemistry (Fryderyka Joliot-Curie 14 - entry near the University Library)

[Link to the map](#)

- 14:00 - 20:00** **Registration** - Student's entrance
- 15:00 - 17:00** **Bruker Workshop**
OPUS Unlocked: Getting the Most Out of Your FT-IR Spectrometer,
Room 145
- 19:00 - 21:00** **Get-together party** - drinks, snacks, and music, Main Hall

Monday, August 25th

University Library (Fryderyka Joliot-Curie 12) [Link to the map](#)

08:30 – 17:00 **Registration** - Main Hall

Lecture hall III

9:00 - 9:30 **Opening Ceremony**

CHAIR: **prof. Kazimierz Orzechowski**

9:30 - 10:00 **PL-1** **Rui Fausto** (Coimbra, Portugal)
*Tunnelling-Driven Chemistry: From Conformational Changes To
Optically-Controlled Tunnelling-Based Molecular Switches*

10:00 - 10:30 **PL-2** **Maria Luisa Saladino** (Palermo, Italy)
Non Invasive Spectroscopy for Cultural Heritage

10:30 - 11:00 **Coffee break**

CHAIR: **prof. Rui Fausto**

11:00 - 11:30 **PL-3** **Małgorzata Barańska** (Kraków, Poland)
Raman Probes for Multiplex Bioimaging

11:30 - 12:00 **PL-4** **Klaus Gerwert** (Bochum, Germany)
*Protein-Misfolding as Fluid Biomarker in Morbus Alzheimer and
Parkinson Measured with the iRS (immuno-Infrared Sensor)*

12:00 - 12:10 **OC-1** **Maria Rosa Lopez-Ramirez** (Málaga, Spain)
*Highly Effective Core@shell AuAg Nanoparticles as Potential SERS
Substrates*

12:10 - 12:30 **OC-2** **Anna Pieczara** (Kraków, Poland)
*Raman-Based Biochemical Profiling of Adrenaline's Action on Lipid
Metabolism in Endothelial Cells*

12:30 - 12:50 **OC-3** **Halina Abramczyk** (Łódź, Poland)
*A New Modality for Cancer Tracking-Raman Imaging, NanoIR Imaging,
Fluorescence and AFM Studies Combined with AI Analysis*

12:50 - 13:00 **OC-4** **Adriana Adamczyk** (Kraków, Poland)
A Spectroscopic Evaluation of the Erythroid Differentiation Process Induced by Drugs of Different Mechanisms of Action

13:00 - 15:00 **Lunch**

CHAIR: **prof. Herbert Michael Heise**

15:00 - 15:20 **OC-5** **Beata Brożek-Pluska** (Łódź, Poland)
Exploring The Therapeutic Molecules Effects in Colon Cells Using Integrated Raman Imaging-AFM-Femtosecond Laser Spectroscopy

15:20 - 15:40 **OC-6** **Rares-Ionut Stiufiuc** (Cluj-Napoca, Romania)
The Role of Spectroscopic Liquid Biopsy in Early Disease Detection

15:40 - 16:00 **OC-7** **Andreas Barth** (Stockholm, Sweden)
The Structure of Amyloid- β Oligomers Studied by Experimental and Computational Isotope-Edited Infrared Spectroscopy

16:00 - 16:20 **OC-8** **Sylwester Mazurek** (Wrocław, Poland)
Carotenoid Profile of Bee Pollen Fractions Based on Raman Spectra

16:20 - 16:40 **OC-9** **Katarzyna Cieřlik-Boczula** (Wrocław, Poland)
FTIR Studies of the Structure of Lipid Membrane Models for Protein/Peptide-Lipid Matrix Interaction and for Carriers in the Transport of Biologically Active Substances

16:40 - 16:50 **OC-10** **Ewa Szczęśny-Małyśiak** (Kraków, Poland)
Monitoring of Cytochrome C Oxidation State in Live Cells with Resonance Raman Imaging

16:50 - 17:00 **OC-11** **Patrycja Dawiec** (Kraków, Poland)
Spectroscopic Profiling of Pharmacologically Induced Metabolic Shifts in Sensitive and Resistant Blood Cancer Cells

17:00 - 17:30 **Coffee break**

19:00 - 21:00 **Barbecue at the Botanical Garden** (Henryka Sienkiewicza 23)
[Link to the map](#)

Tuesday, August 26th

University Library (Fryderyka Joliot-Curie 12) [Link to the map](#)

08:30 – 12:50 **Registration** - Main Hall

Lecture hall III

CHAIR: **prof. Sylvia Turrell**

9:00 - 9:30 **PL-5** **Peter Gardner** (Manchester, UK)
Infrared Imaging of Prostate Tissue: From Diagnosis To Prognosis

9:30 - 10:00 **PL-6** **Herbert Michael Heise** (Iserlohn, Germany)
Infrared Biospectroscopy with ATR Measurement Technology for the Investigation of Insulin-Dependent Intracellular Processes in the Monocytic Cell Line

10:00 - 10:30 **PL-7** **Maxim S. Pshenichnikov** (Groningen, Netherlands)
Self-Assembly of Artificial Light-Harvesting Complexes: A Molecular Spectroscopist's Perspective

10:30 - 11:00 **Coffee break**

CHAIR: **prof. Klaus Gerwert**

11:00 - 11:30 **PL-8** **Michael Schmitt** (Düsseldorf, Germany)
The Concept of the Dipole Moment: Why is it still relevant for Chemistry?

11:30 - 11:50 **OC-13** **Marta Gordel-Wójcik** (Wrocław, Poland)
Tailoring Diverse Light–Matter Interactions by Combining Plasmonic, Dielectric, and Quantum-Confined Nanostructures in Hybrid Nanosystems

11:50 - 12:00 **OC-14** **Wiktoria Korona** (Kraków, Poland)
A New Approach to Spectral Analysis of Lipid Pathways in Cancer Cells Using Labeled Raman and O-PTIR Technique

12:00 - 12:10 **OC-15** **Jakub Dybaś** (Kraków, Poland)
Spectroscopic Analysis of Biochemical Composition of Red Blood Cells in Polycythemia Vera Patients

12:10 - 12:20 **OC-16** **Anna Kołodziej** (Kraków, Poland)
Spectroscopic Study of Magnetic Composites Modified with Hydroxyapatite for Regenerative Medicine Applications

12:20 - 12:30 **OC-17** **Vlada Pashynska** (Kharkiv, Ukraine)
Molecular Interactions Between Anticancer Drugs and Ascorbic Acid: Insights into Drug Activity Modulation

12:30 - 12:50 **OC-18** **Ahmad Salman** (Beer-Sheva, Israel)
Rapid Infection Diagnosis Using Infrared Microscopy, Peripheral Blood Tests, and an Expert System in Febrile Pediatric Oncology

12:50 - 13:00 **Conference Photo**

13:00 - 15:00 **Lunch**

CHAIR: **prof. Małgorzata Barańska**

15:00 - 15:20 **OC-19** **Ivan Němec** (Prague, Czech Republic)
Combined Spectroscopic and Structural Study of Promising NLO Crystals Based on 2D Molecular Building Units

15:20 - 15:30 **OC-20** **Thomas Golin Almeida** (Copenhagen, Denmark)
Atmospheric Oxidation Reaction Kinetics of Ethanolamines Employed in Carbon-Capture

15:30 - 15:40 **OC-21** **Ružica Marković** (Copenhagen, Denmark)
Vibrational Spectroscopy of Monohydrated Radical Cation Complexes

15:40 - 15:50 **OC-22** **Piotr Najgebauer** (Opole, Poland)
Molecular Modeling of Non-Covalent Interactions Between Orellanine and Graphene Oxide Models

15:50 - 16:00 **OC-23** **Nanna Falk Christensen** (Copenhagen, Denmark)
Calculated Absorption Cross Sections and Photolysis Rates of Ketohydroperoxides

CHAIR: **prof. Mirosław Czarnecki**

16:00 - 17:00 **Poster - Flash presentations**

17:00 - 19:00 **Poster session with coffee**

Wednesday, August 27th

University Library (Fryderyka Joliot-Curie 12) [Link to the map](#)

08:30 – 11:00 **Registration - Main Hall**

Lecture hall III

CHAIR: **prof. Michael Schmitt**

9:00 - 9:30 **PL-9** **Jan Lundell** (Helsinki, Finland)
Light-Induced Chemistry in Low Temperature Matrices

9:30 - 10:00 **PL-10** **Marcus Meuwly** (Basel, Switzerland)
Computational Vibrational Spectroscopy in the Era of Machine Learning

10:00 - 10:30 **PL-11** **Malgorzata Biczysko** (Wrocław, Poland)
Simulation of Vibrational Signatures from the Mid Infrared (MIR) to the Vacuum Ultraviolet (VUV)

10:30 - 11:00 **Coffee break**

CHAIR: **prof. Maxim Pshenichnikov**

11:00 - 11:30 **PL-12** **Søren Balling Engelsen** (Copenhagen, Denmark)
Near Infrared Spectroscopy in Food Science and Industry

11:30 - 11:50 **OC-43** **Jacek Waluk** (Warsaw, Poland)
Photostability: Proper Determination and Control

11:50 - 12:10 **OC-25** **Václav Profant** (Prague, Czech Republic)
Terahertz Raman Optical Activity as a New Window into Supramolecular Chirality

12:10 - 12:30 **OC-26** **Natalia Piergies** (Kraków, Poland)
Stability of Drug–Metal Nanoparticle Conjugates as a Key Determinant of Their In Vitro Efficacy

12:30 - 12:40 **OC-27** **Przemysław Dopieralski** (Wrocław, Poland)
Impact of Water on the Nanomechanical Degradation of Functionalized Gold Surface

12:40 - 13:00 **OC-28** **Karolina A. Haupa** (Ettlingen, Germany) **BRUKER**
Spectroscopy for Sustainability: The Role of FTIR in Green Technologies

13:00 - 15:00 **Lunch**

13:55 - 14:55

Bruker Workshop - Lecture hall IV

Getting up to speed with Infrared laser imaging

SESSION 1 - Lecture hall III

CHAIR: **prof. Jacek Waluk**

- 15:00 - 15:20 OC-29 Casper Vindahl Jensen** (Copenhagen, Denmark)
Resonance Tuning of the Water-Trimethylamine Complex in Three Different Experimental Media
- 15:20 - 15:40 OC-30 Aleksandra Weselucha-Birczyńska** (Krakow, Poland)
Raman and Nanomechanical Studies of Polymer Mats with Carbon Nano-additives
- 15:40 - 16:00 OC-31 Vili-Taneli Salo** (Copenhagen, Denmark)
Kinetics of Atmospheric Oxidation of Ammonia
- 16:00 - 16:20 OC-32 Dhritabrata Pal** (Copenhagen, Denmark)
Dimethyl Ether-Water Hydrogen Bond Complex: Room Temperature Gas-Phase Detection and Determination of Formation Gibbs Energy
- 16:20 - 16:40 OC-33 Andrzej Teisseyre** (Wrocław, Poland)
The Inhibitory Effects of Genistein and Resveratrol on Voltage-Gated Potassium Channels in Cancer Cells – Putative Role in Anti-Cancer Activity
- 16:40 - 16:50 OC-34 Sándor Góbi** (Budapest, Hungary)
Hydrogen-Atom-Assisted Thione–Thiol Tautomerization of Thiourea Derivatives in para-H₂ Matrix

SESSION 2 - Lecture hall IV

CHAIR: **prof. Richard Buchner**

- 15:00 - 15:20 OC-35 Tomasz Pawel Czaja** (Copenhagen, Denmark)
Using ASCA to Study Sampling in Spectroscopy
- 15:20 - 15:40 OC-36 Eva Kočíšová** (Prague, Czech)
Metal Oxides and Metal Oxides/Metal Nanostructures for Surface-Enhanced Raman Scattering (SERS) Spectroscopy
- 15:40 - 15:50 OC-37 Ali Muhieddine** (Orsay, France)
Photodetachment of Cooled Deprotonated Chlorophyll Pigments in the Gas Phase
- 15:50 - 16:00 OC-38 Szymon Smólka** (Wrocław, Poland)
Physicochemical Properties and Phase Transition Mechanisms of Lead Halides Comprising Small Organic Cations in the Structure: Novel Perovskites with Tunable Optoelectronic Properties
- 16:00 - 16:10 OC-39 Vera Staun Hansen** (Copenhagen, Denmark)
Absorption Cross-Section of Gas-Phase Isoprene in the Entire JWST Region
- 16:10 - 16:20 OC-40 Andras Sun Poulsen** (Copenhagen, Denmark)
Generation and Consideration of Trioxyl Radical

- 16:20 - 16:30 OC-41 Natalia Dutkiewicz** (Warsaw, Poland)
Porphyrin-acene Dyads for Controlled Singlet Oxygen Generation and Depletion
- 16:30 - 16:50 OC-42 Kazimierz Orzechowski** (Wrocław, Poland)
Dielectric Spectroscopy in Breast Cancer Imaging
- 17:00 - 17:30 Coffee break**
- 19:30 - 20:30 Classical music concert at the Oratorium Marianum**
In the concert hall of the main building of the University of Wrocław (Plac Uniwersytecki 1) [Link to the map](#)

Thursday, August 28th

University Library (Fryderyka Joliot-Curie 12) [Link to the map](#)

08:30 – 11:00 Registration - Main Hall

Lecture hall III

CHAIR: prof. Poul Erik Hansen

- 9:00 - 9:30 PL-13 Richard Buchner** (Regensburg, Germany)
Dielectric Spectroscopy in Solution Chemistry - Advantages and Pitfalls
- 9:30 - 10:00 PL-14 Henrik G. Kjaergaard** (Copenhagen, Denmark)
The Effect of Temperature on OH-stretching Bands of Hydrogen Bonded Complexes
- 10:00 - 10:30 PL-15 Bernhard Lendl** (Wien, Austria)
Enhancing Mid-IR Sensing Through Laser Technology and Integrated Photonics

10:30 - 11:00 Coffee break

CHAIR: prof. Jan Lundell

- 11:00 - 11:20 OC-24 Marek Drozd** (Wrocław, Poland)
About Metamaterials and Other Second Harmonic Generators
- 11:20 - 11:40 OC-44 Maciej Ptak** (Wrocław, Poland)
Mechanism of Phase Transition in Layered 2-Fluoroethylammonium Cadmium Chlorobromide
- 11:40 - 12:00 OC-45 Iwona Płowaś-Korus** (Poznan, Poland)
Molecular Dynamics and Interactions in Aqueous Solutions of Skin Care Ingredients
- 12:00 - 12:10 OC-46 Eaindra Lwin** (Göttingen, Germany)
The Universal Vibrational Dynamics of Water Bound to Tertiary Amines: More Than Just Fermi Resonance
- 12:10 - 12:20 OC-47 Ivan Kopal** (Prague, Czech Republic)
Underrated Surface Phenomena Influencing Surface-Enhanced Raman Scattering at Plasmonic Interfaces
- 12:20 - 12:30 OC-48 Valerie Smeliková** (Prague, Czech Republic)
Treatment of MoS₂ Monolayers by Atomic Deuterium

12:30 - 12:40 OC-49 Karol Kulacz (Wrocław, Poland)
Complexity and Various Dynamic States of Interlayer Water in Nontronite: Insights from Dielectric Spectroscopy and TG–DSC Analysis

12:40 - 13:00 OC-50 Agnieszka Sozańska (Warsaw, Poland) **RENISHAW**
Remote and in situ Sampling with the Virsa™ Raman Analyser

13:00 - 15:00 Lunch

13:55 - 14:55 Bruker Workshop - Lecture hall IV
Unleash the real speed of Raman imaging on any sample

SESSION 1 - Lecture hall III

CHAIR: prof. Marcus Meuwly

15:00 - 15:20 OC-51 Marek Procházka (Prague, Czech Republic)
Surface-Enhanced Raman Scattering (SERS) Spectroscopy on Conductive Polymers and Hybrid Metal/Conductive Polymers Materials

15:20 - 15:40 OC-52 Justyna Grabska (Innsbruck, Austria)
Integration of NIR Spectroscopy and Anharmonic Chemical Calculations for Applied Analysis

15:40 - 15:50 OC-53 Aleksandra Szymańska (Warsaw, Poland)
Seeing Red and Orange: Tailored Nanostructured SERS Substrates for Azo Dye Detection

15:50 - 16:00 OC-54 Veranika Kuzmina (Warsaw, Poland)
Insights into the Photochemical Behavior of Coumarin Derivatives via UV-Vis and NMR: From Reversible Rotation to Irreversible Photodegradation

16:00 - 16:20 OC-55 Barbara Golec (Warsaw, Poland)
Photostability of Azaaromatic Compounds

16:20 - 16:40 OC-56 Alicja Dabrowska (Vienna, Austria)
Towards on-Chip Mach-Zehnder Interferometer for Complex Refractive Index Sensing of Liquids in the Mid-Infrared

16:40 - 16:50 OC-57 Shiva Ghasemi (Hamedan, Iran)
Chemometric Deconvolution of Raman Spectra in Multi-Doped Carbon Nanomaterials

SESSION 2 - Lecture hall IV

CHAIR: prof. Małgorzata Biczysko

15:00 - 15:20 OC-58 Jože Grdadolnik (Ljubljana, Slovenia)
The Physical Origin of Hydrophobicity

15:20 - 15:40 OC-59 Rafał Szabla (Wrocław, Poland)
Stacking and Chalcogen Bonding Enhance Photoinduced Electron Transfer in Nucleic Acids

15:40 - 15:50 OC-60 Roel van de Ven (Nijmegen, Netherlands)
Finding a Needle in a Needle Stack: Leveraging Vibrational Spectra and Machine Learning to Guide Conformational Search

- 15:50 - 16:00 OC-61 Anjali Sangwan** (Delhi, India)
Formation of Ethanolamine-Mediated Surfactant-Free Microemulsions Using Hydrophobic Deep Eutectic Solvents
- 16:00 - 16:10 OC-62 Kamil Wojtkowiak** (Wrocław, Poland)
Theoretical Study of Selected Halogen-Bonded Complexes: Case of Methionine and Its Derivatives
- 16:10 - 16:20 OC-63 Štěpán Jílek** (Prague, Czech Republic)
Investigation of the Structural Plasticity of Lithium Stabilized Mononucleotide G-Quadruplexes via Raman Optical Activity
- 17:00 - 17:30 Coffee break**
- 19:30 - 22:00 Conference banquet**
Hotel HP Park Plaza Wrocław (Bolesława Drobniera 11-13)
[Link to the map](#)

Friday, August 29th

University Library (Fryderyka Joliot-Curie 12) [Link to the map](#)

8:30 – 9:00 Conference office - Main Hall

Lecture hall III

CHAIR: prof. Søren Balling Engelsen

- 9:00 - 9:30 PL-16 Piotr Piecuch** (Michigan, USA)
Computational Studies of FR0-SB, a Novel Organic Compound that Deprotonates Alcohols upon Photoexcitation
- 9:30 - 10:00 PL-17 Poul Erik Hansen** (Roskilde, Denmark)
A Kaleidoscopic View of Intramolecular Hydrogen Bonds
- 10:00 - 10:30 PL-18 Sylvia Turrell** (Lille, France)
From Alzheimer's Disease to Functional Nanomaterials: 100 Years of Advances in Vibrational Spectroscopy
- 10:30 - 11:00 Closing Ceremony**
- 11:00 - 11:30 Coffee break & snacks**
- 11:30 – 12:00 Conference office - Main Hall**