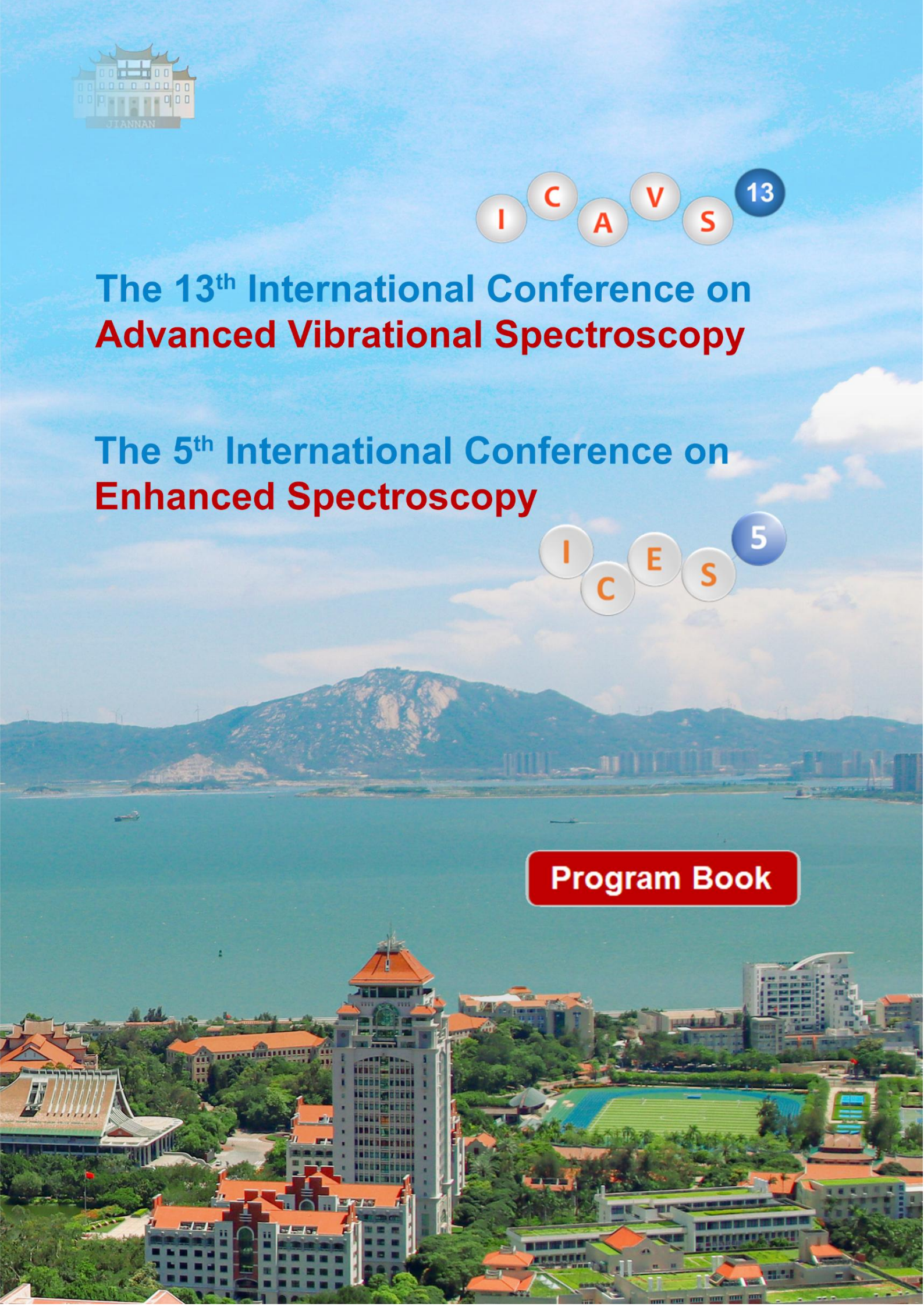
JI'ANNAN
ICAVS 13
The 13th International Conference on
Advanced Vibrational Spectroscopy
The 5th International Conference on
Enhanced Spectroscopy
ICES 5
Program Book

The 13th International Conference on Advanced Vibrational Spectroscopy

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Program Book

Daily Schedule	Nov. 30 (Sun.)			
Time/Place	Room A	Room B	Room C	Room D
14:00-18:00	Registration & Workshop(s)			
18:30-20:00	Registration & Welcoming Dinner			
Daily Schedule	**Dec. 1 (Mon.)**			
Time/Place	Room A	Room B	Room C	Room D
8:30-8:40	Opening Ceremony			
8:40-10:00	PL (Xiaoliang Sunney Xie & Juergen Popp)			
10:00-10:30	Photo & Coffee Break			
10:30-12:00	**Enhanced spectroscopics**	**Nanospectroscopy**	**Vibrational Imaging**	**Raman Optical Activities and Vibrational Chirality Dichroism**
	Invited 10:30-10:50	Invited 10:30-10:50	Invited 10:30-10:50	Invited 10:30-10:50
	[1-I-1] Advances in Electrochemical Surface Enhanced Infrared Absorption Spectroscopy (SEIRAS) Ian Burgess (University of Saskatchewan)	**[2-I-1] Single-Molecule Raman Spectromicroscopy at the Atomic Scale** Zhenchao Dong (University of Science and Technology of China)	**[3-I-1] Time-domain Stimulated Raman Scattering Tomography for Label-free Functional Biomolecular 3D Imaging of Live Cells and Tissue** Zhiwei Huang (National University of Singapore)	**[4-I-1] Overview of Vibrational Optical Activity: Principal Applications of VCD and ROA** Laurence A. Nafie (Syracuse University)
	Invited 10:50-11:10	Invited 10:50-11:10	Oral 10:50-11:05	Invited 10:50-11:10
	[1-I-2] In-Situ Raman Probing Electrochemical Reactions Jian-Feng Li (Xiamen University)	**[2-I-2] Optics and Photochemistry of Single Molecules Explored with Sub-nm Precision** Anna Maria Rosławska (Max Planck Institute for Solid State Research)	**[3-O-1] Deep-dive into Cell Biochemistry with O-PTIR and FL-PTIR in Water Environment** Szymon Tott (Jagiellonian University)	**[4-I-2] Applications of Polarised and Unpolarised Infrared Absorbance Spectroscopy to Help us Understand for Complex Biomolecular Systems: Bioactives to Biopolymers** Alison Rodger (The Australian National University)
	Oral 11:10-11:25	Invited 11:10-11:30	Oral 11:05-11:20	Oral 11:10-11:25
	[1-O-1] Vibrational imaging of CO electrooxidation on single nanocatalysts Yi-Fan Bao (Xiamen University)	**[2-I-3] Chemically Interrogating N-Heterocyclic Carbenes at the Single-Molecule Level Using Tip-Enhanced Raman Spectroscopy** Nan Jiang (University of Illinois Chicago)	**[3-O-2] Next-generation Time-domain Stimulated Raman Scattering Spectroscopy and Imaging for Biomedical Applications** Hanqing Xiong (Peking University)	**[4-O-1] Instrumental advances in Raman optical activity (ROA) – Deep-UV ROA as a possible tool for broadband resonance ROA studies** Daniel-Ralph Hermann (Palacky University Olomouc)
	Oral 11:25-11:40	Oral 11:30-11:45	Oral 11:20-11:35	Oral 11:25-11:40
	[1-O-2] Plasmon-Enhanced Raman Spectroscopy: From Single Molecule Detection to In Situ/Operando Spectroelectrochemical Studies Chaoyu Li (Tongji University)	**[2-O-1] Probing Supported Lipid Membranes at the Nanoscale using Tip-Enhanced Raman Spectroscopy** Naresh Kumar (ETH Zurich)	**[3-O-3] Probing Local Electric Fields via Vibrational Lifetime of a Delocalized Oscillator with Bond-Selective Fluorescence** Haomin Wang (Fudan University)	**[4-O-2] Chiral Nature of Amyloids: An Interdisciplinary View on Amyloid Polymorphism** Aleksandra Wajda (Jagiellonian University)
	Sponsor 11:40-12:00	Oral 11:45-12:00	Sponsor 11:35-11:55	Oral 11:40-11:55
	Time-Resolved Raman Spectroscopy: Eliminating Fluorescent for Clear Chemical Identification Tim Batten (Renishaw)	**[2-O-2] Structure-Property Analysis of Polymer Nanoparticles Via Combined Nanomechanical and Spectroscopic Methods in Liquid** Xinyue Wang (Institute of Physical Chemistry and Abbe Center of Photonics, Friedrich-Schiller Universität Jena)	**Chemical Visualization through Photothermal IR and Stimulated Raman Spectroscopy** Hailong Hu (Photothermal)	**[4-O-3] Exploring Lanthanide Optical Activity via Raman Optical Activity Instrumentation for Biomolecular Analysis** Tao Wu (Institute of Organic Chemistry and Biochemistry, Czech Academy of Sciences)
12:00-14:30	Lunch			
14:30-15:40	**Enhanced spectroscopics**	**Nanospectroscopy**	**Vibrational Imaging**	**Advanced Instrumentation**
	Invited 14:30-14:50	Invited 14:30-14:50	Invited 14:30-14:50	Invited 14:30-14:50
	[1-I-3] SERS of Molecular Tunnel Junctions Reveals Metal-Molecule Charge-Transfer Resonances Zee Hwan Kim (Seoul National University)	**[2-I-4] Quantum Vibrational Nano-Imaging and -Spectroscopy** Markus B. Raschke (University of Colorado)	**[3-I-2] Cryogenic Raman Microscopy: Capturing Dynamic Biological States with High Chemical State Fidelity** Katsumasa Fujita (The University of Osaka)	**[4-I-3] Toward Next-Generation Spectral Detection: A Miniaturized High-Performance Solution** Zongyin Yang (Zhejiang University)

Daily Schedule	Dec. 1 (Mon.)			
Time/Place	**Room A**	**Room B**	**Room C**	**Room D**
14:30-15:40	Invited 14:50-15:10 **[1-I-4] In situ monitoring of nanoparticle catalysis by using SERS** Wei Xie (Nankai University)	Invited 14:50-15:10 **[2-I-5] Tip-enhanced Strong Coupling and Nano-optical Trapping Spectroscopy of Single Quantum Dots** Kyoung-Duck Park (Pohang University of Science and Technology)	Oral 14:50-15:05 **[3-O-4] Two Paths and One Goal: Raman Probes for High-Specificity Imaging of Mitochondria and Lipids Differentiation** Anna Pieczara (Jagiellonian University)	Invited 14:50-15:10 **[4-I-4] Large-Area Molecular Mapping Platform (LAMP)** Ping Wang (Changping National Laboratory)
	Invited 15:10-15:30 **[1-I-5] Metal-Molecule Interactions at the Nanoscale: Issues, Implications and Future Developments in SERS** Laura Fabris (Politecnico di Torino)	Oral 15:10-15:25 **[2-O-3] Nanospectroscopic signatures of local disorder in 2D materials** Otakar Frank (J. Heyrovsky Institute of Physical Chemistry of the Czech Academy of Sciences)	Oral 15:05-15:20 **[3-O-5] Enhanced Widefield Mid-IR Photothermal Imaging and Spectroscopy for Tissue and Cell Screening** Christoph Krafft (Leibniz Institute of Photonic Technology)	Oral 15:10-15:25 **[4-O-4] Progress in sub-micron microscopy at CIRI beamline at Solaris** Tomasz Wrobel (Jagiellonian University)
	Oral 15:30-15:45 **[1-O-3] SERS Chemical Enhancement and Bandwidth Analysis of Benzyl Mercaptan Adsorbed on Ag Substrates** De-Yin Wu (Xiamen University)	Oral 15:25-15:40 **[2-O-4] TERS and TEPL from Single Semiconductor Nanostructures** Alexander Milekhin (Rzhanov Institute of Semiconductor Physics RAS)	Oral 15:20-15:35 **[3-O-6] Quantitative Raman Analysis of Fatty Acid Accumulation in Cells: Insights into Lipid Metabolism** Barbara Orzechowska (Jagiellonian University)	Oral 15:25-15:40 **[4-O-5] Conceptual Design of the Infrared Beamline at the SKIF Synchrotron Facility** Sergey L.Veber (International Tomography Center SB RAS)
15:40-16:00	**Coffee Break**			
16:00-17:45	**Enhanced spectroscopics**	**Nanospectroscopy**	**Vibrational Imaging**	**Advanced Instrumentation**
	Invited 16:00-16:20 **[1-I-6] Data-Driven Design of Molecular Receptors for Precise SERS Detection** Xingyi Ling (Nanyang Technological University Singapore)	Invited 16:00-16:20 **[2-I-6] Light at Nano Tips-Fundamentals and Applications** Volker Deckert (Friedrich Schiller University)	Invited 16:00-16:20 **[3-I-3] Visualization of Marine Degradation Processes of Biodegradable Polyester by Low-frequency Raman Imaging** Harumi Sato (Kobe University)	Invited 16:00-16:20 **[4-I-5] Single-Molecule Chemical Imaging** Ning Fang (Xiamen University)
	Invited 16:20-16:40 **[1-I-7] Surface-Enhanced Raman Spectroscopy for Metabolomics Research** Jian Ye (Shanghai Jiao Tong University)	Invited 16:20-16:40 **[2-I-7] Tuning the Bandgap of MoS2 by Surface Functionalization and Hybridization with Metastructures: A TERS Investigation** François Lagugné-Labarthet (Western University)	Oral 16:20-16:35 **[3-O-7] Active hyperspectral sensing based on high-speed interferometer and broadband mid-IR quantum cascade laser for black plastic sorting** Eduardo Maia Paiva (VTT Technical Research Centre of Finland Ltd)	Oral 16:20-16:35 **[4-O-6] Observation of liquid-solid transition of nanoconfined water at ambient conditions through a Home-made NV-SPM** Ke Bian (Peking University)
	Oral 16:40-16:55 **[1-O-4] Algorithm-Assisted Surface-Enhanced Raman Spectroscopy toward Dynamic Protein Structure Detection** Hao Ma (Xiamen University)	Oral 16:40-16:55 **[2-O-5] Probing Molecular Vibrations Via 1-0 Resonance Tip-enhanced Raman Spectroscopy** Yang Zhang (University of Science and Technology of China)	Oral 16:35-16:50 **[3-O-8] Cell–Cell Communication in the Blood–Brain Barrier: From Physiology to Pathology** Anna Antolak (Jagiellonian University)	Oral 16:35-16:50 **[4-O-7] Visualizing Multi-Scale Spatiotemporal Heterogeneity in Electrochemical Kinetics via Electrochemical Surface-Enhanced Raman Microscopy** Tianyi Yang (Xiamen University)
	Oral 16:55-17:10 **[1-O-5] Machine Learning-Enhanced Raman Spectroscopy for Characterizing Aluminum-Adjuvanted Vaccines** Jana Hahn (Paul-Ehrlich-Institut)	Oral 16:55-17:10 **[2-O-6] Nanoscale Chemical Imaging of Interfacial Reactions by Tip-Enhanced Raman Spectroscopy** Liqing Zheng (Nanjing University)	Oral 16:50-17:05 **[3-O-9] Functional stimulated Raman scattering microscopy for multiplexed photoswitching, sensing and protein secondary structure imaging** Fanghao Hu (Tsinghua University)	Oral 16:50-17:05 **[4-O-8] Rapid Electro-Optic Sampling of MIR Pulses with a Resonant Scanning Mirror for In-flow Molecular Fingerprinting** Lorenzo Gatto (Max Planck Institute of Quantum Optics)
	Oral 17:10-17:25 **[1-O-6] Deep Learning Assisted SERS Method for Accurate Classification and Rapid Diagnosis of CNS-related Diseases** Dongjie Zhang (Xidian University)	Oral 17:10-17:25 **[2-O-7] Single-Molecule Plasmonic Chemistry: Dissociation of CO2 Molecules on CoPc/Au(111)** Chao Zhang (University of Science and Technology of China)	Oral 17:05-17:20 **[3-O-10] Identification of Adulterated Coffee by Near-Infrared Hyperspectral Imaging** Thu Thuy Bui (Hanyang University)	Oral 17:05-17:20 **[4-O-9] Pushing the Boundaries: Handheld Raman Spectrometers Rival Deep-Cooled CCD Giants in Detection Limits** Ilchenko Oleksii (Lightnovo ApS)
	Sponsor 17:25-17:45 **Advanced Applications of HORIBA AFM-Raman Technology** Yan Zhou (Horiba)	Oral 17:25-17:40 **[2-O-8] Tip-enhanced Femtosecond Spectroscopy in Single Molecules** Yang Luo (Max Planck Institute for Solid State Research)	Sponsor 17:20-17:35 **Confocal and Correlative Raman Imaging Platform Innovation: Expanding Analytical Boundaries** Cheng Qian (Oxford)	Oral 17:20-17:35 **[4-O-10] High-Performance Deep Learning Model Classification from Multi-Device Datasets** Hanlin Li (The University of Auckland)
17:45-18:30	**Banquet**			

Daily Schedule	Dec. 2 (Tue.)			
Time/Place	Room A	Room B	Room C	Room D
8:30-9:50	PL (Hatice Altug & Hyeonsik Cheong)			
9:50-10:10	Coffee Break			
10:10-11:50	**Enhanced spectroscopics**	**Nanospectroscopy**	**AI-assisted Chemometrics**	**Application in Materials and Catalysis**
	Invited 10:10-10:30	Invited 10:10-10:30	Invited 10:10-10:30	Invited 10:10-10:30
	[1-I-8] Precision Plasmonics in Nanogaps: from Quantum Effects to Probing Aligned Reactive Centers Sebastian Schlücker (University of Duisburg-Essen)	**[2-I-8] Plasmon Enhanced IR Spectroscopy and Electrochemistry** Xinghua Xia (Nanjing University)	**[3-I-4] Data Augmentation and Fusion Strategies for Clinical and Forensic Vibrational Spectroscopy** David Perez Guaita (University of Valencia)	**[4-I-6] SFG Spectroscopy Study on the Electrode Surfaces of Li-ion Batteries** Shen Ye (Tohoku University)
	Invited 10:30-10:50	Invited 10:30-10:50	Invited 10:30-10:50	Invited 10:30-10:50
	[1-I-9] Probing Plasmonic Hot-Carrier Generation and Transfer in Gold Nanoparticles by Spectroscopic and Photoelectrochemical Methods Sangwoon Yoon (Chung-Ang University)	**[2-I-9] High-speed AFM for Tip-enhanced Optical Nano-imaging** Takayuki Umakoshi (The University of Osaka)	**[3-I-5] Tailoring Image Analysis and Machine Learning for the Analysis of Vibrational Spectroscopic Imaging** Thomas Bocklitz (University of Jena and Leibniz-IPHT)	**[4-I-7] Cross-Section Raman Spectroscopy for Device Level Characterization** Bingjun Xu (Peking University)
	Oral 10:50-11:05	Oral 10:50-11:05	Oral 10:50-11:05	Oral 10:50-11:05
	[1-O-7] Extreme photonic for single molecule electro-photocatalysis Shu Hu (Xiamen University)	**[2-O-9] Correlative Nano-IR + Raman Spectroscopy with Unprecedented Spectral Coverage** Lars Mester (Attocube Systems GmbH)	**[3-O-11] Towards Open, FAIR and AI-driven Raman Spectroscopy for Functional Materials** Miguel A. Bañares (CSIC)	**[4-O-11] Electrocatalytic Process in Hydrogen Fuel Cells via In Situ Raman Spectroscopy** Jinchao Dong (Xiamen University)
	Oral 11:05-11:20	Oral 11:05-11:20	Oral 11:05-11:20	Oral 11:05-11:20
	[1-O-8] In-Situ Observation of Plasmon-Mediated Amide Bond Formation by Surface-Enhanced Raman Spectroscopy Balaji Sanap (Tokushima University)	**[2-O-10] Ultrasensitive Nanoscale IR Vibrational Imaging with Vibrational-encoded Fluorescence** Zhaodong Meng (Xiamen University)	**[3-O-12] An LLM Orchestrated Modular Agent for AI-Assisted Chemometrics: Multi-Task Inference on Infrared Spectra** Xiangyang Yu (Sun Yat-Sen University)	**[4-O-12] Plasmonic effects for spectroscopy and/or reaction** Chao Zhan (Xiamen University)
	Oral 11:20-11:35	Oral 11:20-11:35	Oral 11:20-11:35	Oral 11:20-11:35
	[1-O-9] The Role of Surface Adsorbed Hydroxyl in the Electrocatalytic Ammonia Oxidation on Platinum Haisheng Su (IKKEM)	**[2-O-11] In Situ/Operando Spectroelectrochemistry as a Tool for Recognition of Ambipolar Polymers' Molecular Structure-Reactivity Requirements** Kamila Łępicka (Institute of Physical Chemistry PAS)	**[3-O-13] Generalizable Machine Learning for Vibrational Spectroscopy of Biological Samples** Tarek Eissa (Ludwig Maximilians University of Munich)	**[4-O-13] Resolving CO Dynamics on Electrocatalytic Surface by in situ Vibrational Spectroscopies** Wenxing Yang (Westlake University)
	Sponsor 11:35-11:50	Sponsor 11:35-11:50	Oral 11:35-11:50	Oral 11:35-11:50
	Multimodal Confocal Microspectroscopy: Raman and Beyond… Angela Flack (Edinburgh Instruments)	**Multi-field Coupled Super-resolution Near-field Optical Microscopy and Recent Applications** Xi Lu (Quantum Design)	**[3-O-14] Diffuser-Supported Hyperspectral Near-Infrared Measurement for Analysis of Diverse Samples with Thin Pathlengths** Haeseong Jeong (Hanyang University)	**[4-O-14] Radical Generation via Redox Intermediates: Revealed by Highly Time-resolved EPR and ATR spectroscopies** Qingyue Wang (Zhejiang University)
11:50-13:30	Lunch			
13:30-14:40	**Enhanced spectroscopics**	**Time-resolved Spectroscopy**	**AI-assisted Chemometrics**	**Application in Materials and Catalysis**
	Invited 13:30-13:50	Invited 13:30-13:50	Invited 13:30-13:50	Invited 13:30-13:50
	[1-I-10] Hybrid porous plasmonic materials and their applications in SERS Alvarez-Puebla Ramon (Universitat Rovira i Virgili)	**[2-I-10] How We Study Chemical Reactions with Picosecond Time-resolved Raman Spectroscopy** Koichi Iwata (Gakushuin University)	**[3-I-6] Convolutional Autoencoder-based Feature Extraction From Two-dimensional Spectroscopic Correlation Map and Fusion of Spectroscopy and Visual Image Data to Enhance Accuracy of Discriminant Analysis** Hoeil Chung (Hanyang University)	**[4-I-8] New Types of Phonon-Assisted Interfacial Energy Transfer at the 2D Interface** Weigao Xu (Nanjing University)
	Oral 13:50-14:05	Invited 13:50-14:10	Oral 13:50-14:05	Invited 13:50-14:10
	[1-O-10] ThermoPlasSens: A multiplexed Paper-Based Plasmonic Biosensor Integrating SERS, LSPR, and Thermoplasmonic Readouts for DNA Hybridization Detection Daria Stoia (Babes-Bolyai University)	**[2-I-11] Exploring Intermolecular Coupling and Excited-State Dynamics in Perylene Bisimide Arrays Probed by Electronic and Raman Spcetroscopy** Dongho Kim (Yonsei University)	**[3-O-15] Classification of Gemstones Using Machine Learning Assisted Raman Spectroscopy** Danylo Komisar (Lightnovo ApS)	**[4-I-9] Layer-breathing modes in layered semiconductor materials** Miaoling Lin (Institute of Semiconductors, Chinese Academy of Sciences)

Daily Schedule	Dec. 2 (Tue.)			
Time/Place	**Room A**	**Room B**	**Room C**	**Room D**
13:30-14:40	Oral 14:05-14:20 **[1-O-11] Dynamic Hotspot Monitoring Protein Structural Heterogeneity by Optical Tweezers-Coupled Raman Spectroscopy** Jinqing Huang (The Hong Kong University of Science and Technology)	Oral 14:10-14:25 **[2-O-12] Ultrafast Vibrational Signatures of Conformationally Regulated Phase Separation in a Natural Folded Enzyme** Xiao You (Westlake University)	Oral 14:05-14:20 **[3-O-16] Complex-valued Chemometrics** Thomas Mayerhöfer (Leibniz-Institut f. Photonische Technologien)	Oral 14:10-14:25 **[4-O-15] Precise Synthesis of Discrete Chiral Nanomaterials for Circularly Polarized Photocatalysis and Chiral Sensors** Guangchao Zheng (Zhengzhou University)
	Oral 14:20-14:35 **[1-O-12] Porous Plasmonic Materials for Air Quality Sensing** Irving Brian Becerril Castro (Universitat Rovira i Virgili)	Oral 14:25-14:40 **[2-O-13] Dynamics of Photogenerated Small Polarons in Transition Metal Oxides** Ye Yang (Xiamen University)	Oral 14:20-14:35 **[3-O-17] The Power of Multivariate Data Analysis in Infrared Spectroscopy for Food Quality Control** Polina Fomina (Ulm University)	Oral 14:25-14:40 **[4-O-16] Integrated Multimodal Microscopy for Material Analysis** Stuart Thomson (Edinburgh Instruments)
14:40-15:00	**Coffee Break**			
15:00-16:45	**Enhanced spectroscopics**	**Time-resolved Spectroscopy**	**Application in Biology**	**Application in Materials and Catalysis**
	Invited 15:00-15:20 **[1-I-11] Probing Interfacial Structures and Functionalities of Additives for Superconformal Cu and Co Electrodeposition by Surface Enhanced Infrared Absorption Spectroscopy** Wen-Bin Cai (Fudan University)	Invited 15:00-15:20 **[2-I-12] A New Plasmonic Cell for Infrared Spectroelectrochemistry : Application to Structural Dynamics under Voltage using Ultrafast 2D IR Spectroscopy** Martin Zanni (University of Wisconsin-Madison)	Invited 15:00-15:20 **[3-I-7] High-throughput Raman-activated Sorting of Mutant Libraries for Mining Functional Cells (and genes) via FlowRACS 3.0** Jian Xu (Qingdao Institute of Bioenergy and Bioprocess Technology, CAS)	Invited 15:00-15:20 **[4-I-10] Complementary Raman and infrared operando methodology, at the junction between fundamental chemistry and chemical engineering. The instance of supported oxide catalysts** Miguel A. Bañares (CSIC)
	Oral 15:20-15:35 **[1-O-13] In Situ Infrared Spectroscopy Studies of Biomimetic Membranes on the Gold Surface** Zhangfei Su (University of Guelph)	Invited 15:20-15:40 **[2-I-13] Spectroscopic Light on Nanoconfined and Interfacial Water** Mischa Bonn (Max Planck Institute Polymer Research)	Invited 15:20-15:40 **[3-I-8] Real-time Detection of Human Infectious Viruses by Raman Spectroscopy** Hidetoshi Sato (Kwansei Gakuin University)	Invited 15:20-15:40 **[4-I-11] Operando Raman Spectroscopy for the Characterisation of Battery Materials: Towards Best Practice** Andrew Wain (National Physical Laboratory)
	Oral 15:35-15:50 **[1-O-14] Simultaneous SERS & SEIRA with Single Molecule Detection – The Application and Characterization of Plasmonically Resonant Structures with Sub-Micron Optical Photothermal Infrared and Simultaneous Raman spectroscopy** Mustafa Kansiz (Photothermal Spectroscopy Corporation)	Invited 15:40-16:00 **[2-I-14] Coherent energy transfer in photosynthesis revealed by two-dimensional electronic spectroscopy** Yuxiang Weng (Institute of Physics, CAS)	Oral 15:40-15:55 **[3-O-18] Transferable AI models in Raman spectroscopy for biological applications** Shuxia Guo (Leibniz institute of photonic technology)	Invited 15:40-16:00 **[4-I-12] Studying the Au electrode interface in Li-ion and metal-oxygen battery electrolytes using SEIRAS** Laurence James Hardwick (University of Liverpool)
	Oral 15:50-16:05 **[1-O-15] Plasmonic Nanopillar-Nanostar Array for Scalable SERS-Based Detection of Molecular Biomarkers** Alexandre Chícharo (Humboldt-Universität zu Berlin)	Oral 16:00-16:15 **[2-O-14] High-Efficiency Aqueous Room-Temperature Phosphorescent Materials: Synthesis and Phosphorescence Analysis** Binbin Chen (East China University of Science and Technology)	Oral 15:55-16:10 **[3-O-19] Deep-UV Resonance Raman Spectroscopy for Aqueous Sodium and Potassium Hydroxide** Yusuke Morisawa (Kindai University)	Oral 16:00-16:15 **[4-O-17] Probing dynamic evolution at interfaces in Li–S batteries via in situ/operando confocal Raman microscopy** Shuang-Yan Lang (Key Laboratory of Molecular Nanostructure and Nanotechnology, CAS)
	Oral 16:05-16:20 **[1-O-16] Broadband and Polarized Metasurface-enhanced 2D Correlation IR Spectroscopy Augmented Machine Learning for Mixture Analysis** Si Luo (Zhejiang Normal University)	Oral 16:15-16:30 **[2-O-15] Ultrafast Carrier Dynamics and Anisotropic Propagation of Molecular Exciton – Surface Plasmon Polaritons** Jinhui Zhong (Southern University of Science and Technology)	Oral 16:10-16:25 **[3-O-20] Multimodal Spectroscopic Profiling of Plasma Membrane Vesicles** Katarzyna Pogoda (Institute of Nuclear Physics Polish Academy of Sciences)	Oral 16:15-16:30 **[4-O-18] Probing Charge-Transfer and Vibrational Properties of Triphenylamine-Based Donor-Acceptor Compounds Using Raman Spectroscopy and DFT** Elkhansa Elbashier (University of Otago)
	Sponsor 16:20-16:35 **From Macro to Micro: Bruker's Wide-Field Raman Imaging Pioneers a New Imaging Paradigm** Hao Zhang (Bruker)			Oral 16:30-16:45 **[4-O-19] Discrimination of Hf/Zr Oxides, Fluorides, and Carbides Using XAS, XES, and ATR-FTIR: Implications for HFSE Behavior in Fluoride-Rich Geological Systems** Rui Cheng (Free University of Berlin)
16:45-18:30	**Flash talk (15 min)**			
	Poster session			

Daily Schedule	Dec. 3 (Wed.)			
Time/Place	Room A	Room B	Room C	Room D
8:30-9:50	PL (Tahei Tahara & Rainer Hillenbrand)			
9:50-10:10	Coffee Break			
10:10-11:50	**Enhanced spectroscopics**	**Theories**	**Application in Biology**	**Application in Materials and Catalysis**
	Invited 10:10-10:30	Invited 10:10-10:30	Invitec 10:10-10:30	Invited 10:10-10:30
	[1-I-13] Dual Size Mismatches in SERS and Solutions Shikuan Yang (Zhejiang University)	**[2-I-15] Addressing Molecular Vibrational Pumping and Frequency Up Conversion in Field-Enhancing Nanocavities** Javier Aizpurua (Donostia International Physics Center)	**[3-I-9] Lysis-Free Bacteria Detection Using SERS-Based Acoustofluidic Sensors** Jaebum Choo (Chung-Ang University)	**[4-I-13] Revealing the Air-water Interface of Microdroplet by Raman** Liwu Zhang (Fudan University)
	Invited 10:30-10:50	Invited 10:30-10:50	Invited 10:30-10:50	Oral 10:30-10:45
	[1-I-14] T-rex and Friends: A Journey into Geometry Assisted All-Dielectric Enhanced Raman scattering Ivano Alessandri (University of Brescia)	**[2-I-16] Monitoring vibrational evolution in Jahn-Teller effect by Raman images** Sai Duan (Fudan University)	**[3-I-10] SERS Composite Scaffolds for Applications in 3D Cell Culture and Biosensing** Ann Malou Henriksen (CIC biomaGUNE)	**[4-O-20] Dissecting Hydration and Hydrogen Bonding in Ionic Liquids via UV Resonance Raman Spectroscopy: Anion and Cation Chain Effects** Fatima Matroodi (Elettra Sincrotrone)
	Oral 10:50-11:05	Invited 10:50-11:10	Oral 10:50-11:05	Oral 10:45-11:00
	[1-O-17] Surface-Enhanced Raman Scattering Using Plasmonic Nanoarrays Qi Hao (Southeast University)	**[2-I-17] Decoding Bond-Electron Dynamics and Many-Body Quantum Cooperativity in Complex Systems** Changqing Sun (Nanyang Technological University)	**[3-O-22] Integrating Raman Spectroscopy with Multi-modality Optical Techniques to Interpret Biomedical Phenomena** Shuang Wang (Northwest University)	**[4-O-21] In situ spectroscopic methods for revealing active centers in ash-enriched bed materials from biomass gasification** Joanna Profic-Paczkowska (Jagiellonian University)
	Oral 11:05-11:20	Invited 11:10-11:30	Oral 11:05-11:20	Oral 11:00-11:15
	[1-O-18] Enhancing SERS sensitivity by optimizing colloid synthesis parameters Alexandra-Maria Chiriac (Babeș-Bolyai University)	**[2-I-18] Local Quantum Vibration Embedding Framework for Exploring Intramolecular Resonances** Hui Li (Jilin University)	**[3-O-23] Developing Ensemble Models for Real-time, in-vivo, Diagnosis of Prostate Cancer Using Raman Spectroscopic Probes** Max Dooley (University of Auckland)	**[4-O-22] From Spectral Shifts to Bond Mechanics: A Spectroscopic Metrology for Quantifying Covalent Bond Tuning at Organic-Aqueous Interfaces** Yong Zhou (Dongguan University of Technology)
	Oral 11:20-11:35	Oral 11:30-11:45	Oral 11:20-11:35	Oral 11:15-11:30
	[1-O-19] Charging and discharging of silver nanoparticle for selective SERS detection Stefania D. Iancu (Babeș-Bolyai University)	**[2-O-16] From First Principles Calculations to Machine Learning: New Developments and Applications of Sum Frequency Generation Spectroscopy Algorithms** Fujie Tang (Xiamen University)	**[3-O-24] Label-Free Raman Microscopy for Assessing Purity and Maturity of hiPSC-Derived Cardiac Tissues** Menglu Li (Shenzhen Medical Academy of Research and Translation)	**[4-O-23] Effects of Fire on Egyptian Mummies - A Vibrational Spectroscopy Study** Maria Paula Marques (University Coimbra)
	Oral 11:35-11:50		Oral 11:35-11:50	Oral 11:30-11:45
	[1-O-31] The assembly and study of 3D SERS substrates Xiangdong Tian (Institute of Urban Environment, CAS)		**[3-O-25] Photothermal Detection of SRS – a New Breakthrough Stimulated Raman Technique for Live Cell Imaging** Yuhao Yuan (Photothermal Spectroscopy Corporation)	**[4-O-24] Experimental and Theoretical Characterization of 1,3-Diphenyl-3-(phenylsulfonyl) propan-1-one** Srishailam Kanugula (SR University)
11:50-13:30	Lunch			
13:30-18:30	Excursion			

Daily Schedule	Dec. 4 (Thur.)			
Time/Place	**Room A**	**Room B**	**Room C**	**Room D**
8:30-9:50	**PL (Boris Mizaikoff & Zhong-Qun Tian)**			
9:50-10:10	**Coffee Break**			
10:10-11:50	**Enhanced spectroscopics**	**Non-linear Spectroscopy & Time-resolved Spectroscopy**	**Application in Biology**	**Application in Arts, Archaeology, Extraterrestrials, Forensic, and Environment**
	Invited 10:10-10:30	Invited 10:10-10:30	Invited 10:10-10:30	Invited 10:10-10:30
	[1-I-15] Meeting the Challenges of Quantitative SERS in Complex Biological Matrices Steven Bell (Queen's University of Belfast)	**[2-I-19] Local Structures and Dynamics of Drug Cocrystals Revealed by 1D and 2D IR Spectroscopy** Jianping Wang (Institute of Chemistry, CAS)	**[3-I-11] Brain Molecular Atlas Analysis** Yang Tian (East China Normal University)	**[4-I-14] Gilded in Time: Multimodal Spectroscopic Imaging Redefines Roman-Egyptian Mummification** Bayden Wood (Monash University)
	Invited 10:30-10:50	Invited 10:30-10:50	Invited 10:30-10:50	Invited 10:30-10:50
	[1-I-16] Single Molecule Dynamics in SERS Hotspots Alexandre Brolo (University of Victoria)	**[2-I-20] Site-Specific Interrogation of Protein Structure and Dynamics via Linear and Nonlinear Infrared Spectroscopic Techniques** Feng Gai (Peking University)	**[3-I-12] SERS and Plasmonic Nanosensors for Monitoring Proteins in Brain Tissues and Biofluids** Jean-Francois Masson (Universite de Montreal)	**[4-I-15] Time-Gated Raman Spectroscopy Reveals how Burial Conditions Shaped the Degradation of Sanxingdui Ivory** Zhenyou Wang (GBA Branch of Aerospace Information Research Institute)
	Oral 10:50-11:05	Oral 10:50-11:05	Oral 10:50-11:05	Oral 10:50-11:05
	[1-O-20] Development of Hybrid Composites for Real-Time SERS Detection of Marine Toxins in Aquatic Environments Bernardo Albuquerque Nogueira (International Iberian Nanotechnology Laboratory)	**[2-O-17] Polaron interactions in metal halide perovskites by Terahertz spectroscopy** Heng Zhang (Xiamen University)	**[3-O-26] Beyond the Brain: The Influence of Citalopram on Human Colon Cell Function** Karolina Beton-Mysur (Lodz University of Technology)	**[4-O-25] Exploration of Egyptian Mummy Tissues thanks to Infrared Nano-Spectroscopy** Margaux Petay (TU Wien)
	Oral 11:05-11:20	Oral 11:05-11:20	Oral 11:05-11:20	Oral 11:05-11:20
	[1-O-21] SERS-Based Detection of Biomolecules and Biotoxins by Using Nanostructured Solid Substrates Nicoleta Elena Dina (National Institute for Research and Development of Isotopic and Molecular Technologies, Cluj-Napoca, Romania)	**[2-O-18] Substrate Binding Induced Dynamic Restructuring of Binuclear Copper Centers** Xinxing Zhang (Dalian University of Technology)	**[3-O-27] Studying Stress Response Process of Cell During Electrical Stimulation Through Spectra Techniques** Zuotao Chen (Shenzhen University)	**[4-O-26] Characterization of the incense from the underground palace of Famen Royal Temple during the ninth century in China** Meng Ren (The Palace Museum)
	Oral 11:20-11:35	Sponsor 11:20-11:35	Oral 11:20-11:35	Oral 11:20-11:35
	[1-O-22] Portable Sensor for Detecting Trifluoroacetic Acid in Bottled Water: A Visualization Method Based on Multiple Synergistically Induced Aggregation Haifeng Zhou (Leiden University)	**Application of Coherent Raman Scattering in Tissue Imaging** Pu Wang (Vibronix)	**[3-O-28] Lipids Under Pressure: Cannabidiol As a Molecular Modulator Revealed by Vibrational Spectroscopy** Karolina Chrabąszcz (Institute of Nuclear Physics Polish Academy of Science)	**[4-O-27] Micro- and sub-micrometric characterization of an insect trapped in amber with IR nanospectro-imaging** Antoine Vite (Université Paris Saclay)
11:50-13:30	**Lunch**			
13:30-14:40	**Enhanced spectroscopics**	**Non-linear Spectroscopy**	**Application in Biology**	**Application in Arts, Archaeology, Extraterrestrials, Forensic, and Environment**
	Invited 13:30-13:50	Invited 13:30-13:50	Invited 13:30-13:50	Invited 13:30-13:50
	[1-I-17] Frontiers of Semiconductor-Enhanced Raman spectroscopy Yukihiro Ozaki (Kwansei Gakuin University)	**[2-I-21] Probing Electrochemical Interfaces with Vibrational Sum Frequency Spectroscopy: Insights and Challenges** Yujin Tong (University of Duisburg-Essen)	**[3-I-13] Non-invasive Glucose Monitoring: Opportunity and Challenge** Chang Chen (Ruijin Hospital, Shanghai Jiao Tong University School of Medicine)	**[4-I-16] Single-Cell Raman Spectroscopy Reveals Microbial Functions in Environment: from Threats to Allies** Li Cui (Institute of Urban Environment, CAS)
	Invited 13:50-14:10	Invited 13:50-14:10	Invited 13:50-14:10	Invited 13:50-14:10
	[1-I-18] The Role of a Metal–Semiconductor Interface in SERS and PIERS. Insights from a Model Ag-TiO2 Hybrid Nanostructures Kamilla Malek (Jagiellonian University)	**[2-I-22] Nonlinear Optical Spectroscopy of Oxide/water Interfaces** Weitao Liu (Fudan University)	**[3-I-14] Self-stacked Small Molecules for Ultrasensitive in vivo Raman Imaging Towards Biomedical Applications** Zeyu Xiao (Shanghai Jiao Tong University)	**[4-I-17] Raman Microspectroscopy for Phenotyping Microorganisms** Kang Soo Lee (Ulsan National Institute of Science and Technology)
	Oral 14:10-14:25	Oral 14:10-14:25	Oral 14:10-14:25	Oral 14:10-14:25
	[1-O-23] Early Diagnosis of Diseases Based on Semiconductor-Enhanced Raman Spectroscopy Tingting Zheng (East China Normal University)	**[2-O-19] Orientational and Solvent Couplings of Molecules at Interfaces by Interface-Specific Two-Dimensional Vibrational-Electronic (i2D-VE) Spectroscopy** Zhichao Huangfu (Southeast University)	**[3-O-29] How to Unmix Raman Spectra of Complex Biomedical Samples – in Vitro vs. in Silico Methods** Teresa Slanina (Paul-Ehrlich-Institut)	**[4-O-28] Tackling Antimicrobial Resistance: Vibrational Spectroscopy of Bacteriophages** Kamila Kochan (Monash University)

Daily Schedule	Dec. 4 (Thur.)			
Time/Place	**Room A**	**Room B**	**Room C**	**Room D**
13:30-14:40	Oral 14:25-14:40	Oral 14:25-14:40	Oral 14:25-14:40	Oral 14:25-14:40
	[1-O-24] Metal Oxides and Metal Oxides/Metal Nanostructured Substrates as Efficient Platforms for Surface-Enhanced Raman Scattering (SERS) Spectroscopy Eva Kočišová (Charles University)	**[2-O-20] Optimizing Surface-Enhanced Femtosecond Stimulated Raman Spectroscopy** Sylwester Gawinkowski (Institute of Physical Chemistry Polish Academy of Sciences)	**[3-O-30] Large-Spot Deep Raman Spectroscopy for Intraoperative Detection in Large Animals** Linley Li Lin (Shanghai Jiao Tong University)	**[4-O-29] Long-Term Morphological Integrity of Polymer Coatings in Mid-IR Sensors for Marine Applications** Leonora Podvorica (University of Ulm)
14:40-15:00	**Coffee Break**			
15:00-16:45	**Enhanced spectroscopics**	**Non-linear Spectroscopy**	**Application in Biology**	**Application in Arts, Archaeology, Extraterrestrials, Forensic, and Environment**
	Invited 15:00-15:20	Invited 15:00-15:20	Invited 15:00-15:20	Invited 15:00-15:20
	[1-I-19] Molecular Structure and Interaction from SERS Spectra: From Biomolecule Models to Living Cells Janina Kneipp (Humboldt-Universität zu Berlin)	**[2-I-23] Stimulated Raman Scattering Microscopy for Detailed Analysis of Cells and Semiconductors** Yasuyuki Ozeki (The University of Tokyo)	**[3-I-15] Using Vibrational Spectroscopy and Computational Chemistry to Understand Polymorph Transformation in Pharmaceuticals** Keith Gordon (University of Otago)	**[4-I-18] Raman-based Methods for Analysis Microplastics and Nanoplastics** Natalia Ivleva (Technical University of Munich)
	Invited 15:20-15:40	Invited 15:20-15:40	Invited 15:20-15:40	Invited 15:20-15:40
	[1-I-20] Advances and Applications of SERS-Based Bioanalysis Young Mee Jung (Kangwon National University)	**[2-I-24] Post-OPA Enhanced SFG Spectroscopy and Transient Absorption Microscopy** Zefeng Ren (Dalian Institute of Chemical Physics, Chinese Academy of Sciences)	**[3-I-16] New Insight from FTIR Spectroscopic Imaging** Sergei Kazarian (Imperial College London)	**[4-I-19] Raman Spectroscopy in optical and acoustic traps for micro- and nano-plastics detection: advancements in the SAMOTHRACE project** Gucciardi Pietro Giuseppe (CNR IPCF)
	Invited 15:40-16:00	Invited 15:40-16:00	Oral 15:40-15:55	Oral 15:40-15:55
	[1-I-21] SERS Application in Liquid Biopsy for Cancer Diagnosis Yuling Wang (Macquarie University)	**[2-I-25] From Stimulated Raman to Mid-Infrared Photothermal: Super-Resolution High-Content Chemical Imaging** Delong Zhang (Zhejiang University)	**[3-O-31] Infrared Molecular Fingerprinting for Multi-Phenotype Medical Screening** Mihaela Zigman (Ludwig-Maximilians-Universität München)	**[4-O-30] Automated High-Efficiency Raman Analysis of Nanoplastics in Environmental Samples Using Self-Nanolensing Enhancement** Dongha Shin (Inha University)
	Oral 16:00-16:15	Oral 16:00-16:15	Oral 15:55-16:10	Oral 15:55-16:10
	[1-O-25] Sulfate-Directed Silver Dendrites with Long-Term Stability for SERS-Based Biomolecular Analysis in Complex Matrices Aradhana Dwivedi (Leibniz IPHT)	**[2-O-21] Breaking Speed Barriers - Unveiling Biological Insights with Label-Free Chemical Imaging** Volker Schweikhard (Leica Microsystems)	**[3-O-32] Multi-scale Infrared Spectral Fingerprinting of Lyme Disease Infection in Microglial Cells and Exosomes** Jizhou Zhong (King's College London)	**[4-O-32] Automated Analysis of Small Microplastics with Raman Microspectroscopy** Isabel Juengling (Technical University Munich)
	Oral 16:15-16:30	Oral 16:15-16:30	Oral 16:10-16:25	Oral 16:10-16:25
	[1-O-26] Architecting Hybrid Graphene-Plasmonic Nanoplatforms for Dual-Enhanced SERS Biosensing Hyejin Chang (Kangwon National University)	**[2-O-22] Computational Field-resolved Coherent Chemical Imaging** Shupeng Zhao (CNRS, Laboratory Kastler Brossel)	**[3-O-33] Monitoring cellular glycolysis pathway kinetics as a function of time using high content Raman spectroscopy** Nitin Patil (Technological University Dublin)	**[4-O-33] Combining Fluorescence Staining with O-PTIR Spectroscopy to Detect and Characterize Micro- and Nanoplastics** Marcel Klotz (Technical University of Munich)
	Oral 16:30-16:45	Oral 16:30-16:45		Oral 16:25-16:40
	[1-O-27] Advancing On-Disc Nanopillar SERS-Based Therapeutic Drug Monitoring Through Optimized Sample Preparation Gohar Soufi (Technical university of Denmark)	**[2-O-23] A Web-based Interactive Simulation Program for Orientation and Polarization Analysis in Sum-Frequency Generation Vibrational Spectroscopy** Luozhou Chen (Westlake University)		**[4-O-34] Smaller Plastics, Bigger Risks: The Invisible Threat of Nanoplastics and Microplastics in Biological and Environmental Samples Analyzed with Multimodal Submicron IR (O-PTIR) and Simultaneous Raman with Co-Located Fluorescence Imaging** Mike Lo (Photothermal Spectroscopy Corporation)
16:45-18:30	**Flash talk (15 min)**			
	Poster session			

Daily Schedule	Dec. 5 (Fri.)			
Time/Place	Room A	Room B	Room C	Room D
8:30-9:50	PL (Yi Luo & Malgorzata Baranska)			
9:50-10:10	Photo & Coffee Break			
10:10-11:50	**Enhanced spectroscopics, Fundamentals, Methodologies, Applications**	**Non-linear Spectroscopy**	**Application in Biology**	**Emerging techniques**
	Invited 10:10-10:30	Invited 10:10-10:30	Invited 10:10-10:30	Invited 10:10-10:30
	[1-I-22] AI+SERS Analysis of Trace Targets Guo-Kun Liu (Xiamen University)	**[2-I-26] Vibrational SFG as a Probe of Interfacial Hydration** Dennis Hore (University of Victoria)	**[3-I-17] Monitoring VOC-Mediated Inter-Plant Communication Using Surface-Enhanced Raman Scattering Nanosensor** Dae Hong Jeong (Seoul National University)	**[4-I-20] Infrared spectroscopic imaging at the nanoscale: From analytical theory to high performance instrumentation** Rohit Bhargava (University of Illinois Urbana-Champaign)
	Invited 10:30-10:50	Invited 10:30-10:50	Oral 10:30-10:45	Invited 10:30-10:50
	[1-I-23] Manipulating Molecule-Metal Interactions Using the Electrochemical Double Layer Tabitha Jones (University of Cambridge)	**[2-I-27] A Multi-Modal Sub-1 cm-1 High-Resolution Ultrafast Broadband Nonlinear Spectroscopy Platform: Implementation and Applications** Hongfei Wang (Westlake University)	**[3-O-35] Application of Deep UV Raman Spectroscopy for Characterizing Acid-Induced Demineralization in Human Enamel** Fatima Matroodi (Elettra Sincrotrone)	**[4-I-21] Compressive Raman imaging: from high-speed imaging to ultrafast spectroscopy all using the spontaneous Raman effect** Hilton Barbosa de Aguiar (Laboratory Kastler Brossel - ENS - CNRS)
	Oral 10:50-11:05	Invited 10:50-11:10	Oral 10:45-11:00	Oral 10:50-11:05
	[1-O-28] SERS as a Probe of Surface Chemistry Enabled by Surface-Accessible Plasmonic Nanomaterials Yikai Xu (East China University of Science and Technology)	**[2-I-28] Probing Water Structure and Electric Fields at the Interface of Oil Nanodroplets** Lixue Shi (Fudan University)	**[3-O-36] Development of a Gold Nanoparticle-Based Colorimetric Aptasensor for the Detection of Vitamin D** Kevin Hewitt (Dalhousie University)	**[4-O-35] Unraveling Hydrogen-Bonding Networks: Cryogenic Ion-trap Vibrational Spectroscopy of Microhydrated Ions** Jiaye Jin (Fudan University)
	Oral 11:05-11:20	Oral 11:10-11:25	Oral 11:00-11:15	Oral 11:05-11:20
	[1-O-29] The role of cations and surface structures on electrocatalytic hydrogenation reaction on Pd surfaces Yuzhe Wang (Xiamen University)	**[2-O-24] Probing Chemisorbed Ions on the Polycrystalline Platinum Electrode using In situ Second-Harmonic Generation Spectroscopy** Ba Lich Pham (Université Paris-Saclay)	**[3-O-37] Real-Time Spectroscopic Monitoring of Fatty Acid Uptake by Cells** Anna Nowakowska (Jagiellonian University)	**[4-O-36] Gating-out emission for fluorescence-free Raman spectra for the study of electrode interfaces** Alex Neale (University of Liverpool)
	Oral 11:20-11:35	Oral 11:25-11:40	Oral 11:15-11:30	Oral 11:20-11:35
	[1-O-30] A Combined Experimental and Computational Study of Surface-Enhanced Raman Scattering in Lanthanide–Citrate Complexes Hao Jin (Japan Advanced Institute of Science and Technology)	**[2-O-25] Electric Double Layer Structure at the Amorphous Alumina/Water Interface Elucidated by HD-VSFG Spectroscopy** Feng Wei (Jianghan University)	**[3-O-38] In-situ 3D Structural Determination of Soft Biomaterials via Computationally-Assisted Polarized Raman Spectroscopy** Xiaohan Xi (Xiamen University)	**[4-O-37] Infrared nanospectroscopy at the SOLARIS synchrotron** Maciej Roman (Jagiellonian University)
11:40-13:30	Award & Closing lunch			

Content

I. Welcome Address

We are welcoming you to the 13th International Conference on Advanced Vibrational Spectroscopy (ICAVS13) and the 5th International Conference on Enhanced Spectroscopy (ICES5) at the most beautiful main campus of Xiamen University, China, from 30th November – 5th December 2025. This conference is co-organized by the College of Chemistry and Chemical Engineering and State Key Laboratory of Physical Chemistry of Solid Surfaces of Xiamen University. The ICAVS conference has a long history dating back to the first ICAVS in 2001 (Turku, Finland) and rotates around different continents. Recent meetings include ICAVS8 in Austria (2015), ICAVS9 in Canada (2017), ICAVS10 in New Zealand (2019), and ICAVS11 (online, 2021) &ICAVS 12 (on site, 2023) both in Poland. The first ICES was held in France in 2012, followed by ICES2015 in Italy, ICES2017 in Germany, and ICES2019 in Canada. This is the first time for these two series of international conferences to be held in China and converge at a same location.

ICAVS-ICES conference aims at bringing together the academic and industrial researchers of the vibrational spectroscopy community as well as the enhanced-spectroscopy community, to present and discuss the latest results, exchange ideas and inspire new thoughts. ICAVS-ICES manages to balance between the parallel session tradition of the ICAVS and single section tradition of ICES. This conference features 10 plenary lectures, 90 invited talks, 130 oral presentations, 20 flash talks and 158 posters divided into 2 sessions. We expect over 400 participants from 29 countries. We hope you take this chance to not only renew friendships and make new friends, but also stimulate new collaborations with research all around the world.

We wish you a happy stay in Xiamen and hope you enjoy your ICAVS-ICES!

Bin Ren
Conference Chair
Xiamen University

Hongfei Wang
Conference Chair
Westlake University

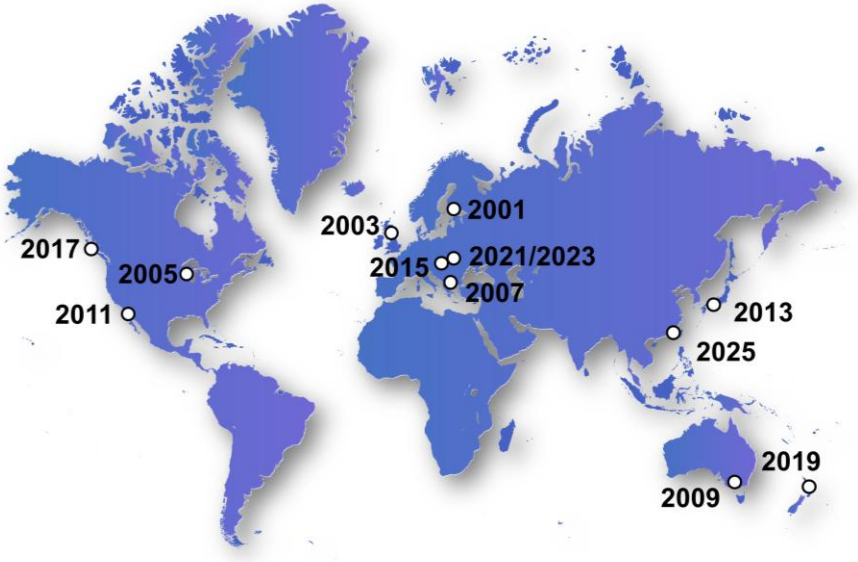
II. History of ICAVS

ICAVS Conferences have a well-established tradition and rich history. However, the beginning of the ICAVS meetings dates back to the 70s and stemmed from two other conferences: the International Conference on Fourier Transform Spectroscopy (ICOFTS) and the Advanced Infrared Spectroscopy (AIRS). The first one, ICOFTS, began in 1970 in Aspen, USA and continued in 1977 and 1981 in South Carolina, USA. Following 1981, ICOFTS became a biennial conference. The first meeting outside the USA was held in Durham, UK and meetings continued to run at locations around the globe. The latter, AIRS, had its beginning in 1993 in Tokyo, Japan as a special conference and was originally not intended to be a series. However, the next AIRS meetings took place in North Carolina, USA (1996) and Vienna, Austria (1998). Both conferences helped to shape the present form of the ICAVS conference.

In the late 1990s, to bring scientists together it was decided to join these meetings and establish one conference entitled the International Conference on Advanced Vibrational Spectroscopy (ICAVS). The first one of the ICAVS meetings was held in 2001 in Turku, Finland and continues as a biennial conference moving throughout the world. The ICAVS conference rotates among the continents, with ICAVS7 held in Japan (2013), ICAVS8 in Austria (2015), ICAVS9 in Canada (2017) and ICAVS10 in New Zealand (2019), and ICAVS11 in Poland (2021 on online and 2023 in Krakov).

Each ICAVS event gathers between 450-700 participants from all over the world, including UK, Australia, New Zeala South Korea, Poland, India, Austria, Canada, USA, Germany, Japan, France, China and Brazil.

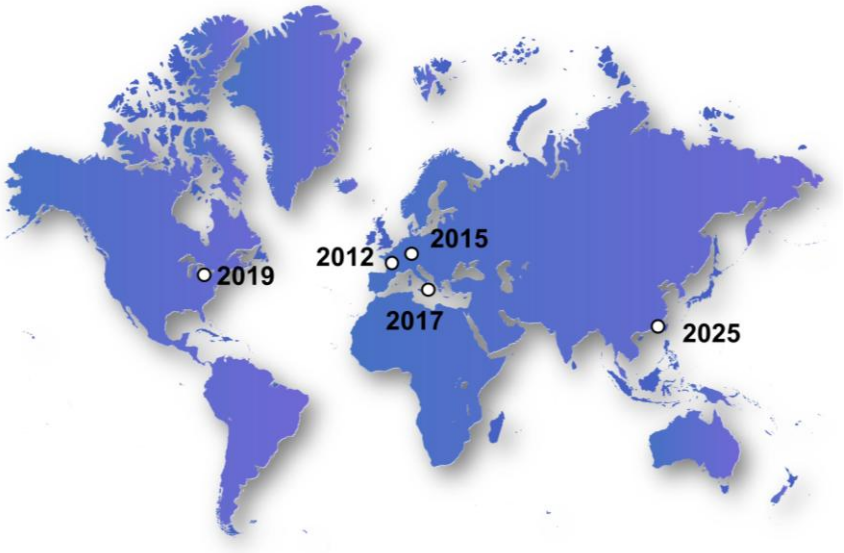
ICAVS1	2001	Turku, Finland
ICAVS2	2003	Nottingham, UK
ICAVS3	2005	Wisconsin, USA
ICAVS4	2007	Corfu, Greece
ICAVS5	2009	Melbourne, Australia
ICAVS6	2011	California, USA
ICAVS7	2013	Kobe, Japan
ICAVS8	2015	Vienna, Austria
ICAVS9	2017	Victoria, Canada
ICAVS10	2019	Auckland, New Zealand
ICAVS11	2021	Krakow, Poland
ICAVS12	2023	Krakow, Poland
ICAVS13	2025	Xiamen, China



III. History of ICES

The first one of ICES meetings was held in 2012 in beautiful Porquerolles Island, France. At that time, we had only four topics: SERS/TERS, MEF/TEF, SEIRS/TEIRS and applications. Later on, three ICES conferences had been held successfully, including ICES2015 in Italy, ICES2017 in Germany, and ICES2019 in Canada. ICES has witnessed the expansion of the field, whose topics further include ultrafast phenomena in plasmon enhanced spectroscopy, advanced materials for surface enhanced spectroscopy, biosensing applications, theory of enhanced optical near-field, etc. Now, ICES event serves as one of the most important international events in the field of enhanced spectroscopy, gathering participants from all over the world.

ICES1	2012	Nantes, France
ICES2	2015	Munich, Germany
ICES3	2017	Messina, Italy
ICES4	2019	London, Canada
ICES5	2025	Xiamen, China



IV. Conference Topics

- Theories
- Enhanced spectroscopics, Fundamentals, Methodologies, Applications
- Nanospectroscopy
- Non-linear Spectroscopy
- Time-resolved Spectroscopy
- Raman Optical Activities and Vibrational Chirality Dichroism
- Vibrational Imaging
- Plasmonics and Nanosensors
- Advanced Instrumentation
- AI-assisted Chemometrics
- Emerging Techniques
- Application in Materials and Catalysis
- Application in Biomedicine, Pharmaceuticals, Skin Diagnostics, Translational Research, and Pathology
- Application in Arts, Archaeology, Extraterrestrials, Forensic, and Environment

V. Steering Committee of ICAVS

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Bin Ren (China) – Xiamen University

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Renato Zenobi (Switzerland) – ETH Zurich

Bin Ren (China) – Xiamen University

VIII. Organizers

Organizers

College of Chemistry and Chemical Engineering, Xiamen University

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IX. Conference Sponsors

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X. Conference Information

Registration

Place: Lobby on the second floor, The Science and Arts Center

Credit cards and Cash are the only accepted forms of payment for on-site registration. The registration desk is open during the conference according to the following schedule:

Operating Hours

Date	Nov. 30 (Sun.)	Dec. 1 (Mon.)
Time	14:00-20:00	9:00-18:00

On-site Registration Fee

	Early Registration	**Normal Registration**
Student	USD 275 / CNY 2000	USD 375 / CNY 2700
Regular	USD 400 / CNY 3000	USD 500 / CNY 3700

Regular/Student Registration includes:

All Sessions, Welcome Reception, Lunch, Excursion, Conference Kit, Refreshments

Accompanying Person Registration includes:

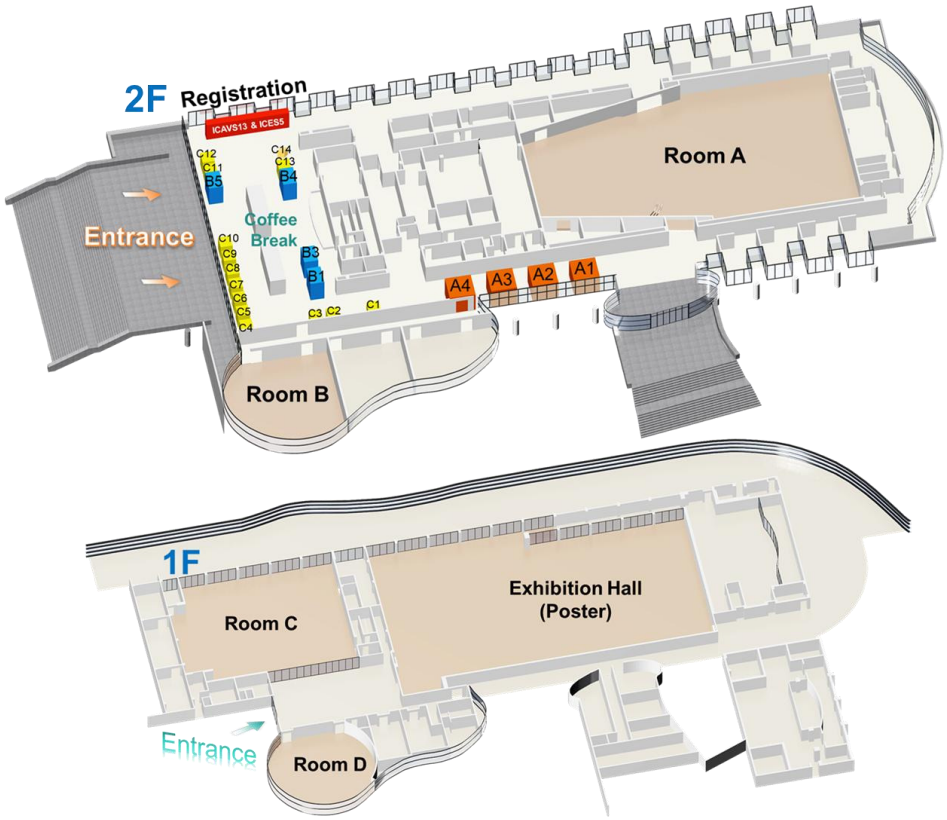
Welcome Reception, Lunch, Excursion, Refreshments

Note: Shuttle service will be provided to return attendees to their hotels after the event. Please follow the guidance of the staff.

Map of Conference Venue

Route 1: Participants may enter the campus via **Qunxian Gate** and follow **Route** ① to reach the **Xiamen University Sciences Center–Exhibition Hall**.

Route 2: Participants may enter the campus via **Da'nan Gate** and follow **Route** ② to reach the **Xiamen University Sciences Center–Exhibition Hall**.



The lobby on the second floor of the Science and Arts Center serves as the **registration area and exhibition space for sponsors**.

Room A on the second floor and **Room B** on the first floor are designated as **lecture halls**.

On the first floor, **Room C** and **Room D** also function as **lecture halls**, while the **Exhibition Hall** is used as the **poster presentation area**.

XI. Social Programs

➢ Welcome Reception

-Date/Time: November 30, Sunday / 18:30–20:00

-Place: The Science and Arts Center, 1F, Exhibition Hall.

All participants are cordially invited to the Welcome Reception. This will be a wonderful opportunity to build a broad, deep, and diverse network of personal connections with colleagues from around the world. Complimentary food and beverages will be provided by the Organizing Committee of ICAVS-ICES.

➢ Banquet

-Date/Time: December 1, Monday / 18:30–20:00

-Address: 66 Huangcuo Xitouxia, Huandao Road (Huandao Lu)

-Price: USD 50

We hope you will enjoy a wonderful night with delightful food, cultural experiences, and warm company. Please note that participants are required to present the Banquet Ticket at the entrance.
To facilitate transportation, the ICAVS-ICES Organizing Committee has arranged shuttle buses from the conference venue to the hotel where the Banquet will take place. The bus ride takes approximately 15 minutes. Shuttle service will operate from 18:20 to 18:40, with buses departing every 5 minutes.

➢ Lunches

➢ Date/Time:

December 1, Monday:	11:50-13:30
December 2, Tuesday:	11:50-13:30
December 3, Wednesday:	11:50-13:30
December 4, Thursday:	11:50-13:30
December 5, Friday:	11:50-13:30

➢ Place: Yifu Building, 2F, Banquet Hall

The fee for regular registration and accompanying person includes lunches per person.

➢ Workshop

-Titled: Photothermal Vibrational Spectroscopy: Fundamentals and Latest Advances in Photothermal IR and Raman Spectroscopy

-Date/Time: Sunday, 30th November, 14:00–17:00

-Place: The Science and Arts Center, Level 2, Room B.

➢ Official Organized Excursion

ICAVS-ICES offers two excursion options, including the **Gulangyu Island Tour** and the **Quanzhou Half-Day Tour**, you may proceed with the reservations in our registration page.

1. Gulangyu Island

Gulangyu Island, just a five-minute ferry ride from Xiamen, is a peaceful, car-free island known for its well-preserved Chinese and Western architecture. Once an international settlement, it retains churches, mansions, and museums that reflect its multicultural past, earning it UNESCO World Heritage status in 2017. Visitors enjoy its slow pace, beaches, and charming historic streets.

2. Quanzhou Half-Day Tour

Quanzhou's ancient sites offer the experience of walking through a living museum of maritime history. From Arab-influenced fishing traditions to Song-Dynasty urban planning, the city preserves a remarkable multicultural legacy shaped by centuries of global exchange. Visitors can explore flower-adorned coastal villages, climb sacred temple stairways, and wander along 1,000-year-old streets that reveal why Quanzhou was once known as the "Start of the Maritime Silk Road." Located 40 km from your hotel, Quanzhou—called Zayton by medieval traders—stands today as a UNESCO World Heritage "Emporium of the World in Song-Yuan China," where Minnan, Arab, and Buddhist influences continue to coexist in daily life. For centuries, the city thrived as China's largest seaport, attracting Arab merchants during the Tang Dynasty whose customs and architectural styles left distinctive marks still seen today. This enduring legacy survives in Xunpu's oyster-shell houses, the floral traditions of its fishing community, and the Hindu-style carvings at Kaiyuan Temple created by South Asian devotees who worshipped here in the 13th century. Together, these heritage landscapes illustrate how Quanzhou's diverse communities shaped one of the world's most dynamic maritime centers.

◆ Agenda

✧ **13:00–15:00: Xunpu Village（蟳浦渔村）**

A historic fishing village known for its Arab-influenced traditions, floral zanhua headdresses, and unique oyster shell houses.

✧ **15:00–16:00: Kaiyuan Temple（开元寺）**

One of China’s oldest Buddhist temples, famous for its twin stone pagodas, Hindu-inspired carvings, and continuous religious traditions since the Tang Dynasty.

✧ **16:00–17:00: West Street & Xiaoxicheng（西街・小西埕）**

Quanzhou's oldest street featuring Song-dynasty lanes, traditional shops, red-brick Minnan houses, and Xiaoxicheng's revitalized art spaces.

Campus Visit

During this tour, we will visit both the **Siming Campus** and the **Xiang'an Campus**, experiencing their unique architecture and learning environment.

The two campuses offer a contrasting yet complementary view of Xiamen University's history and modern development.

- Date/Time: December 3, Wednesday: 13:30-18:00

- Assembly Point: The Science and Arts Center

Siming Campus

Xiang'an Campus

➢ Recommended Self-Guided Activities

While these activities are not officially organized, we highly recommend them as excellent independent explorations.

1. Xiamen's Forest-to-Sea Trail

The pathway along Xiamen's Forest-to-Sea Trail (Linhaixian) is a stunning 6 km pathway that connects the city's lush mountains, serene reservoirs, and coastal landscapes.

Highlights of the Linhaixian Trail

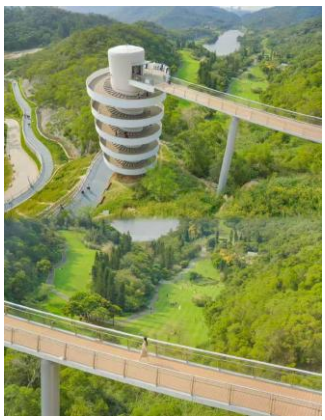
1. Meihai Flower Terrace: Located in Dongping Mountain, this terraced garden is a vibrant sea of flowers throughout the year. It's an ideal spot for photography and a peaceful retreat into nature.

2. Wanshi Canghai: Situated on the southern bank of Shangli Reservoir, this viewpoint offers breathtaking panoramic views of the reservoir and the surrounding mountains. It's a perfect place to appreciate the harmony between Xiamen's mountains and sea.

3. Pangui Tower: A landmark of the trail, Pangui Tower is shaped like a sailboat and offers stunning views of the coastline. On clear days, you can even catch a glimpse of Kinmen Island in the distance.

4. Cherry Blossom Valley: Nestled in Hulishan Park, this area is famous for its cherry blossoms and bougainvillea. In spring, the valley transforms into a colorful wonderland, making it a must-visit spot.

Meihai Flower Terrace



Wanshi Canghai

Pangui Tower

Cherry Blossom Valley

2. Night Cruise on Lujiang River

A night cruise on Xiamen's Lujiang River, a poetic waterway that weaves through the city's history, modernity, and natural beauty. Experience the enchanting fusion of illuminated skylines, cultural landmarks, and maritime charm under the starlit sky.

Highlights of the Lujiang Night Cruise

1. Zheng Chenggong Statue: A towering monument dedicated to the Ming Dynasty national hero, standing solemnly by the river. At night, the statue is bathed in golden light, symbolizing Xiamen's historical resilience and maritime heritage.

2. Yanwu Bridge: This serpentine bridge stretches across the sea like a luminous dragon, offering panoramic views of Xiamen's coastline. Its dynamic lighting design reflects the city's modern engineering prowess.

3. Twin Towers of Shimao Straits Plaza: Known as Xiamen's "sails to the future," these twin skyscrapers illuminate the night with ever-changing colors, representing the city's innovation and prosperity.

4. Cultural Performances Onboard: Immerse in traditional Minnan culture with live puppet shows, a national intangible heritage, and soothing saxophone performances under the stars.

Zheng Chenggong Statue

Yanwu Bridge

Twin Towers of Shimao Straits Plaza

Cultural Performances Onboard

XII. General Information

Electricity & Voltage

The electricity supply commonly used in China is the 220-volt 50Hz system. You are advised to check your electronic equipment beforehand.

Time Difference & Business Hours

China is 8 hours ahead of Greenwich Mean Time (GMT+8). Business hours for banks are generally from 09:00 to 17:00 on weekdays only. Banks are closed on Saturdays, Sundays, and public holidays. ATMs are widely available. Major department stores are open from 10:00 to 22:00, including weekends, while smaller shops tend to open earlier and close later every day.

Chinese Word

English	Chinese	Pronunciation (Pinyin)
How are you?	你好!	Nǐ hǎo!
Thank you.	谢谢。	Xiè xiè.
Yes.	是的。	Shì de.
English	**Chinese**	**Pronunciation (Pinyin)**
No.	不是。	Bú shì.
I am sorry.	对不起。	Duì bù qǐ.
I enjoyed the meal.	我吃得很满意。	Wǒ chī de hěn mǎn yì.
Please give me some more of this.	请再给我一些这个。	Qǐng zài gěi wǒ yì xiē zhè ge.
Do you take credit cards?	可以刷卡吗?	Kě yǐ shuā kǎ ma?
How much is it?	这个多少钱?	Zhè ge duō shao qián?
It is ___ yuan.	这个是___元。	Zhè ge shì ___ yuán.

5,000	五千	Wǔ qiān
10,000	一万	Yí wàn
15,000	一万五千	Yí wàn wǔ qiān
20,000	两万	Liǎng wàn
30,000	三万	Sān wàn
Where is the restroom?	请问洗手间在哪?	Qǐng wèn xǐ shǒu jiān zài nǎ?
Goodbye.	再见。	Zài jiàn.

Emergency Phone Number

According to global safety reports, China is considered one of the safest countries in the world. Strict laws prohibit the possession of guns and drugs, and public security is well maintained across the country. In case of emergency, the following numbers can be used.

120	Medical Emergency, First Aid Services
119	Emergencies for Fire, Rescue & Accidents
110	Police

Currency

The national currency in China is the Renminbi (RMB/¥), commonly known as the yuan. One yuan equals 10 jiao or 100 fen. Coins are available in 1 yuan, 5 jiao, and 1 jiao denominations, while banknotes are issued in 1, 5, 10, 20, 50, and 100 yuan. Foreign currencies can be exchanged at banks and official exchange counters in cities and airports. ATMs are widely available across the country.

Transportation

Welcome to the ICAVS-ICES Conference, held at the Science and Art Center on the Siming Campus of Xiamen University (XMU). This guide is designed to help you reach the conference venue easily. Xiamen is a beautiful coastal city with an efficient transportation network, including buses, taxis, the metro, and ride-hailing services.

Maps of Xiamen's metro and BRT lines can be found at:

https://www.xmgdjt.com.cn/Index.aspx.

Information about city bus routes is available at:

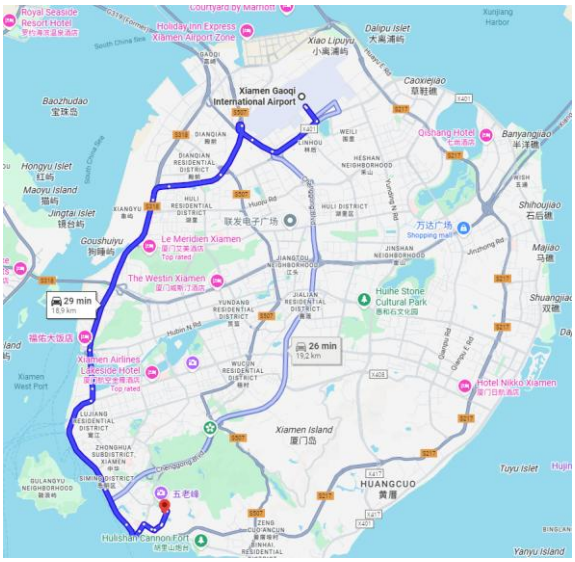
https://xiamen.gongjiao.com/

The main gateways to Xiamen are Xiamen Gaoqi International Airport, Xiamen North Railway Station, and Xiamen Railway Station.

If you depart from Xiamen Gaoqi International Airport:

Gaoqi International Airport has two terminals.

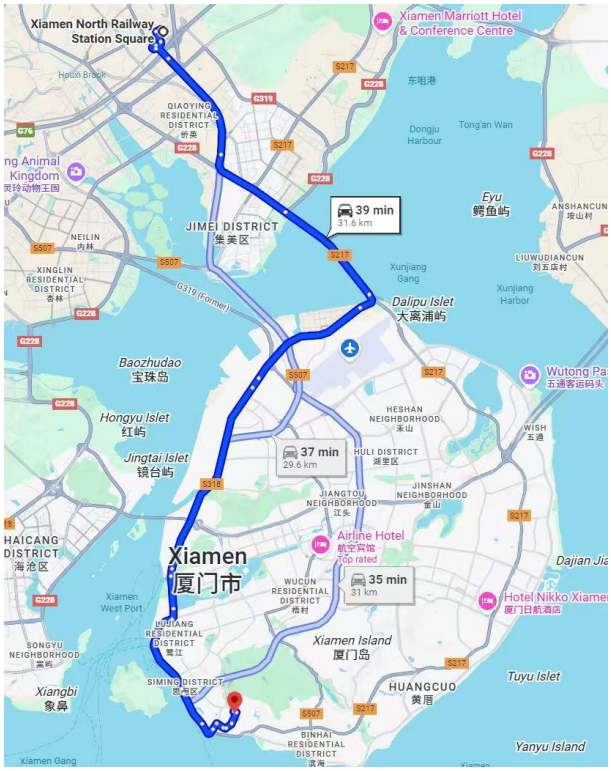
- **Public Bus:** Take the **Airport Express Bus Line** or **Airport Express Eastbound Line**, and then transfer to a connecting bus to **“Xicun Station (Xiamen University)”**.
- The journey takes approximately **1 hour 10 minutes**, and the fare is around **CNY 15**. Tickets can be purchased at the **counters in the arrival hall**.
- **Taxi / Ride-hailing:** This is the most convenient option. Designated taxi pick-up points are located at the arrival hall. Ride-hailing services are also widely used.
- The fare to **Xiamen University** is approximately **CNY 40-50**, and the trip takes about **20-30 minutes,** depending on the traffic conditions at that time.
- Please note that **ride-hailing pick-up points are located on the underground level** of the airport.

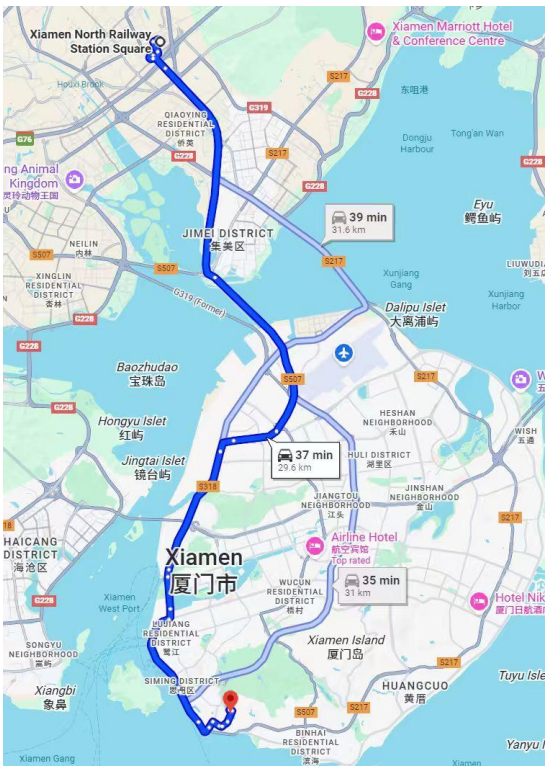


If you depart from **Xiamen North Railway Station**:

Xiamen North Railway Station is the city’s main high-speed rail hub.

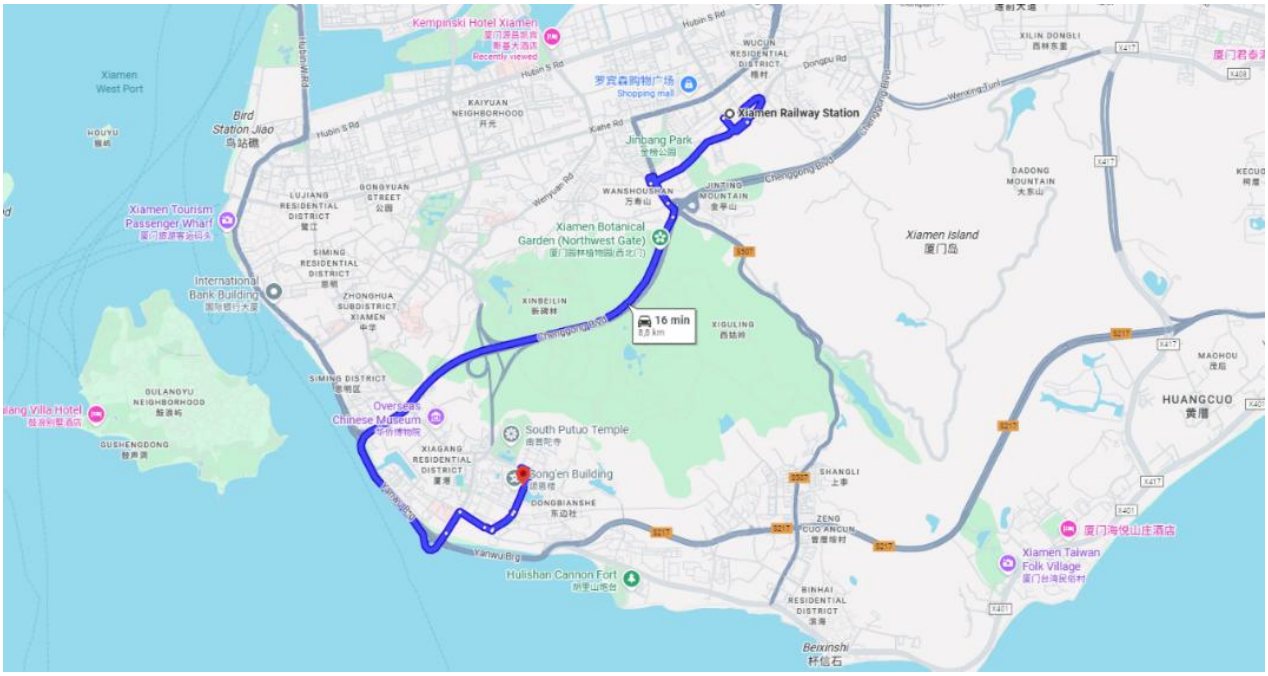
- **Public Transport (Metro + Bus)**: This is the most recommended and efficient option. Take **Metro Line 1** from Xiamen North Station and get off at “**Zhenhai Road Station**” (approximately 45 minutes). Then, transfer to a bus such as **Bus 20, 22, or 45** for a few stops to reach "**Xicun Station of Xiamen University**". The total journey takes approximately 60-70 minutes. The metro fare is around CNY 7, and the bus fare is CNY 1.
- **Taxi/Ride-hailing**: A convenient and direct option. Designated pick-up points for taxis and ride-hailing services are located **outside the station**. the fares to **Xiamen University (Siming Campus)** is approximately **CNY 60-80**, and the trip takes **40-50 minutes**, depending on traffic.





If you depart from **Xiamen Railway Station:**

- **Public Bus:** It is highly recommended to take **No. 96/48/21**. Its final stop is " **Xicun Station of Xiamen University** " (Xiamen University Station). This is the most direct route, taking about 45 minutes with a fare of CNY 1.
- **Taxi / Ride-hailing:** A fast and comfortable option, costing around CNY 15-20 for a 15-minute journey.
- **Metro:** You can take **No.3 and transfer to No.1** to "**Zhongshan Park** " station, then transfer to a bus or taxi for the remaining 2 km to Xiamen University.



- The conference venue is located on the **Siming Campus of Xiamen University**. Vehicles and pedestrians typically enter the campus through the **Da'nan Gate** or **Qunxian Gate**. Please note that the **train, bus, and metro systems use different types of tickets** in Xiamen.

- Metro tickets can be purchased from ticket vending machines at the stations (cash, credit card, or debit card).
- Train tickets are purchased at railway stations or online.
- Bus fares are paid directly on board (usually via exact change or mobile payment).

You may also use mobile applications such as *Alipay* or *WeChat* for metro and bus payments.

For more information on public transportation, please visit:

- Metro & BRT: https://www.xmgdjt.com.cn/Index.aspx
- City Buses: https://xiamen.gongjiao.com/
- Bus Company: https://www.xmbus.com/

We strongly recommend installing Amap (Gaode Map) or Baidu Maps on your phone. These apps provide real-time bus information, route planning, and ride-hailing services. If taking a taxi or ride-hailing, clearly state your destination as "Xiamen University Siming Campus". Please be aware that Xiamen University is located in a popular tourist area, and traffic near the campus can be congested during peak hours. We recommend allowing extra travel time. We hope this guide helps ensure a smooth journey. We look forward to welcoming you to Xiamen.

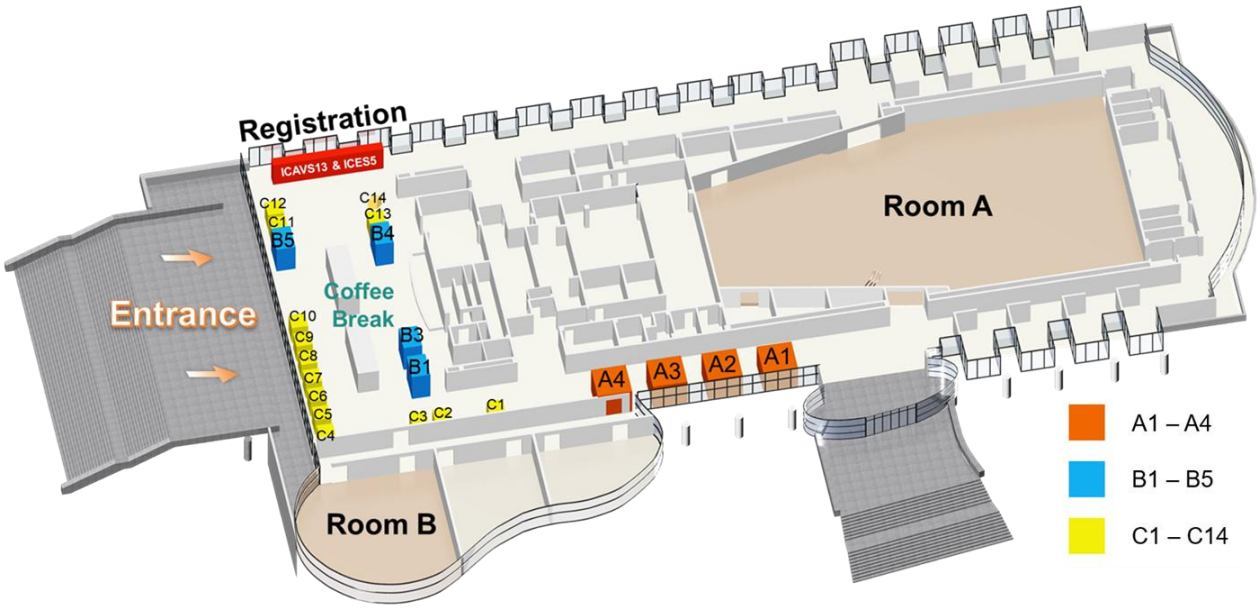
Note: Shuttle services are available at different times. Please follow the directions of volunteers with conference badges.

XIII. Exhibition

Overview

- Date: November 30 (Sun.) – December 5 (Fri.), 2025
- Place: The lobby on the second floor of the Science and Arts Center.

Booth Layout



Company Name	Booth No.
Renishaw (Shanghai) Trading Co. Ltd	A1
Edinburgh Instruments Ltd	A2
Zhendian (Suzhou) Medical Technology Co., Ltd	A3
Horiba	A4
Quantum Design China	B1
Bruker (Beijing) Scientific Technology Co., Ltd	B3
Photothermal Spectroscopy Corp	B4
Oxford Instruments Technology (Shanghai) Co. Ltd	B5
Luxiang Jiayi (Xiamen) Technology Co., Ltd.	C1
DHS Instruments Co., Ltd	C2
Wiley	C3

Company Name	Booth No.
PulsePower Technology Limited	C4
SPECS-TII Technology (Beijing)Co.,Ltd	C5
Beijing Haozhen Technology Co., LTD	C6
CIQTEK Co., LTD	C7
Fortec (Changchun) Technology Co., LTD	C8
Tangent Optics Co., LTD	C9
JASCO China (Shanghai)Co.,LTD	C10
Lightnovo ApS	C11
Shanghai Yuanfang Technology Co., LTD	C12
Chroma Technology Corp	C13
NPI Lasers Co., LTD	C14

XIV. Presentation Instruction

Oral Presentation (Invited, and Oral)

1. Presentation Time

Length of presentation should be in accordance with your time assigned as follows:

- ✧ Invited Presentation: 20 min. including 5 min Q&A.
- ✧ Oral Presentation: 15 min. including 3 min Q&A.
- ✧ Speakers are kindly reminded to keep within the allotted time. On-site timing will be strictly enforced.

2. Presentation File & Speaker's Autobiography

- ✧ Presentation file should be prepared in MS-PowerPoint format in English.
- ✧ Please bring your PowerPoint presentation file on USB memory stick and submit it to the staff of each presentation room before each session starts. The operator will load the presentation files to the laptop PC.

3. No Camera & No Record

- ✧ Please note that photo taking and video recording are strictly prohibited in the presentation room.

Poster Presentation

Place: 1F, Exhibition Hall	Poster Session 1	Poster Session 2
Put-up Time	Dec. 2 (Tue.) 09:00–	Dec. 3 (Wed.) 18:00–
Presentation Time	Dec. 2 (Tue.) 17:00–18:30	Dec. 4 (Thur.) 16:45–18:30
Take-down Time	from Dec. 3 (Wed.) 18:00	From Aug. Dec. 5 (Fri.) 12:00–

- ➢ Each poster will be assigned to a board with the corresponding paper number.
- ➢ We do not specify the poster format, but each poster should include the paper title, authors, affiliation, and paper number and must fit within a ***Width*** **0.9 m × *Height* 1.2 m** space (A0 size).
- ➢ Poster presenters are required to prepare their own poster materials and post them in advance.
- ➢ Please remove your poster according to the take-down time. All remaining posters will be removed.
- ➢ The materials such as scissors and tapes will be provided in poster session place.

XV. Plenary Speakers

Prof. Xiaoliang Sunney Xie

Xiaoliang Sunney Xie is the Director of Changping Laboratory, the Lee Shau-kee Professor and Dean of Faculty of Sciences at Peking University. He received his B.Sc. in Chemistry from Peking University in 1984, and Ph.D. in Physical Chemistry from University of California at San Diego in 1990. He became the first tenured professor in 1998 and the first endowed Professor in 2009 at Harvard University among Chinese scholars since China's reform and opening up. He relocated to Peking University in 2018.

Xie has been a pioneer of single-molecule biophysical chemistry, coherent Raman scattering microscopy and single-cell genomics. The single-cell whole genome amplification methods that his group invented has to date benefited over 8,000 families with monogenic diseases by successfully preventing the passing of disease-causing mutations to their offspring. In fighting against the COVID-19 pandemic, Xie's team has identified a broad-spectrum neutralizing antibody against all SARS-CoV-2 variants, which has been licensed to Sinovac and is undergoing clinical trials.

Xie received numerous international awards, most notably Tengchong Science Award (2024), Zhong Guan Cun Outstanding Contribution Price (2022), Qiu Shi Science and Technology Prize (2017), Albany Prize in Medicine and Biomedical Research (2015), Peter Debye Award in Physical Chemistry of American Chemical Society (2015) and Founders Award of Biophysical Society (2012).

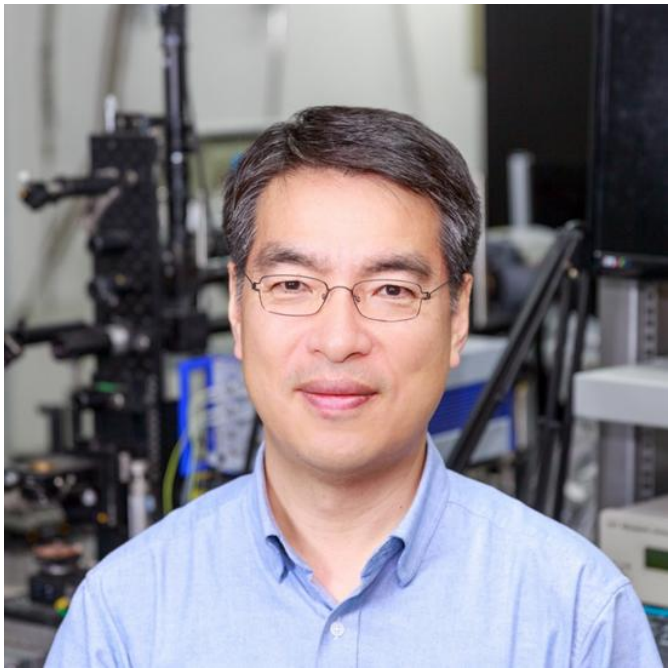
Prof. Juergen Popp

Juergen Popp studied chemistry at the universities of Erlangen and Würzburg, Germany. After his PhD in Chemistry he joined Yale University for postdoctoral work. He subsequently returned to Würzburg University where he finished his habilitation in 2002. Since 2002 Juergen Popp holds a chair for Physical Chemistry at the Friedrich-Schiller University Jena, Germany. Since 2006 he is also the scientific director of the Leibniz Institute of Photonic Technology, Jena. Juergen Popp is a world leading expert in Biophotonic / optical health technology research covering the complete range from photonic basic research towards translation into clinically applicable methods. Jürgen Popp is author of >1.100 papers in peer-reviewed journals which have been cited >40.000 times, which results in an h-index of 83. In addition Popp's innovations have led to 18 patents. He has given more than 200 invited talks on national and international conferences (among them more than 60 keynote/plenary lectures). In addition, he organized numerous conferences and workshops (e.g. the world largest conference on Raman spectroscopy ICORS in 2014). He is Editor-in-Chief of the Journal of Biophotonics and associate editor of Analytical Chemistry. Furthermore, he is a leading partner in various national and international projects in cooperation with academic, clinical and industrial partners. Very recently under the leadership of Juergen Popp the "Leibniz Center for Photonics in Infection Research (LPI)" has been put by the German government as one of three projects on the national roadmap for research infrastructures. The infrastructure committed to research transfer will receive three-digit million funding. Juergen Popp is member of the Photonics 21 Executive Board and has been frequently asked as a contact person for media and politics. Professor Popp has received numerous awards for his research, including the prestigious Pittsburgh Spectroscopy Award in 2016. In 2023, Jürgen Popp received an honorary doctorate from the University at Albany - State University of New York (USA) and the Charles Mann Award from the Federation of Analytical Chemistry and Spectroscopy Societies (FACSS).

Prof. Hatice Altug

Prof. Hatice Altug is professor at Ecole Polytechnique since 2013 and the head of BioNanoPhotonic Systems (BIOS) Laboratory at School of Engineering. Prior to EPFL, she was professor at Boston University, Electrical and Computer Engineering Department from 2007 to 2013. She received her Ph.D. in Applied Physics from Stanford University (U.S.) in 2007 and her B.S. in Physics from Bilkent University (Turkey) in 2000. Her research is focused in the application of nanophotonics for life sciences and biomedical fields with the development of next-generation biosensing, spectroscopy and bioimaging systems. Her laboratory has world-leading expertise to engineer plasmonic and all-dielectric based metasurfaces and nanoantennas with operation wavelengths spanning from visible to Infrared to leverage powerful optical detection techniques including vibrational spectroscopy (Surface enhanced infrared absorption - SEIRA & surface enhanced Raman scattering- SERS, Vibrational Circular Dichroism) and digital biosensing. They innovatively combine nanophotonics with novel nanofabrication approaches, microfluidics, surface chemistry and AI techniques to achieved lab-on-chip device integration and enhanced device performance. Prof. Altug received numerous awards including European Physical Society Emmy Noether Distinction, Optical Society of America Adolph Lomb Medal, U.S. Presidential Early Career Award for Scientists and Engineers, IEEE Photonics Society Young Investigator Award and Koc University Science Medal. She received European Commission ERC Consolidator and Proof of Concept Grants, U.S. Office of Naval Research Young Investigator Award, U.S. National Science Foundation CAREER Award, Massachusetts Life Science Center New Investigator Award. In 2011, she has been named to Popular Science Magazine's "Brilliant 10" list. She is a fellow of Optical Society of America and senior member of SPIE.

Prof. Hyeonsik Cheong



Hyeonsik Cheong is a professor of physics at Sogang University. He received his B.S. degree in physics from Seoul National University and A.M. and Ph.D. in physics from Harvard University. After working at Harvard as a postdoctoral fellow and at National Renewable Energy Laboratory in Golden, Colorado as a postdoc and then as a senior scientist, he joined the Department of Physics at Sogang University in 1999. At Sogang University, he has served in various administrative positions, including Director of International and Public Relations, Chair of the Department of Physics, Vice President for Budget and Planning, Vice President of Research and Director of Sogang University Research & Business Development Foundation, and Dean of Graduate School. He served as the president of Korean Graphene Society from 2015 to 2016 and as the chair of the Division of Applied Physics of the Korean Physical Society from 2016 to 2020. He is currently the Chair of the International Advisory Board of Recent Progress in Graphene and 2D Materials Research (RPGR) Conference. He won the Korea Science Award (presidential award) in 2022 and is a fellow of the Korean Academy of Science and Technology. His research interest includes spectroscopic studies of graphene and 2-dimensional materials, semiconductor nanostructures, and solar cell materials.

Prof. Tahei Tahara

Tahei Tahara obtained his Ph.D. degree from the University of Tokyo in 1989. He became a research associate of the University of Tokyo in 1989 and then moved to the newly founded Kanagawa Academy of Science and Technology (KAST) as a research associate in 1990. In 1995, he joined the Institute for Molecular Science (IMS) as an associate professor and started his own research group. He moved to RIKEN as Chief Scientist in 2001 and has been the Director of Molecular Spectroscopy Laboratory since then.

His research interests are ultrafast spectroscopy, interface-selective nonlinear spectroscopy, and single-molecule spectroscopy. He has obtained a number of awards including the CSJ Award (2025), Shimadzu Award (2021), Mizushima-Raman Lectureship (2019), TRVS “Lifetime Achievement” Award (2019), JSMS Distinguished Scientist Award (2017), The Spectroscopic Society of Japan Award (2017), The Commendation for Science and Technology by MEXT (2017), CSJ Award for Creative Work (2012), The JSPS Prize (2006), IBM Japan Science Prize (2004), Morino Science Award (2000).

He served as President of the Japan Society of Molecular Science (2018-2020). He also served as Chair of the 16th International Conference on Time-Resolved Spectroscopy (2013), Co-General Chair of the 22nd International Conference on Ultrafast Phenomena (2020), and Chair of the 8th Asian Spectroscopic Conference (2023). He is currently a member of the Editorial Advisory Board / Advisory Board / Editorial Board of J. Chem. Phys., J. Phys. Chem. Lett., J. Phys. Chem. A/B/C, Chemical Science, Chemical Physics.

Prof. Rainer Hillenbrand

Rainer Hillenbrand is an Ikerbasque Research Professor and Nanooptics Group Leader at the nanoscience research center CIC nanoGUNE in San Sebastian (Basque Country, Spain), and a Joint Professor at the University of the Basque Country. He is also co-founder of the company neaspec GmbH (Germany), now part of attocube systems AG (Germany), which develops and manufactures near-field optical microscopes. From 1998 to 2007 he worked at the Max Planck Institute of Biochemisty (Martinsried, Germany), where he led the Nano-Photonics Research Group from 2003 to 2007. He obtained his PhD degree in physics from the Technical University of Munich in 2001.

Hillenbrand's research activities include the development of scattering-type scanning near-field optical microscopy (s-SNOM), nanoscale Fourier transform infrared (nano-FTIR) spectroscopy and related techniques, as well as their application in nanophotonics and materials sciences. He has published more than 180 peer-reviewed articles with over 28000 citations and an h-index 89 (Google Scholar). In 2014 he received the Ludwig-Genzel-Price "for the design and development of infrared near-field spectroscopy and the application of the novel spectroscopy method in different fields of natural sciences".

Prof. Zhong-Qun Tian

Zhong-Qun Tian received his B.S. in Chemistry from Xiamen University, China, in 1982 and his Ph.D. in Chemistry from the University of Southampton, UK, under Martin Fleischmann (FRS), in 1987. He then returned to Xiamen University, where he has been working ever since. He was appointed a full professor in 1992 and was elected a Member of the Chinese Academy of Sciences in 2005. Tian has been a Fellow of the Royal Society of Chemistry (2005), the International Society of Electrochemistry (2010), and the World Academy of Sciences (2014).

He served as President of the International Society of Electrochemistry (ISE) from 2019 to 2020 and was Chairman of the Chinese Light Scattering Committee of the Chinese Physical Society (2004-2006). He has also served twice on the Steering Committee of the International Conference on Raman Spectroscopy (ICORS, 2004-2010, 2018-present). Tian is a permanent member of the Steering Committee of the Asian Spectroscopy Conference. He was an associate editor for Chem. Soc. Rev. (2012-2024) and J. Raman Spectrosc. (2009-2021).

Currently, he is a member of the Academic Committee of the Chinese Academy of Sciences and serves on the advisory/editorial boards of more than 15 international journals. Over the course of his career, he has received numerous awards from China, UK, USA, France, Japan, ISE, and ICORS, including the Raman Lifetime Award. His main research interests include SERS/SHINERS, spectroelectrochemistry, plasmonics, and molecular assembly. He has published more than 700 peer-reviewed papers (over 450 of which focus on SERS/SHINERS), with over 56,000 citations and an H-index of 102.

Prof. Boris Mizaikoff

Dr. Boris Mizaikoff is a Chaired Professor and Director of the Institute of Analytical and Bioanalytical Chemistry @ Ulm University (Germany) with prior appointments at the Vienna University of Technology (Austria) and at the Georgia Institute of Technology (USA). Since 2021, he is also a Director at the Hahn-Schickard Institute for Microanalysis Systems in Ulm (Germany). His research interests focus on optical sensors, biosensors, and biomimetic sensors in the mid-infrared spectral range, system miniaturization and integration based on micro- and nanofabrication, multifunctional (nano)analytical platforms, development of biomolecular/biomimetic molecular recognition architectures, multivariate data evaluation, and applications in environmental analytics, process analysis, and biomedical/clinical diagnostics. He is (co)author of 470+ peer-reviewed publications and 21 patents.

Prof. Yi Luo

Yi Luo earned his Bachelor's degree in Engineering from HuaZhong University of Science and Technology (1985) and a Ph.D. in Computational Physics from Linköping University, Sweden (1996). He started as an Assistant Professor at Stockholm University (1997–2000), pioneering research in theoretical molecular electronics and X-ray spectroscopies. Later, he joined the Royal Institute of Technology (KTH) in Sweden as an Associate Professor and Full Professor while leading interdisciplinary research. Since 2010, he has been at the University of Science and Technology of China (USTC), where he holds the titles of Distinguished Chair Professor and Yan Jici Chair Professor. As Director of the Hefei National Research Center for Physical Sciences at Microscale and Executive Director of USTC's School of Emerging Technology, he oversees cutting-edge research in quantum information science, nanotechnology, biotechnology, and cognitive science. As a Principal Investigator, he has led several high-profile research projects funded by the National Natural Science Foundation of China (NSFC), the Ministry of Science and Technology (MOST), and the Chinese Academy of Sciences (CAS), contributing to advancements in ultrafast spectroscopy, ultra-high-resolution chemical imaging of single molecules, and AI-driven robotic chemistry. With over 500 co-authored publications, his work has been honored with the Göran Gustafsson Prize in Chemistry by the Royal Swedish Academy of Sciences. He currently serves as the Editor of Chemical Physics and the Executive Editor of Chinese Journal of Chemical Physics.

Prof. Malgorzata Baranska

Professor Malgorzata Baranska is a graduate (1992) and PhD (1999 of the Jagiellonian University, Krakow, Poland, where she also obtained her habilitation (2007) and the title of full professor (2013). Since 1998, she has been employed at the Faculty of Chemistry of Jagiellonian University, where she serves as the Head of the Raman Imaging Group and the Department of Chemical Physics. She specializes in Raman imaging and the analysis of biological and medical samples, including research related to the development and treatment of lifestyle diseases. Her current interest focuses on the development of nonlinear optical Raman imaging techniques (SRS, CARS) for ultrafast tracking of biochemical changes in cells and tissues, including studies of the kinetics of drug uptake and metabolism in cells. Labelled imaging and data fusion are a new approach for sensitive and selective subcellular analysis. She also studies the optical activity of biologically important compounds using chiraloptic techniques (ROA, ECD), including the mechanism of Raman signal amplification.

XVI. Scientific Program

Program

December 1, Monday — Morning [AM]

Opening ceremony

✦ Room A

8:20 – 8:40

Plenary Lecture

Chair: Pietro.Giuseppe Gucciardi

✦ Room A

8:40-9:20	[PL1] **Xiaoliang Sunney Xie** (Changping Laboratory, Beijing, 102206, China) “25 Years of 3D Coherent Raman Imaging for Biomedicine”
9:20-10:00	[PL2] **Juergen Popp** (Leibniz Institute of Photonic Technology (IPHT), Member of Leibniz Health Technologies and the Leibniz Centre for Photonics in Infection Research (LPI), Germany) “From Light to Insight: AI-Powered Raman Spectroscopy in Medicine”
10:00-10:40	Coffee break

Enhanced spectroscopics	
Date/Time	Dec. 1 (Mon.), 2025 / 10:40-12:10
Place	Room A
Session Chair	Yi-Fan Bao & Ian Burgess

[1-I-1] (Invited) 10:40-11:00

Advances in Electrochemical Surface Enhanced Infrared Absorption Spectroscopy (SEIRAS)

Ian Burgess

University of Saskatchewan, Canada

[1-I-2] (Invited) 11:00-11:20

In-Situ Raman Probing Electrochemical Reactions

Jian-Feng Li

Xiamen University, China

[1-O-1] (Oral) 11:20-11:35

Vibrational imaging of CO electrooxidation on single nanocatalysts

Yi-Fan Bao

Xiamen University, China

[1-O-2] (Oral) 11:35-11:50

Plasmon-Enhanced Raman Spectroscopy: From Single Molecule Detection to In Situ/Operando Spectroelectrochemical Studies

Chaoyu Li

Tongji University, China

Sponsor 11:50-12:10

Time-Resolved Raman Spectroscopy: Eliminating Fluorescent for Clear Chemical Identification

Tim Batten

Renishaw

Nanospectroscopy	
Date/Time	Dec. 1 (Mon.), 2025 / 10:40-12:10
Place	Room B
Session Chair	Naresh Kumar & Zhenchao Dong

[2-I-1] (Invited) 10:40-11:00

Single-Molecule Raman Spectromicroscopy at the Atomic Scale

Zhenchao Dong

University of Science and Technology of China, China

[2-I-2] (Invited) 11:00-11:20

Optics and Photochemistry of Single Molecules Explored with Sub-Nm Precision

Anna Maria Rosławska

Max Planck Institute for Solid State Research, Germany

[2-I-3] (Invited) 11:20-11:40

Chemically Interrogating N-Heterocyclic Carbenes at the Single-Molecule Level Using Tip-Enhanced Raman Spectroscopy

Nan Jiang

University of Illinois Chicago, United States

[2-O-1] (Oral) 11:40-11:55

Probing Supported Lipid Membranes at the Nanoscale using Tip-Enhanced Raman Spectroscopy

Naresh Kumar

ETH Zurich, Switzerland

[2-O-2] (Oral) 11:55-12:10

Structure–Property Analysis of Polymer Nanoparticles Via Combined Nanomechanical and Spectroscopic Methods in Liquid

Xinyue Wang

Institute of Physical Chemistry and Abbe Center of Photonics, Friedrich-Schiller Universität Jena, Germany

Vibrational Imaging	
Date/Time	Dec. 1 (Mon.), 2025 / 10:40-12:10
Place	Room C
Session Chair	Hanqing Xiong & Zhiwei Huang

[3-I-1] (Invited) 10:40-11:00

Time-domain Stimulated Raman Scattering Tomography for Label-free Functional Biomolecular 3D Imaging of Live Cells and Tissue

Zhiwei Huang

National University of Singapore, Singapore

[3-O-1] (Oral) 11:00-11:15

Deep-dive into Cell Biochemistry with O-PTIR and FL-PTIR in Water Environment

Szymon Tott

Jagiellonian University, Poland

[3-O-2] (Oral) 11:15-11:30

Next-generation Time-domain Stimulated Raman Scattering Spectroscopy and Imaging for Biomedical Applications

Hanqing Xiong

Peking University, China

[3-O-3] (Oral) 11:30-11:45

Probing Local Electric Fields via Vibrational Lifetime of a Delocalized Oscillator with Bond-Selective Fluorescence

Haomin Wang

Fudan University, China

Sponsor 11:45-12:05

Chemical Visualization through Photothermal IR and Stimulated Raman Spectroscopy

Hailong Hu

Photothermal

Raman Optical Activities and Vibrational Chirality Dichroism	
Date/Time	Dec. 1 (Mon.), 2025 / 10:40-12:10
Place	Room D
Session Chair	Tao Wu & Daniel-Ralph Hermann

[4-I-1] (Invited) 10:40-11:00

Overview of Vibrational Optical Activity: Principal Applications of VCD and ROA

Laurence A. Nafie

Syracuse Univerity, United States

[4-I-2] (Invited) 11:00-11:20

Applications of Polarised and Unpolarised Infrared Absorbance Spectroscopy to Help us Undestand for Complex Biomolecular Systems: Bioactives to Biopolymers

Alison Rodger

The Australian National University, Australia

[4-O-1] (Oral) 11:20-11:35

Instrumental advances in Raman optical activity (ROA) – Deep-UV ROA as a possible tool for broadband resonance ROA studies

Daniel-Ralph Hermann

Palacky University Olomou, Czech Republic

[4-O-2] (Oral) 11:35-11:50

Chiral Nature of Amyloids: An Interdisciplinary View on Amyloid Polymorphism

Aleksnadra Wajda

Jagiellonian Universit, Poland

[4-O-3] (Oral) 11:50-12:05

Exploring Lanthanide Optical Activity via Raman Optical Activity Instrumentation for Biomolecular Analysis

Tao Wu

Institute of Organic Chemistry and Biochemistry, Czech Academy of Sciences, Czech Republic

Program

December 1, Monday — Afternoon [PM]

Lunch

✦ Yifu Building

12:10 – 14:30

Enhanced spectroscopics	
Date/Time	Dec. 1 (Mon.), 2025 / 14:30-15:40
Place	Room A
Session Chair	Laura Fabris & Zee Hwan Kim

[1-I-3] (Invited) 14:30-14:50

SERS of Molecular Tunnel Junctions Reveals Metal-Molecule Charge-Transfer Resonances

Zee Hwan Kim

Seoul National Universit, Republic of Korea

[1-I-4] (Invited) 14:50-15:10

In situ monitoring of nanoparticle catalysis by using SERS

Wei Xie

Nankai University, China

[1-I-5] (Invited) 15:10-15:30

Metal-Molecule Interactions at the Nanoscale: Issues, Implications and Future Developments in SERS

Laura Fabris

Politecnico di Torino, Italy

[1-O-3] (Oral) 15:30-15:45

SERS Chemical Enhancement and Bandwidth Analysis of Benzyl Mercaptan Adsorbed on Ag Substrates

De-Yin Wu

Xiamen University, China

15:40-16:00 Coffee break

Nanospectroscopy	
Date/Time	Dec. 1 (Mon.), 2025 / 14:30-15:40
Place	Room B
Session Chair	Otakar Frank & Markus B. Raschke

[2-I-4] (Invited) 14:30-14:50

Quantum Vibrational Nano-Imaging and -Spectroscopy

Markus B. Raschke

University of Colorado, the United States

[2-I-5] (Invited) 14:50-15:10

Tip-Enhanced Strong Coupling and Nano-optical Trapping Spectroscopy of Single Quantum Dots

Kyoung-Duck Park

Pohang University of Science and Technology, Republic of Korea

[2-O-3] (Oral) 15:10-15:25

Nanospectroscopic signatures of local disorder in 2D materials

Otakar Frank

J. Heyrovsky Institute of Physical Chemistry of the Czech Academy of Sciences, Czech Republic

[2-O-4] (Oral) 15:25-15:40

TERS and TEPL from Single Semiconductor Nanostructures

Alexander Milekhin

Rzhanov Institute of Semiconductor Physics, Russia

15:40-16:00 Coffee break

Vibrational Imaging	
Date/Time	Dec. 1 (Mon.), 2025 / 14:30-15:40
Place	Room C
Session Chair	Barbara Orzechowska & Katsumasa Fujita

[3-I-2] (Invited) 14:30-14:50

Cryogenic Raman Microscopy: Capturing Dynamic Biological States with High Chemical State Fidelity

Katsumasa Fujita

The University of Osaka, Japan

[3-O-4] (Oral) 14:50-15:05

Two Paths and One Goal: Raman Probes for High-Specificity Imaging of Mitochondria and Lipids Differentiation

Anna Pieczara

Jagiellonian Univeristy, Poland

[3-O-5] (Oral) 15:05-15:20

Enhanced Widefield Mid-IR Photothermal Imaging and Spectroscopy for Tissue and Cell Screening

Christoph Krafft

Leibniz Institute of Photonic Technology, Germany

[3-O-6] (Oral) 15:20-15:35

Quantitative Raman Analysis of Fatty Acid Accumulation in Cells: Insights into Lipid Metabolism

Barbara Orzechowska

Jagiellonian Univeristy, Poland

15:40-16:00 Coffee break

Advanced Instrumentation	
Date/Time	Dec. 1 (Mon.), 2025 / 14:30-15:40
Place	Room D
Session Chair	Sergey L.Veber & Zongyin Yang

[4-I-3] (Invited) 14:30-14:50

Toward Next-Generation Spectral Detection: A Miniaturized High-Performance Solution

Zongyin Yang

Zhejiang University, China

[4-I-4] (Invited) 14:50-15:10

Large-Area Molecular Mapping Platform (LAMP)

Ping Wang

Changping National Laboratory, China

[4-O-4] (Oral) 15:10-15:25

Progress in sub-micron microscopy at CIRI beamline at Solaris

Tomasz Wrobel

Jagiellonian University, Poland

[4-O-5] (Oral) 15:25-15:40

Conceptual Design of the Infrared Beamline at the SKIF Synchrotron Facility

Sergey L.Veber

International Tomography Center SB RAS, Russia

15:40-16:00 Coffee break

Enhanced spectroscopics	
Date/Time	Dec. 1 (Mon.), 2025 / 16:00-17:45
Place	Room A
Session Chair	Jana Hahn & Xingyi Ling

[1-I-6] (Invited) 16:00-16:20

Data-Driven Design of Molecular Receptors for Precise SERS Detection

Xingyi Ling

Nanyang Technological University Singapore, Singapore

[1-I-7] (Invited) 16:20-16:40

Surface-Enhanced Raman Spectroscopy for Metabolomics Research

Jian Ye

Shanghai Jiao Tong University, China

[1-O-4] (Oral) 16:40-16:55

Algorithm-Assisted Surface-Enhanced Raman Spectroscopy toward Dynamic Protein Structure Detection

Hao Ma

Xiamen University, China

[1-O-5] (Oral) 16:55-17:10

Machine Learning-Enhanced Raman Spectroscopy for Characterizing Aluminum-Adjuvanted Vaccines

Jana Hahn

Paul-Ehrlich-Institut, Germany

[1-O-6] (Oral) 17:10-17:25

Deep Learning Assisted SERS Method for Accurate Classification and Rapid Diagnosis of CNS-related Diseases

Dongjie Zhang

Xidian University, China

Sponsor 17:25-17:45

Advanced Applications of HORIBA AFM-Raman Technology

Yan Zhou

Horiba

17:45-18:30 Banquet

Nanospectroscopy	
Date/Time	Dec. 1 (Mon.), 2025 / 16:00-17:45
Place	Room B
Session Chair	Yang Luo & Volker Deckert

[2-I-6] (Invited) 16:00-16:20

Light at Nano Tips-Fundamentals and Applications

Volker Deckert

Friedrich Schiller University, Germany

[2-I-7] (Invited) 16:20-16:40

Tuning the Bandgap of MoS_2 by Surface Functionalization and Hybridization with Metastructures: A TERS Investigation

François Lagugné-Labarthet

Western University, Canada

[2-O-5] (Oral) 16:40-16:55

Probing Molecular Vibrations Via 1-0 Resonance Tip-Enhanced Raman Spectroscopy

Yang Zhang

University of Science and Technology of China, China

[2-O-6] (Oral) 16:55-17:10

Nanoscale Chemical Imaging of Interfacial Reactions by Tip-Enhanced Raman Spectroscopy

Liqing Zheng

Nanjing University, China

[2-O-7] (Oral) 17:10-17:25

Single-Molecule Plasmonic Chemistry: Dissociation of CO_2 Molecules on CoPc/Au(111)

Chao Zhang

University of Science and Technology of China, China

[2-O-8] (Oral) 17:25-17:40

Tip-Enhanced Femtosecond Spectroscopy in Single Molecules

Yang Luo

Max Planck Institute for Solid State Research, Germany

17:45-18:30 Banquet

Vibrational Imaging	
Date/Time	Dec. 1 (Mon.), 2025 / 16:00-17:45
Place	Room C
Session Chair	Fanghao Hu & Harumi Sato

[3-I-3] (Invited) 16:00-16:20

Visualization of Marine Degradation Processes of Biodegradable Polyester by Low-frequency Raman Imaging

Harumi Sato

Kobe University, Japan

[3-O-7] (Oral) 16:20-16:35

Active hyperspectral sensing based on high-speed interferometer and broadband mid-IR quantum cascade laser for black plastic sorting

Eduardo Maia Paiva

VTT Technical Research Centre of Finland Ltd, Finland

[3-O-8] (Oral) 16:35-16:50

Cell–Cell Communication in the Blood–Brain Barrier: From Physiology to Pathology

Anna Antolak

Jagiellonian University, Poland

[3-O-9] (Oral) 16:50-17:05

Functional stimulated Raman scattering microscopy for multiplexed photoswitching, sensing and protein secondary structure imaging

Fanghao Hu

Tsinghua University, China

[3-O-10] (Oral) 17:05-17:20

Identification of Adulterated Coffee by Near-Infrared Hyperspectral Imaging

Thu Thuy Bui

Hanyang University, Republic of Korea

Sponsor 17:20-17:35

Confocal and Correlative Raman Imaging Platform Innovation: Expanding Analytical Boundaries

Cheng Qian

Oxford

17:45-18:30 Banquet

Advanced Instrumentation	
Date/Time	Dec. 1 (Mon.), 2025 / 16:00-17:45
Place	Room D
Session Chair	Lorenzo Gatto & Ke Bian

[4-I-5] (Invited) 16:00-16:20

Single-Molecule Chemical Imaging

Ning Fang

Xiamen University, China

[4-O-6] (Oral) 16:20-16:35

Observation of liquid-solid transition of nanoconfined water at ambient conditions through a Home-made NV-SPM

Ke Bian

Peking University, China

[4-O-7] (Oral) 16:35-16:50

Visualizing Multi-Scale Spatiotemporal Heterogeneity in Electrochemical Kinetics via Electrochemical Surface-Enhanced Raman Microscopy

Tianyi Yang

Xiamen University, China

[4-O-8] (Oral) 16:50-17:05

Rapid Electro-Optic Sampling of MIR Pulses with a Resonant Scanning Mirror for In-flow Molecular Fingerprinting

Lorenzo Gatto

Max Planck Institute of Quantum Optics, Germany

[4-O-9] (Oral) 17:05-17:20

Pushing the Boundaries: Handheld Raman Spectrometers Rival Deep-Cooled CCD Giants in Detection Limits

Ilchenko Oleksii

Lightnovo ApS, Denmark

[4-O-10] (Oral) 17:20-17:35

High-Performance Deep Learning Model Classification from Multi-Device Datasets

Hanlin Li

The University of Auckland, New Zealand

17:45-18:30 Banquet

Program

December 2, Tuesday — Morning [AM]

Plenary Lecture

Chair: Sergei Kazarian

✦ Room A

8:20-9:00	[PL1] **Hatice Altug** (Ecole Polytechnique federale de Lausanne, School of Engineering, Bionanophotonic Systems Laboratory, Lausanne) “Integrated Mid-IR Nanophotonics for Surfaced Enhanced Spectroscopy, Biosensing and Microarrays”
9:00-9:40	[PL2] **Hyeonsik Cheong** (Department of Physics and Center for Nano Materials, Sogang University 35 Baekbeom-ro, Republic of Korea) “Raman Spectroscopy for Two-Dimensional Materials Research”
9:40-10:10	Coffee break

Enhanced spectroscopics	
Date/Time	Dec. 2 (Tue.), 2025 / 10:10-11:50
Place	Room A
Session Chair	Balaji Sanap & Sebastian Schlücker

[1-I-8] (Invited) 10:10-10:30

Precision Plasmonics in Nanogaps: from Quantum Effects to Probing Aligned Reactive Centers

Sebastian Schlücker

University of Duisburg-Essen, Germany

[1-I-9] (Invited) 10:30-10:50

Probing Plasmonic Hot-Carrier Generation and Transfer in Gold Nanoparticles by Spectroscopic and Photoelectrochemical Methods

Sangwoon Yoon

Chung-Ang University, Republic of Korea

[1-O-7] (Oral) 10:50-11:05

Extreme photonic for single molecule electro-photocatalysis

Shu Hu

Xiamen University, China

[1-O-8] (Oral) 11:05-11:20

In-Situ Observation of Plasmon-Mediated Amide Bond Formation by Surface-Enhanced Raman Spectroscopy

Balaji Sanap

Tokushima University, Japan

[1-O-9] (Oral) 11:20-11:35

The Role of Surface Adsorbed Hydroxyl in the Electrocatalytic Ammonia Oxidation on Platinum

Haisheng Su

IKKEM, China

Sponsor 11:35-11:50

Multimodal Confocal Microspectroscopy: Raman and Beyond…

Angela Flack

Edinburgh Instruments

Nanospectroscopy	
Date/Time	Dec. 2 (Tue.), 2025 / 10:10-11:50
Place	Room B
Session Chair	Zhaodong Meng & Takayuki Umakoshi

[2-I-8] (Invited) 10:10-10:30

Plasmon Enhanced IR Spectroscopy and Electrochemistry

Xinghua Xia

Nanjing University, China

[2-I-9] (Invited) 10:30-10:50

High-speed AFM for Tip-enhanced Optical Nano-imaging

Takayuki Umakoshi

The University of Osaka, Japan

[2-O-9] (Oral) 10:50-11:05

Correlative Nano-IR + Raman Spectroscopy with Unprecedented Spectral Coverage

Lars Mester

Attocube Systems GmbH, Germany

[2-O-10] (Oral) 11:05-11:20

Ultrasensitive Nanoscale IR Vibrational Imaging with Vibrational-encoded Fluorescence

Zhaodong Meng

Xiamen University, China

[2-O-11] (Oral) 11:20-11:35

In Situ/Operando Spectroelectrochemistry as a Tool for Recognition of Ambipolar Polymers' Molecular Structure-Reactivity Requirements

Kamila Łępicka

Institute of Physical Chemistry PAS, Poland

Sponsor 11:35-11:50

Multi-field Coupled Super-resolution Near-field Optical Microscopy and Recent Applications

Xi Lu

Quantum Design

AI-assisted Chemometrics	
Date/Time	Dec. 2 (Tue.), 2025 / 10:10-11:50
Place	Room C
Session Chair	Tarek Eissa & Thomas Bocklitz

[3-I-4] (Invited) 10:10-10:30

Data Augmentation and Fusion Strategies for Clinical and Forensic Vibrational Spectroscopy

David Perez Guaita

University of Valencia, Spain

[3-I-5] (Invited) 10:30-10:50

Tailoring Image Analysis and Machine Learning for the Analysis of Vibrational Spectroscopic Imaging

Thomas Bocklitz

University of Jena and Leibniz-IPHT, Germany

[3-O-11] (Oral) 10:50-11:05

Towards Open, FAIR and AI-driven Raman Spectroscopy for Functional Materials

Miguel A. Bañares

CSIC, Spain

[3-O-12] (Oral) 11:05-11:20

An LLM Orchestrated Modular Agent for AI-Assisted Chemometrics: Multi-Task Inference on Infrared Spectra

Xiangyang Yu

Sun Yat-Sen University, China

[3-O-13] (Oral) 11:20-11:35

Generalizable Machine Learning for Vibrational Spectroscopy of Biological Samples

Tarek Eissa

Ludwig Maximilians University of Munich, Germany

[3-O-14] (Oral) 11:35-11:50

Diffuser-Supported Hyperspectral Near-Infrared Measurement for Analysis of Diverse Samples with Thin Pathlengths

Haeseong Jeong

Hanyang university, Republic of Korea

Application in Materials and Catalysis	
Date/Time	Dec. 2 (Tue.), 2025 / 10:10-11:50
Place	Room D
Session Chair	Wenxing Yang & Bingjun Xu

[4-I-6] (Invited) 10:10-10:30

SFG Spectroscopy Study on the Electrode Surfaces of Li-ion Batteries

Shen Ye

Tohoku University, Japan

[4-I-7] (Invited) 10:30-10:50

Cross-Section Raman Spectroscopy for Device Level Characterization

Bingjun Xu

Peking University, China

[4-O-11] (Oral) 10:50-11:05

Electrocatalytic Process in Hydrogen Fuel Cells via In Situ Raman Spectroscopy

Jinchao Dong

Xiamen University, China

[4-O-12] (Oral) 11:05-11:20

Plasmonic effects for spectroscopy and/or reaction

Chao Zhan

Xiamen University, China

[4-O-13] (Oral) 11:20-11:35

Resolving CO Dynamics on Electrocatalytic Surface by in situ Vibrational Spectroscopies

Wenxing Yang

Westlake University, China

[4-O-14] (Oral) 11:35-11:50

Radical Generation via Redox Intermediates: Revealed by Highly Time-resolved EPR and ATR Spectroscopies

Qingyue Wang

Zhejiang University, China

Program

December 2, Tuesday — Afternoon [PM]

Lunch

✦ Yifu Building

11:50-13:30

Enhanced spectroscopics	
Date/Time	Dec. 2 (Tue.), 2025 / 13:30-14:40
Place	Room A
Session Chair	Jinqing Huang & Alvarez-Puebla Ramon

[1-I-10] (Invited) 13:30-13:50

Hybrid porous plasmonic materials and their applications in SERS

Alvarez-Puebla Ramon

Universitat Rovira i Virgili, Spain

[1-O-10] (Oral) 13:50-14:05

ThermoPlasSens: A multiplexed Paper-Based Plasmonic Biosensor Integrating SERS, LSPR, and Thermoplasmonic Readouts for DNA Hybridization Detection

Daria Stoia

Babes-Bolyai University, Romania

[1-O-11] (Oral) 14:05-14:20

Dynamic Hotspot Monitoring Protein Structural Heterogeneity by Optical Tweezers-Coupled Raman Spectroscopy

Jinqing Huang

The Hong Kong University of Science and Technology, Hong Kong, China

[1-O-12] (Oral) 14:20-14:35

Porous Plasmonic Materials for Air Quality Sensing

Irving Brian Becerril Castro

Universitat Rovira i Virgili, Spain

14:40-15:00 Coffee break

Time-resolved Spectroscopy	
Date/Time	Dec. 2 (Tue.), 2025 / 13:30-14:40
Place	Room B
Session Chair	Xiao You & Koichi Iwata

[2-I-10] (Invited) 13:30-13:50

How We Study Chemical Reactions with Picosecond Time-resolved Raman Spectroscopy

Koichi Iwata

Gakushuin University, Japan

[2-I-11] (Invited) 13:50-14:10

Exploring Intermolecular Coupling and Excited-State Dynamics in Perlyene Bisimide Arrays Pobed by Electronic and Raman Spctroscopy

Dongho Kim

Yonsei University, Republic of Korea

[2-O-12] (Oral) 14:10-14:25

Ultrafast Vibrational Signatures of Conformationally Regulated Phase Separation in a Natural Folded Enzyme

Xiao You

Westlake University, China

[2-O-13] (Oral) 14:25-14:40

Dynamics of Photogenerated Small Polarons in Transition Metal Oxides

Ye Yang

Xiamen University, China

14:40-15:00 Coffee break

AI-assisted Chemometrics	
Date/Time	Dec. 2 (Tue.), 2025 / 13:30-14:40
Place	Room C
Session Chair	Polina Fomina & Hoeil Chung

[3-I-6] (Invited) 13:30-13:50

Convolutional Autoencoder-based Feature Extraction From Two-dimensional Spectroscopic Correlation Map and Fusion of Spectroscopy and Visual Image Data to Enhance Accuracy of Discriminant Analysis

Hoeil Chung

Hanyang University, Republic of Korea

[3-O-15] (Oral) 13:50-14:05

Classification of Gemstones Using Machine Learning Assisted Raman Spectroscopy

Danylo Komisar

Lightnovo ApS, Ukraine

[3-O-16] (Oral) 14:05-14:20

Complex-valued Chemometrics

Thomas Mayerhöfer

Leibniz-Institut f. Photonische Technologien, Germany

[3-O-17] (Oral) 14:20-14:35

The Power of Multivariate Data Analysis in Infrared Spectroscopy for Food Quality Control

Polina Fomina

Ulm University, Germany

14:40-15:00 Coffee break

Application in Materials and Catalysis	
Date/Time	Dec. 2 (Tue.), 2025 / 13:30-14:40
Place	Room D
Session Chair	Stuart Thomson & Weigao Xu

[4-I-8] (Invited) 13:30-13:50

New Types of Phonon-Assisted Interfacial Energy Transfer at the 2D Interface

Weigao Xu

Nanjing University, China

[4-I-9] (Invited) 13:50-14:10

Layer-breathing modes in layered semiconductor materials

Miaoling Lin

Institute of Semiconductors, Chinese Academy of Sciences, China

[4-O-15] (Oral) 14:10-14:25

Precise Synthesis of Discrete Chiral Nanomaterials for Circularly Polarized Photocatalysis and Chiral Sensors

Guangchao Zheng

Zhengzhou University, China

[4-O-16] (Oral) 14:25-14:40

Integrated Multimodal Microscopy for Material Analysis

Stuart Thomson

Edinburgh Instruments, United Kingdom

14:40-15:00 Coffee break

Enhanced spectroscopics	
Date/Time	Dec. 2 (Tue.), 2025 / 15:00-16:45
Place	Room A
Session Chair	Alexandre Chícharo & Zhangfei Su

[1-I-11] (Invited) 15:00-15:20

Probing Interfacial Structures and Functionalities of Additives for Superconformal Cu and Co Electrodeposition by Surface Enhanced Infrared Absorption Spectroscopy

Wen-Bin Cai

Fudan University, China

[1-O-13] (Oral) 15:20-15:35

In Situ Infrared Spectroscopy Studies of Biomimetic Membranes on the Gold Surface

Zhangfei Su

University of Guelph, Canada

[1-O-14] (Oral) 15:35-15:50

Simultaneous SERS & SEIRA with Single Molecule Detection – The Application and Characterization of Plasmonically Resonant Structures with Sub-Micron Optical Photothermal Infrared and Simultaneous Raman Spectroscopy

Mustafa Kansiz

Photothermal Spectroscopy Corporation, the United States

[1-O-15] (Oral) 15:50-16:05

Plasmonic Nanopillar-Nanostar Array for Scalable SERS-Based Detection of Molecular Biomarkers

Alexandre Chícharo

Humboldt-Universität zu Berlin, Germany

[1-O-16] (Oral) 16:05-16:20

Broadband and Polarized Metasurface-enhanced 2D Correlation IR Spectroscopy Augmented Machine Learning for Mixture Analysis

Si Luo

Zhejiang Normal University, China

Sponsor 16:20-16:35

From Macro to Micro: Bruker's Wide-Field Raman Imaging Pioneers a New Imaging Paradigm

Hao Zhang

Bruker

16:45-17:00 Flash talk (15 min)
17:00-18:30 Poster session

Time-resolved Spectroscopy	
Date/Time	Dec. 2 (Tue.), 2025 / 15:00-16:45
Place	Room B
Session Chair	Jinhui Zhong & Martin Zanni

[2-I-12] (Invited) 15:00-15:20

A New Plasmonic Cell for Infrared Spectroelectrochemistry : Application to Structural Dynamics under Voltage using Ultrafast 2D IR Spectroscopy

Martin Zanni

University of Wisconsin-Madison, the United States

[2-I-13] (Invited) 15:20-15:40

Spectroscopic Light on Nanoconfined and Interfacial Water

Mischa Bonn

Max Planck Institute Polymer Research, Germany

[2-I-14] (Invited) 15:40-16:00

Coherent energy transfer in photosynthesis revealed by two-dimensional electronic spectroscopy

Yuxiang Weng

Institute of Physics, CAS, China

[2-O-14] (Oral) 16:00-16:15

High-Efficiency Aqueous Room-Temperature Phosphorescent Materials: Synthesis and Phosphorescence Analysis

Binbin Chen

East China University of Science and Technology, China

[2-O-15] (Oral) 16:15-16:30

Ultrafast Carrier Dynamics and Anisotropic Propagation of Molecular Exciton – Surface Plasmon Polaritons

Jinhui Zhong

Southern University of Science and Technology, China

16:45-17:00	Flash talk (15 min): You are invited to attend the flash talks in **Room A** at the conclusion of the session.
17:00-18:30	Poster session

Application in Biology	
Date/Time	Dec. 2 (Tue.), 2025 / 15:00-16:45
Place	Room C
Session Chair	Katarzyna Pogoda & Hidetoshi Sato

[3-I-7] (Invited) 15:00-15:20

High-throughput Raman-activated Sorting of Mutant Libraries for Mining Functional Cells (and genes) via FlowRACS 3.0

Jian Xu

Qingdao Institute of Bioenergy and Bioprocess Technology, Chinese Academy of Sciences, China

[3-I-8] (Invited) 15:20-15:40

Real-time Detection of Human Infectious Viruses by Raman Spectroscopy

Hidetoshi Sato

Kwansei Gakuin University

[3-O-18] (Oral) 15:40-15:55

Transferable AI models in Raman spectroscopy for biological applications

Shuxia Guo

Leibniz institute of photonic technology, Germany

[3-O-19] (Oral) 15:55-16:10

Deep-UV Resonance Raman Spectroscopy for Aqueous Sodium and Potassium Hydroxide

Yusuke Morisawa

Kindai University, Japan

[3-O-20] (Oral) 16:10-16:25

Multimodal Spectroscopic Profiling of Plasma Membrane Vesicles

Katarzyna Pogoda

Institute of Nuclear Physics Polish Academy of Sciences, Poland

16:45-17:00 Flash talk (15 min): You are invited to attend the flash talks in **Room A** at the conclusion of the session.

17:00-18:30 Poster session

Application in Materials and Catalysis	
Date/Time	Dec. 2 (Tue.), 2025 / 15:00-16:45
Place	Room D
Session Chair	Shuang-Yan Lang & Miguel A. Bañares

[4-I-10] (Invited) 15:00-15:20

Complementary Raman and infrared operando methodology, at the junction between fundamental chemistry and chemical engineering. The instance of supported oxide catalysts

Miguel A. Bañares

CSIC, Spain

[4-I-11] (Invited) 15:20-15:40

Operando Raman Spectroscopy for the Characterisation of Battery Materials: Towards Best Practice

Andrew Wain

National Physical Laboratory, United Kingdom

[4-I-12] (Invited) 15:40-16:00

Studying the Au electrode interface in Li-ion and metal-oxygen battery electrolytes using SEIRAS

Laurence James Hardwick

University of Liverpool, United Kingdom

[4-O-17] (Oral) 16:00-16:15

Probing dynamic evolution at interfaces in Li−S batteries via in situ/operando confocal Raman microscopy

Shuang-Yan Lang

Key Laboratory of Molecular Nanostructure and Nanotechnology, CAS, China

[4-O-18] (Oral) 16:15-16:30

Probing Charge-Transfer and Vibrational Properties of Triphenylamine-Based Donor-Acceptor Compounds Using Raman Spectroscopy and DFT

Elkhansa Elbashier

University of Otago, New Zealand

[4-O-19] (Oral) 16:30-16:45

Discrimination of Hf/Zr Oxides, Fluorides, and Carbides Using XAS, XES, and ATR-FTIR: Implications for HFSE Behavior in Fluoride-Rich Geological Systems

Rui Cheng

Free University of Berlin, Germany

16:45-17:00 Flash talk (15 min): You are invited to attend the flash talks in **Room A** at the conclusion of the session.

17:00-18:30 Poster session

Program

December 3, Wednesday — Morning [AM]

Plenary Lecture

Chair: Francois Lagugné-Labarthet

✦ Room A

8:30-9:10	[PL1] **Tahei Tahara** (Molecular Spectroscopy Laboratory, RIKEN, and Ultrafast Spectroscopy Research Team, RIKEN Center for Advanced Photonics Center (RAP), Japan) “Dynamics and Structure of Liquid Interfaces Revealed by Phase-Sensitive Nonlinear Spectroscopy”
9:10-9:50	[PL2] **Rainer Hillenbrand** (CICBInIGUNE-BRTA, Donostia!San Sebastián, Spaine) “Optical near-field nanoscopy”
9:50-10:10	Coffee break

Enhanced spectroscopics	
Date/Time	Dec. 3 (Wed.), 2025 / 10:10-11:50
Place	Room A
Session Chair	Stefania D. Iancu & Ivano Alessandri

[1-I-13] (Invited) 10:10-10:30

Dual Size Mismatches in SERS and Solutions

Shikuan Yang

Zhejiang University, China

[1-I-14] (Invited) 10:30-10:50

T-rex and Friends: A Journey into Geometry Assisted All-Dielectric Enhanced Raman scattering

Ivano Alessandri

University of Brescia, Italy

[1-O-17] (Oral) 10:50-11:05

Surface-Enhanced Raman Scattering Using Plasmonic Nanoarrays

Qi Hao

Southeast University, China

[1-O-18] (Oral) 11:05-11:20

Enhancing SERS sensitivity by optimizing colloid synthesis parameters

Alexandra-Maria Chiriac

University of Brescia, Italy

[1-O-19] (Oral) 11:20-11:35

Charging and discharging of silver nanoparticle for selective SERS detection

Stefania D. Iancu

Babeș-Bolyai University, Romania

[1-O-31] (Oral) 11:35-11:50

The assembly and study of 3D SERS substrates

Xiangdong Tian

Institute of Urban Environment, CAS, China

Theories	
Date/Time	Dec. 3 (Wed.), 2025 / 10:10-11:50
Place	Room B
Session Chair	Fujie Tang & Javier Aizpurua

[2-I-15] (Invited) 10:10-10:30

Addressing Molecular Vibrational Pumping and Frequency Up Conversion in Field-Enhancing Nanocavities

Javier Aizpurua

Donostia International Physics Center, Spain

[2-I-16] (Invited) 10:30-10:50

Monitoring vibrational evolution in Jahn-Teller effect by Raman images

Sai Duan

Fudan University, China

[2-I-17] (Invited) 10:50-11:10

Decoding Bond-Electron Dynamics and Many-Body Quantum Cooperativity in Complex Systems

Changqing Sun

Nanyang Technological University, Singapore

[2-I-18] (Invited) 11:10-11:30

Local Quantum Vibration Embedding Framework for Exploring Intramolecular Resonances

Hui Li

Jilin University, China

[2-O-16] (Oral) 11:30-11:45

From First Principles Calculations to Machine Learning: New Developments and Applications of Sum Frequency Generation Spectroscopy Algorithms

Fujie Tang

Xiamen University, China

Application in Biology	
Date/Time	Dec. 3 (Wed.), 2025 / 10:10-11:50
Place	Room C
Session Chair	Max Dooley & Jaebum Choo

[3-I-9] (Invited) 10:10-10:30

Lysis-Free Bacteria Detection Using SERS-Based Acoustofluidic Sensors

Jaebum Choo

Chung-Ang University, South Korea

[3-I-10] (Invited) 10:30-10:50

SERS Composite Scaffolds for Applications in 3D Cell Culture and Biosensing

Ann Malou Henriksen

CIC biomaGUNE, Spain

[3-O-22] (Oral) 10:50-11:05

Integrating Raman Spectroscopy with Multi-modality Optical Techniques to Interpret Biomedical Phenomena

Shuang Wang

Northwest University, China

[3-O-23] (Oral) 11:05-11:20

Developing Ensemble Models for Real-time, in-vivo, Diagnosis of Prostate Cancer Using Raman Spectroscopic Probes

Max Dooley

University of Auckland, New Zealand

[3-O-24] (Oral) 11:20-11:35

Label-Free Raman Microscopy for Assessing Purity and Maturity of hiPSC-Derived Cardiac Tissues

Menglu Li

Shenzhen Medical Academy of Research and Translation, China

[3-O-25] (Oral) 11:35-11:50

Photothermal Detection of SRS – a New Breakthrough Stimulated Raman Technique for Live Cell Imaging

Yuhao Yuan

Photothermal Spectroscopy Corporation, the United States

Application in Materials and Catalysis	
Date/Time	Dec. 3 (Wed.), 2025 / 10:10-11:50
Place	Room D
Session Chair	Srishailam Kanugula & Liwu Zhang

[4-I-13] (Invited) 10:10-10:30

Revealing the Air-water Interface of Microdroplet by Raman

Liwu Zhang

Fudan University, China

[4-O-20] (Oral) 10:30-10:45

Dissecting Hydration and Hydrogen Bonding in Ionic Liquids via UV Resonance Raman Spectroscopy: Anion and Cation Chain Effects

Fatima Matroodi

Elettra Sincrotrone, Italy

[4-O-21] (Oral) 10:45-11:00

In situ spectroscopic methods for revealing active centers in ash-enriched bed materials from biomass gasification

Joanna Profic-Paczkowska

Jagiellonian University, Poland

[4-O-22] (Oral) 11:00-11:15

From Spectral Shifts to Bond Mechanics: A Spectroscopic Metrology for Quantifying Covalent Bond Tuning at Organic-Aqueous Interfaces

Yong Zhou

Dongguan University of Technology, China

[4-O-23] (Oral) 11:15-11:30

Effects of Fire on Egyptian Mummies - A Vibrational Spectroscopy Study

Maria Paula Marques

University of Coimbra, Portugal

[4-O-24] (Oral) 11:30-11:45

Experimental and Theoretical Characterization of 1,3-Diphenyl-3-(phenylsulfonyl)propan-1-one

Srishailam Kanugula

SR University, Indian

Program

December 3, Wednesday — Afternoon [PM]

Lunch

✦ Yifu Building

11:55 – 13:30

13:30-18:30 Excursion

Program

December 4, Thursday — Morning [AM]

Plenary Lecture

Chair: Janina Kneipp

✦ Room A

8:30-9:10	[PL1] **Boris Mizaikoff** (Institute of Analytical and Bioanalytical Chemistry, Ulm University & Hahn-Schickard, Institute for Microanalysis Systems, Ulm) “Probing the World with Good Vibrations”
9:10-9:50	[PL2] **Zhong-Qun Tian** (Xiamen University, China) “Making the Impossible Possible: The Transformative Journey of SERS over 50 Years”
9:50-10:10	Coffee break

Enhanced spectroscopics	
Date/Time	Dec. 4 (Thur.), 2025 / 10:10-11:35
Place	Room A
Session Chair	Haifeng Zhou & Steven Bell

[1-I-15] (Invited) 10:10-10:30

Meeting the Challenges of Quantitative SERS in Complex Biological Matrices

Steven Bell

Queen's University of Belfast, United Kingdom

[1-I-16] (Invited) 10:30-10:50

Single Molecule Dynamics in SERS Hotspots

Alexandre Brolo

University of Victoria, Canada

[1-O-20] (Oral) 10:50-11:05

Development of Hybrid Composites for Real-Time SERS Detection of Marine Toxins in Aquatic Environments

Bernardo Albuquerque Nogueira

International Iberian Nanotechnology Laboratory, Portugal

[1-O-21] (Oral) 11:05-11:20

SERS-Based Detection of Biomolecules and Biotoxins by Using Nanostructured Solid Substrates

Nicoleta Elena Dina

National Institute for Research and Development of Isotopic and Molecular Technologies, Cluj-Napoca, Romania

[1-O-22] (Oral) 11:20-11:35

Portable Sensor for Detecting Trifluoroacetic Acid in Bottled Water: A Visualization Method Based on Multiple Synergistically Induced Aggregation

Haifeng Zhou

Leiden University, Netherlands

Non-linear Spectroscopy & Time-resolved Spectroscopy	
Date/Time	Dec. 4 (Thur.), 2025 / 10:10-11:35
Place	Room B
Session Chair	Xinxing Zhang & Jianping Wang

[2-I-19] (Invited) 10:10-10:30

Local Structures and Dynamics of Drug Cocrystals Revealed by 1D and 2D IR Spectroscopy

Jianping Wang
Institute of Chemistry, Chinese Academy of Sciences, China

[2-I-20] (Invited) 10:30-10:50

Site-Specific Interrogation of Protein Structure and Dynamics via Linear and Nonlinear Infrared Spectroscopic Techniques

Feng Gai
Peking University, China

[2-O-17] (Oral) 10:50-11:05

Polaron interactions in metal halide perovskites by Terahertz spectroscopy

Heng Zhang
Xiamen University, China

[2-O-18] (Oral) 11:05-11:20

Substrate Binding Induced Dynamic Restructuring of Binuclear Copper Centers

Xinxing Zhang
Dalian University of Technology, China

Sponsor 11:20-11:35

Application of Coherent Raman Scattering in Tissue Imaging

Pu Wang
Vibronix

Application in Biology	
Date/Time	Dec. 4 (Thur.), 2025 / 10:10-11:35
Place	Room C
Session Chair	Karolina Chrabąszcz & Jean-Francois Masson

[3-I-11] (Invited) 10:10-10:30

Brain Molecular Atlas Analysis

Yang Tian

East China Normal University, China

[3-I-12] (Invited) 10:30-10:50

SERS and Plasmonic Nanosensors for Monitoring Proteins in Brain Tissues and Biofluids

Jean-Francois Masson

Universite de Montreal, Canada

[3-O-26] (Oral) 10:50-11:05

Beyond the Brain: The Influence of Citalopram on Human Colon Cell Function

Karolina Beton-Mysur

Lodz University of Technology, Poland

[3-O-27] (Oral) 11:05-11:20

Studying Stress Response Process of Cell During Electrical Stimulation Through Spectra Techniques

Zuotao Chen

Shenzhen University, China

[3-O-28] (Oral) 11:20-11:35

Lipids Under Pressure: Cannabidiol As a Molecular Modulator Revealed by Vibrational Spectroscopy

Karolina Chrabąszcz

Institute of Nuclear Physics Polish Academy of Science, Poland

Application in Arts, Archaeology, Extraterrestrials, Forensic, and Environment	
Date/Time	Dec. 4 (Thur.), 2025 / 10:10-11:35
Place	Room D
Session Chair	Antoine Vite & Bayden Wood

[4-I-14] (Invited) 10:10-10:30

Gilded in Time: Multimodal Spectroscopic Imaging Redefines Roman-Egyptian Mummification

Bayden Wood

Monash University, Australia

[4-I-15] (Invited) 10:30-10:50

Time-Gated Raman Spectroscopy Reveals how Burial Conditions Shaped the Degradation of Sanxingdui Ivory

Zhenyou Wang

GBA Branch of Aerospace Information Research Institute, China

[4-O-25] (Oral) 10:50-11:05

Exploration of Egyptian Mummy Tissues thanks to Infrared Nano-Spectroscopy

Margaux Petay

TU Wien, Austria

[4-O-26] (Oral) 11:05-11:20

Characterization of the incense from the underground palace of Famen Royal Temple during the ninth century in China

Meng Ren

The Palace Museum, China

[4-O-27] (Oral) 11:20-11:35

Micro- and sub-micrometric characterization of an insect trapped in amber with IR nanospectro-imaging

Antoine Vite

Université Paris Saclay, France

Program

December 4, Thursday — Afternoon [PM]

Lunch

✦ Yifu Building

11:35 – 13:30

Enhanced spectroscopics	
Date/Time	Dec. 4 (Thur.), 2025 / 13:30-14:40
Place	Room A
Session Chair	Tingting Zheng & Kamilla Malek

[1-I-17] (Invited) 13:30-13:50

Frontiers of Semiconductor-Enhanced Raman spectroscopy

Yukihiro Ozaki

Kwansei Gakuin Universtiy, Japan

[1-I-18] (Invited) 13:50-14:10

The Role of a Metal-Semiconductor Interface in SERS and PIERS. Insights from a Model Ag-TiO_2 Hybrid Nanostructures

Kamilla Malek

Jagiellonian University, Poland

[1-O-23] (Oral) 14:10-14:25

Early Diagnosis of Diseases Based on Semiconductor-Enhanced Raman Spectroscopy

Tingting Zheng

East China Normal University, China

[1-O-24] (Oral) 14:25-14:40

Metal Oxides and Metal Oxides/Metal Nanostructured Substrates as Efficient Platforms for Surface-Enhanced Raman Scattering (SERS) Spectroscopy

Eva Kočišová

Charles University, Czech Republic

14:40-15:00 Coffee break

Non-linear Spectroscopy	
Date/Time	Dec. 4 (Thur.), 2025 / 13:30-14:40
Place	Room B
Session Chair	Sylwester Gawinkowski & Yujin Tong

[2-I-21] (Invited) 13:30-13:50

Probing Electrochemical Interfaces with Vibrational Sum Frequency Spectroscopy: Insights and Challenges

Yujin Tong

University of Duisburg-Essen, Germany

[2-I-22] (Invited) 13:50-14:10

Nonlinear Optical Spectroscopy of Oxide/water Interfaces

Weitao Liu

Fudan University, China

[2-O-19] (Oral) 14:10-14:25

Orientational and Solvent Couplings of Molecules at Interfaces by Interface-Specific Two-Dimensional Vibrational-Electronic (i2D-VE) Spectroscopy

Zhichao Huangfu

Southeast University, China

[2-O-20] (Oral) 14:25-14:40

Optimizing Surface-Enhanced Femtosecond Stimulated Raman Spectroscopy

Sylwester Gawinkowski

Institute of Physical Chemistry Polish Academy of Sciences, Poland

14:40-15:00 Coffee break

Application in Biology	
Date/Time	Dec. 4 (Thur.), 2025 / 13:30-14:40
Place	Room C
Session Chair	Linley Li Lin & Chang Chen

[3-I-13] (Invited) 13:30-13:50

Non-invasive Glucose Monitoring: Opportunity and Challenge

Chang Chen

Ruijin Hospital, Shanghai Jiao Tong University School of Medicine, China

[3-I-14] (Invited) 13:50-14:10

Self-stacked Small Molecules for Ultrasensitive in vivo Raman Imaging Towards Biomedical Applications

Zeyu Xiao

Shanghai Jiao Tong University, China

[3-O-29] (Oral) 14:10-14:25

How to Unmix Raman Spectra of Complex Biomedical Samples – in Vitro vs. in Silico Methods

Teresa Slanina

Paul-Ehrlich-Institut, Germany

[2-O-30] (Oral) 14:25-14:40

Large-Spot Deep Raman Spectroscopy for Intraoperative Detection in Large Animals

Linley Li Lin

Shanghai Jiao Tong University, China

14:40-15:00 Coffee break

Application in Arts, Archaeology, Extraterrestrials, Forensic, and Environment	
Date/Time	Dec. 4 (Thur.), 2025 / 13:30-14:40
Place	Room D
Session Chair	Kamila Kochan & Li Cui

[4-I-16] (Invited) 13:30-13:50

Single-Cell Raman Spectroscopy Reveals Microbial Functions in Environment: from Threats to Allies

Li Cui

Institute of Urban Environment, CAS, China

[4-I-17] (Invited) 13:50-14:10

Raman Microspectroscopy for Phenotyping Microorganisms

Kang Soo Lee

Ulsan National Institute of Science and Technology, Republic of Korea

[4-O-28] (Oral) 14:10-14:25

Tackling Antimicrobial Resistance: Vibrational Spectroscopy of Bacteriophages

Kamila Kochan

Monash University, Australia

[4-O-29] (Oral) 14:25-14:40

Long-Term Morphological Integrity of Polymer Coatings in Mid-IR Sensors for Marine Applications

Leonora Podvorica

University of Ulm, Germany

14:40-15:00 Coffee break

Enhanced spectroscopics	
Date/Time	Dec. 4 (Thur.), 2025 / 15:00-16:45
Place	Room A
Session Chair	Hyejin Chang & Janina Kneipp

[1-I-19] (Invited) 15:00-15:20

Molecular Structure and Interaction from SERS Spectra: From Biomolecule Models to Living Cells

Janina Kneipp

Humboldt-Universität zu Berlin, Germany

[1-I-20] (Invited) 15:20-15:40

Advances and Applications of SERS-Based Bioanalysis

Young Mee Jung

Kangwon National University, Republic of Korea

[1-I-21] (Invited) 15:40-16:00

SERS Application in Liquid Biopsy for Cancer Diagnosis

Yuling Wang

Macquarie University, Australia

[1-O-25] (Oral) 16:00-16:15

Sulfate-Directed Silver Dendrites with Long-Term Stability for SERS-Based Biomolecular Analysis in Complex Matrices

Aradhana Dwivedi

Leibniz IPHT, Germany

[1-O-26] (Oral) 16:15-16:30

Architecting Hybrid Graphene-Plasmonic Nanoplatforms for Dual-Enhanced SERS Biosensing

Hyejin Chang

Kangwon National University, Republic of Korea

[1-O-27] (Oral) 16:30-16:45

Advancing On-Disc Nanopillar SERS-Based Therapeutic Drug Monitoring Through Optimized Sample Preparation

Gohar Soufi

Technical university of Denmark, Denmark

16:45-17:00	Flash talk (15 min)
17:00-18:30	Poster session

Non-linear Spectroscopy	
Date/Time	Dec. 4 (Thur.), 2025 / 15:00-16:45
Place	Room B
Session Chair	Shupeng Zhao & Yasuyuki Ozeki

[2-I-23] (Invited) 15:00-15:20

Stimulated Raman Scattering Microscopy for Detailed Analysis of Cells and Semiconductors

Yasuyuki Ozeki

The University of Tokyo, Japan

[2-I-24] (Invited) 15:20-15:40

Post-OPA Enhanced SFG Spectroscopy and Transient Absorption Microscopy

Zefeng Ren

Dalian Institute of Chemical Physics, Chinese Academy of Sciences, China

[2-I-25] (Invited) 15:40-16:00

From Stimulated Raman to Mid-Infrared Photothermal: Super-Resolution High-Content Chemical Imaging

Delong Zhang

Zhejiang University, China

[2-O-21] (Oral) 16:00-16:15

Breaking Speed Barriers - Unveiling Biological Insights with Label-Free Chemical Imaging

Volker Schweikhard

Leica Microsystems, Germany

[2-O-22] (Oral) 16:15-16:30

Computational Field-resolved Coherent Chemical Imaging

Shupeng Zhao

CNRS, Laboratory Kastler Brossel, France

[2-O-23] (Oral) 16:30-16:45

A Web-based Interactive Simulation Program for Oriantation and Polarization Analysis in Sum-Frequency Generation Vibrational Spectroscopy

Luozhou Chen

Westlake University, China

16:45-17:00	Flash talk (15 min): You are invited to attend the flash talks in **Room A** at the conclusion of the session.
17:00-18:30	Poster session

Application in Biology	
Date/Time	Dec. 4 (Thur.), 2025 / 15:00-16:45
Place	Room C
Session Chair	Nitin Patil & Keith Gordon

[3-I-15] (Invited) 15:00-15:20

Using Vibrational Spectroscopy and Computational Chemistry to Understand Polymorph Transformation in Pharmaceuticals

Keith Gordon

University of Otago, New Zealand

[3-I-16] (Invited) 15:20-15:40

New Insight from FTIR Spectroscopic Imaging

Sergei Kazarian

Imperial College London, United Kingdom

[3-O-31] (Oral) 15:40-15:55

Infrared Molecular Fingerprinting for Multi-Phenotype Medical Screening

Mihaela Zigman

Ludwig-Maximilians-Universität München, Germany

[3-O-32] (Oral) 15:55-16:10

Multi-scale Infrared Spectral Fingerprinting of Lyme Disease Infection in Microglial Cells and Exosomes

Jizhou Zhong

King's College London, United Kingdom

[3-O-33] (Oral) 16:10-16:25

Monitoring cellular glycolysis pathway kinetics as a function of time using high content Raman spectroscopy

Nitin Patil

Technological University Dublin, Ireland

16:45-17:00	Flash talk (15 min): You are invited to attend the flash talks in **Room A** at the conclusion of the session.
17:00-18:30	Poster session

Application in Arts, Archaeology, Extraterrestrials, Forensic, and Environment	
Date/Time	Dec. 4 (Thur.), 2025 / 15:00-16:45
Place	Room D
Session Chair	Marcel Klotz & Natalia Ivleva

[4-I-18] (Invited) 15:00-15:20

Raman-based Methods for Analysis Microplastics and Nanoplastics

Natalia Ivleva

Technical University of Munich, Germany

[4-I-19] (Invited) 15:20-15:40

Raman Spectroscopy in optical and acoustic traps for micro- and nano-plastics detection: advancements in the SAMOTHRACE project

Gucciardi Pietro Giuseppe

CNR IPCF, Italy

[4-O-30] (Oral) 15:40-15:55

Automated High-Efficiency Raman Analysis of Nanoplastics in Environmental Samples Using Self-Nanolensing Enhancement

Dongha Shin

Inha University, Republic of Korea

[4-O-32] (Oral) 15:55-16:10

Automated Analysis of Small Microplastics with Raman Microspectroscopy

Isabel Juengling

Technical University Munich, Germany

[4-O-33] (Oral) 16:10-16:25

Combining Fluorescence Staining with O-PTIR Spectroscopy to Detect and Characterize Micro- and Nanoplastics

Marcel Klotz

Technical University of Munich, Germany

[4-O-34] (Oral) 16:25-16:40

Smaller Plastics, Bigger Risks: The Invisible Threat of Nanoplastics and Microplastics in Biological and Environmental Samples Analyzed with Multimodal Submicron IR (O-PTIR) and Simultaneous Raman with Co-Located Fluorescence Imaging

Mike Lo

Photothermal Spectroscopy Corporation, the United States

16:45-17:00 Flash talk (15 min): You are invited to attend the flash talks in **Room A** at the conclusion of the session.

17:00-18:30 Poster session

Program

December 5, Friday — Morning [AM]

Plenary Lecture

Chair: Hongfei Wang

✦ Room A

8:30-9:10	[PL1] **Yi Luo** (University of Science and Technology of China, China) “Integrating Machine Learning Spectroscopy Models with Autonomous Acquisition Platforms for Robotic AI Chemists”
9:10-9:50	[PL2] **Malgorzata Baranska** (Jagiellonian University, Poland) “To label or not to label cells for spectroscopic imaging?”
9:50-10:10	Coffee Break

Enhanced spectroscopics, Fundamentals, Methodologies, Applications	
Date/Time	Dec. 5 (Fri.), 2025 / 10:10-11:50
Place	Room A
Session Chair	Yikai Xu & Tabitha Jones

[1-I-22] (Invited) 10: 10-10: 30

AI+SERS Analysis of Trace Targets

Guo-Kun Liu
Xiamen University, China

[1-I-23] (Invited) 10:30-10:50

Manipulating Molecule-Metal Interactions Using the Electrochemical Double Layer

Tabitha Jones
University of Cambridge, United Kingdom

[1-O-28] (Oral) 10:50-11:05

SERS as a Probe of Surface Chemistry Enabled by Surface-Accessible Plasmonic Nanomaterials

Yikai Xu
East China University of Science and Technology, China

[1-O-29] (Oral) 11:05-11:20

The role of cations and surface structures on electrocatalytic hydrogenation reaction on Pd surfaces

Yuzhe Wang
Xiamen University, China

[1-O-30] (Oral) 11:20-11:35

A Combined Experimental and Computational Study of Surface-Enhanced Raman Scattering in Lanthanide–Citrate Complexes

Hao Jin
Japan Advanced Institute of Science and Technology, Japan

Non-linear Spectroscopy	
Date/Time	Dec. 5 (Fri.), 2025 / 10:10-11:50
Place	Room B
Session Chair	Lixue Shi & Dennis Hore

[2-I-26] (Invited) 10:10-10:30

Vibrational SFG as a Probe of Interfacial Hydration

Dennis Hore

University of Victoria, Canada

[2-I-27] (Invited) 10:30-10:50

A Multi-Modal Sub-1 cm-1 High-Resolution Ultrafast Broadband Nonlinear Spectroscopy Platform: Implementation and Applications

Hongfei Wang

Westlake University, China

[2-I-28] (Invited) 10:50-11:10

Probing Water Structure and Electric Fields at the Interface of Oil Nanodroplets

Lixue Shi

Fudan University, China

[2-O-24] (Oral) 11:10-11:25

Probing Chemisorbed Ions on the Polycrystalline Platinum Electrode using in situ Second-Harmonic Generation Spectroscopy

Ba Lich Pham

Université Paris-Saclay, France

[2-O-25] (Oral) 10:25-11:40

Electric Double Layer Structure at the Amorphous Alumina/Water Interface Elucidated by HD-VSFG Spectroscopy

Feng Wei

Jianghan University, China

Application in Biology	
Date/Time	Dec. 5 (Fri.), 2025 / 10:10-11:50
Place	Room C
Session Chair	Anna Nowakowska & Dae Hong Jeong

[3-I-17] (Invited) 10:10-10:30

Monitoring VOC-Mediated Inter-Plant Communication Using Surface-Enhanced Raman Scattering Nanosensor

Dae Hong Jeong

Seoul National University, Republic of Korea

[3-O-35] (Oral) 10:30-10:45

Application of Deep UV Raman Spectroscopy for Characterizing Acid-Induced Demineralization in Human Enamel

Fatima Matroodi

Elettra Sincrotrone, Italy

[3-O-36] (Oral) 10:45-11:00

Development of a Gold Nanoparticle-Based Colorimetric Aptasensor for the Detection of Vitamin D

Kevin Hewitt

Dalhousie University, Canada

[3-O-37] (Oral) 11:00-11:15

Real-Time Spectroscopic Monitoring of Fatty Acid Uptake by Cells

Anna Nowakowska

Jagiellonian University, Poland

[3-O-38] (Oral) 11:15-11:30

In-situ 3D Structural Determination of Soft Biomaterials via Computationally-Assisted Polarized Raman Spectroscopy

Xiaohan Xi

Xiamen University, China

Emerging techniques	
Date/Time	Dec. 5 (Fri.), 2025 / 10:10-11:50
Place	Room D
Session Chair	Maciej Roman & Hilton Barbosa de Aguiar

[4-I-19] (Invited) 10:10-10:30

Infrared spectroscopic imaging at the nanoscale: From analytical theory to high performance instrumentation

Rohit Bhargava

University of Illinois Urbana-Champaign, the United States

[4-I-20] (Invited) 10:30-10:50

Compressive Raman imaging: from high-speed imaging to ultrafast spectroscopy all using the spontaneous Raman effect

Hilton Barbosa de Aguiar

Laboratorey Kastler Brossel - ENS - CNRS, France

[4-O-35] (Oral) 10:50-11:05

Unraveling Hydrogen-Bonding Networks: Cryogenic Ion-trap Vibrational Spectroscopy of Microhydrated Ions

Jiaye Jin

Fudan University, China

[4-O-36] (Oral) 11:05-11:20

Gating-out emission for fluorescence-free Raman spectra for the study of electrode interfaces

Alex Neale

University of Liverpool, United Kingdom

[4-O-37] (Oral) 11:20-11:35

Infrared nanospectroscopy at the SOLARIS synchrotron

Maciej Roman

Jagiellonian University, Poland

Program

December 5, Friday — Afternoon [PM]

Award & Closing lunch

✦ Yifu Building

11:40 – 13:30

XVII. Scientific Poster Program

Program

December 2, Tuesday

Poster session 1

✦ Exhibition Hall, 1F

17:00-18:30

[P] Poster session 1	
Date/Time	Dec. 2 (Tue.), 2025 / 17:00-18:30
Place	Exhibition Hall, 1F

[1-P-1] 17:00-18:30

Spectroscopic Study of Metabolic Inhibitor Effects on Therapeutic Response in Hematologic Cancer Cells

Patrycja Dawiec

Jagiellonian University, Poland

[1-P-2] 17:00-18:30

Towards a Holistic Understanding of Cellular Metabolism through Multiplexed Vibrational Imaging

Wiktoria Korona

Jagiellonian University, Poland

[1-P-3] 17:00-18:30

Spectroscopic Insights into the Molecular Changes Induced by Time-Dependent Hypoxia in Brain Endothelial Cells

Aleksandra Pragnąca

Jagiellonian University, Poland

[1-P-4] 17:00-18:30

Real-Time Raman Monitoring of Acetic Acid Production by Acetobacter aceti via Droplet-Based Liquid Media Analysis and NMR Spectroscopy

Clark Gray

University of Liverpool, United Kingdom

[1-P-5] 17:00-18:30

Tracking cellular metabolic kinetics with label-free Raman microspectroscopy integrated with advanced multivariate data analysis

Zohreh Mirveis

Technological University Dublin, Ireland

[1-P-6] 17:00-18:30

Improving Raman mapping images via deep learning algorithm

Juhyeong Jang

Sogang University, Republic of Korea

[1-P-7] 17:00-18:30

Probing the mechanism and active sites of CO electrooxidation on Pt via electrochemical tip-enhanced Raman spectroscopy

Mengyuan Zhu

Xiamen University, China

[1-P-8] 17:00-18:30

Orthogonal Assessment of Polymer Materials Including Fabrics Using UV/Vis/NIR, FT-IR, and Raman Microscopy

Kohei Tamura

JASCO Corporation, Japan

[1-P-9] 17:00-18:30

Biomedical precision identification and tissue imaging based on SERS probes

Yue Cao

Nanjing Medical University, China

[1-P-10] 17:00-18:30

Raman Spectroscopic Analysis of Primary Molar Teeth in Relation to Cord-Blood Vitamin D Status

Anam Zulfiqar

University of Otago, New Zealand

[1-P-11] 17:00-18:30

Nanoparticle plasmonic effect: finite element method calculations of electromagnetic enhancement to SERS

Julian Rayo Alape

Federal University of ABC, Brazil

[1-P-12] 17:00-18:30

High-speed AFM/micro-Raman multimodal measurement system

Keishi Yang

The university of Osaka, Japan

[1-P-13] 17:00-18:30

Self-supervised Learning for Deep Penetration Raman Spectrum Denoising in Biological Tissues and Deep-Seated Lesion Location Prediction

Siyi Wu

Shanghai Jiao Tong University, China

[1-P-14] 17:00-18:30

[1-P-15] 17:00-18:30

Multiple detection of cancer cell proteins by SERS with core shell magnetic gold nanoparticles

Eungyeong Park

Kangwon National University, Republic of Korea

[1-P-16] 17:00-18:30

Label-Free Raman Imaging Approach to Investigate Fibrosis in Liver Spheroid Models

Gunganist Kongklad
The University of Osaka, Japan

[1-P-17] 17:00-18:30

Light in the Dark: Aminal-linked COFs for Efficient Light Upconversion

Mateusz Brzezinski
Institute of Physical Chemistry Polish Academy of Sciences, Poland

[1-P-18] 17:00-18:30

Label-Free Evaluation of Osteogenic Differentiation Using Extended-Focal Raman Imaging

Heqi Xi
The University of Osaka, Japan

[1-P-19] 17:00-18:30

SERS Reveals Subcellular Response to Ceramide Accumulation

Yiqing Feng
Humboldt-Universität zu Berlin, Germany

[1-P-20] 17:00-18:30

Sensor Tilt: A Simple Mechanical Solution to Improve SNR in Raman Spectroscopy of Liquids

Danylo Komisar
Lightnovo ApS, Denmark

[1-P-21] 17:00-18:30

Towards low-cost, flexible and disposable SERS-active substrates based on conducting polymers

Ondřej Kylián
Charles University, Czech Republic

[1-P-22] 17:00-18:30

Negative Staining of Lipids within Living Cells by Lanthanide-Based Raman Tags

Xin Tong
Institute of Organic Chemistry and Biochemistry of the CAS, Czech Republic

[1-P-23] 17:00-18:30

Investigating the effects of backbone flexibility on the electronic properties of heteroleptic Cu(I) bis diimine complexes

Peter III Johannes Gabriel Remoto
University of Otago, New Zealand

[1-P-24] 17:00-18:30

Observation of Rydberg Transitions in Alcohols by ATR-FUV Spectroscopy: Structural Dependence Analysis Utilizing Solvent Isolation

Yoshihiro Taguchi
Kindai University, Japan

[1-P-25] 17:00-18:30

Simultaneous Detection of HIV and Hepatitis B Virus: an Electrophoresis-Assisted SERS-LFA for Enhanced Sensitivity and Selectivity

Mengdan Lu
Chung-Ang University, Republic of Korea

[1-P-26] 17:00-18:30

High-throughput paper-based SERS immunoassay chip for rapid and simultaneous quantification of cancer markers

Ji Qi
Chung-Ang University, Republic of Korea

[1-P-27] 17:00-18:30

High-Accuracy Differentiation of Antibiotic-Resistant and Susceptible Bacteria Using SERS-Based Microdroplet Sensors

Qian Yu
Chung-Ang University, Republic of Korea

[1-P-28] 17:00-18:30

Molecularly Imprinted SERS Sensor for Quantitative Profiling of Intact Exosomes

Jiadong Chen
Chung-Ang University, Republic of Korea

[1-P-29] 17:00-18:30

First Hydration Shell Steers Phenylalanine Fibril Assembly

Xiaohan Xi
Xiamen University, China

[1-P-30] 17:00-18:30

Photocatalytic Degradation of Polyethylene Microplastics Using Plasmonic Gold Nanoclusters Revealed by In Situ SERS for Environmental Catalysis

Junyeong Yang
Dong-A University, Republic of Korea

[1-P-31] 17:00-18:30

Vibrational Spectroscopy Reveals PEF-Induced Protein Conformational Changes and Enables Rapid Protein Quantification in Flaxseed Extracts

Jervee Punzalan
University of Otago, New Zealand

[1-P-32] 17:00-18:30

Ultrafast Laser-Induced 2H-$MoTe_2$ patterned phase transition with Au-Nanoclusters for Raman Monitoring of Cellular Drug Metabolism

Yao Yao

Beijing University of Technology, China

[1-P-33] 17:00-18:30

Electronic Structure of Saccharides Studied by ATR-FUV and NIR Spectroscopy

Soh Morimatsu

Kindai University, Japan

[1-P-34] 17:00-18:30

Ultrarapid deep 3D histology with cleared stimulated Raman imaging and unsupervised learning

Yingying Li

Fudan University, China

[1-P-35] 17:00-18:30

[1-P-36] 17:00-18:30

Single-molecule Surface-Enhanced Raman Spectroscopy (SM-SERS) for Dye Molecules

Daria Larowska-Zarych

Polish Academy of Sciences, Poland

[1-P-37] 17:00-18:30

How Molecules Align: Visualizing Collagen and Polymers in High Resolution using O-PTIR imaging

Honorata Oleś

Jagiellonian University, Poland

[1-P-38] 17:00-18:30

A 2T2D Correlation ATR-FTIR Spectroscopy and Chemometric Approach for Flavonoid Profiling of Scutellaria Baicalensis Roots

Bogumiła Kupcewicz

Nicolaus Copernicus University, Poland

[1-P-39] 17:00–18:30

Zeta Potential-Modulated Gold Nanoparticles Catalysts for Electrostatic Degradation of Ionic Dyes

Youhee Seo

Dong-A University, Republic of Korea

[1-P-40] 17:00–18:30

Probing Nanoscale Heat Transport and Thermoelasticity in Layered and Heterogeneous Structures: Integrating Photothermal Mirror Spectroscopy and AFM-IR

Yide Zhang
Institute of Chemical Technologies and Analytics, TU Wien, Austria

[1-P-41] 17:00–18:30

Diagnosis of Psoriatic Arthritis via label-free serum SERS spectra with Support Vector Machine

Huijuan Zhang
Beijing University of Technology, China

[1-P-42] 17:00–18:30

Pressure-induced phase transition in [Cu2(hfac)8(LPy)2] magnetoactive compound studied by microscopy in middle-IR and visible ranges

Nikita Tashkeev
International Tomography Center SB RAS, Novosibirsk, Russia

[1-P-43] 17:00–18:30

Integration of Regenerated Cellulose Filtration and Nanopillar SERS Substrates in Lab-on-Disc Platforms for Label-Free Detection in Complex Samples

Martyna Pytlarz
Technical University of Denmark, Kongens Lyngby, Denmark

[1-P-44] 17:00–18:30

Operando FTIR and Raman approach to study sorptive and catalytic properties of metal-exchanged zeolites for hydrogen sulfide mitigation

Arsenii Zezekalo
Jagiellonian University, Poland

[1-P-45] 17:00–18:30

Multi-technique spectroscopic analysis of gasification ashes and their impact on plant growth

Roman Jędrzejczyk
Jagiellonian University, Poland

[1-P-46] 17:00–18:30

[1-P-47] 17:00–18:30

In situ vibrational spectroscopic methods for probing surface properties of functionalized bentonites for H_2S removal

Gabriela Zarzecka
Jagiellonian University, Poland

[1-P-48] 17:00–18:30

Interfacial self-assembly of ZnO@ZIF-8 film for quantitative SERS analysis of volatile organic compounds (VOCs)

Shan Xu
East China University of Science and Technology, China

[1-P-49] 17:00–18:30

Nanoscale imaging of plasmon-phonon interaction in an Au nanoantenna on a thin SiO2 layer

Ilya Milekhin
Rzhanov Institute of Semiconductor Physics RAS, Russia

[1-P-50] 17:00–18:30

Characterization of lipid membrane model systems at the nanoscale with s-SNOM and nano FT-IR

Tetiana Stepanenko
Jagiellonian University, Poland

[1-P-51] 17:00–18:30

Integration of Untargeted Urinary Metabolomics and Machine Learning for Early Breast Cancer Detection: Feature Prioritization and Model Optimization with Random Forest and GINI-Index

Markus Zetes
Babes-Bolyai University, Romania

[1-P-52] 17:00–18:30

Optical Photothermal Infrared (O-PTIR) Spectroscopy Explores Light-Induced Liquid-Liquid Phase Separation of Arabidopsis Cryptochrome 2 (CRY2) Proteins

Jiaqi Lu
Jilin University, China

[1-P-53] 17:00–18:30

Following interface formation and degradation using SHINERS on Li-ion and Na-ion full cell electrodes

Jacqueline Everitt
University of Liverpool, United Kingdom

[1-P-54] 17:00–18:30

From theory to experiment: how AFM-IR experimental parameters shape complex biological samples' analysis

Margaux Petay
TU Wien, Austria

[1-P-55] 17:00–18:30

[1-P-56] 17:00–18:30

Molecular Classification of Gliomas using Surface-Enhanced Raman Scattering (SERS) DNA Spectral Data

Teodor George Calina
Babes Bolyai University Cluj-Napoca, Romania

[1-P-57] 17:00–18:30

Deep Learning-Powered Dark-Field Microscopy for Simultaneous Size and Concentration Analysis of Nanoplastics in Water

Yi Wang
East China University of Science and Technology, China

[1-P-58] 17:00–18:30

Vibrational Spectroscopy into the Molecular Dynamic Processes of Self-Healing Systems: An Analyst Viewpoint

Michael Freduah Agyemang
Friedrich-Schiller-Universität Jena, Germany

[1-P-59] 17:00–18:30

Spatiotemporal tracking of charge carriers reveal transport highways in perovskite grain boundaries

Hailong Ma
The Hong Kong University of Science and Technology (Guangzhou), China

[1-P-60] 17:00–18:30

IR-Nanoscopy of Packing Domains in Monolayer Aliphatic Thiols on Gold

Yeunho Lee
Seoul national university, Republic of Korea

[1-P-61] 17:00–18:30

Revealing Phase Transitions of Monodisperse Cesium Lead Bromide Quantum Dots via Temperature-Dependent Raman Spectroscopy

Safira Arta Paramita
Pukyong National University, Republic of Korea

[1-P-62] 17:00–18:30

Investigation of Enhanced Seebeck Effect of PEDOT:PSS Doped with 1-Ethyl-3-methylimidazolium Halide by Using Raman Spectroscopy

Jaeeun Han
Pukyong National University, Republic of Korea

[1-P-63] 17:00–18:30

Characterizing Electrospun PAN Fibers for Hydrogen Evolution Reactions: Insights from Raman Spectroscopy

Akuila Edwards
Friedrich Schiller Universität, Germany

[1-P-64] 17:00–18:30

Carrier Dynamics of Self-Hybridized Exciton–Polaritons in Thick-Layer MoS_2 Probed by Ultrafast Spectroscopy

Ziwei Xu
Southern University of Science and Technology, China

[1-P-65] 17:00–18:30

Enhancing Triplet Formation in Polycyclic Aromatic Hydrocarbons via Plasmonic Nanoparticles

Zhanzhao Li
Southern University of Science and Technology, China

[1-P-66] 17:00–18:30

Unveiling the spectroscopic properties of intercalated stratified systems: A focus on HOPG Blisters

Marco Menegazzo
Politecnico di Milano, Italy

[1-P-67] 17:00–18:30

A Well-stacked Approach: Correlating Structure and Properties in TMDs

Angela Marie Flack
Edinburgh Instruments, United Kingdom

[1-P-68] 17:00–18:30

RaFLIM: A Unified Platform for Raman and Fluorescence Lifetime Imaging

Stuart Thomson
Edinburgh Instruments, United Kingdom

[1-P-69] 17:00–18:30

Nonambient Thermodynamics in Solid-State Batteries

Jingying Zhou
Shanghai Jiao Tong University, China

[1-P-70] 17:00–18:30

High-Speed Laser-Scanning Photothermal Infrared and Stimulated Raman Platform for Real-Time Label-Free Chemical Imaging

Mustafa Kansiz
Photothermal Spectroscopy Corp, Australia

[1-P-71] 17:00–18:30

Application of Novel Submicron Infrared (O-PTIR) spectroscopy towards accurate identification of trace organic materials from semiconductor packaging to black gold

Michael K. F. Lo
Photothermal Spectroscopy Corp, the United States

[1-P-72] 17:00–18:30

Enhanced Layer breathing mode detection by ULF-TERS

Jun Wang
Xiamen University, China

[1-P-73] 17:00–18:30

In situ Raman spectroscopy reveals the role of ethanol in the nature of solid-electrolyte interface of lithium-mediated nitrogen reduction reaction

Enhui Ma
Xiamen University, China

[1-P-74] 17:00–18:30

Vibrational Signatures of Proton Order/Disorder in Hydrogen Bond Networks: A Theoretical Investigation

Qi You
Xiamen University, China

[1-P-75] 17:00–18:30

Spatiotemporally-resolved in-situ Raman Spectroscopy Reveals Lithium-Ion Transport Dynamics in Poly (ethylene oxide) Electrolytes of Solid-State Batteries

Wenxuan Li
Xiamen University, China

[1-P-76] 17:00–18:30

Correlating Temperature Change and Heat Conduction Process Using Mid-Infrared Photothermal Method

Zhaodong Meng
Xiamen University, China

[1-P-77] 17:00–18:30

Quantum tunneling high-speed nano-excitonic modulator

Sujeong Kim
Pohang University of Science and Technology (POSTECH), Republic of Korea

[1-P-78] 17:00–18:30

Tip-induced nanoplasmonic photocatalysis for water splitting

Taeyoung Moon
POSTECH, Republic of Korea

Program

December 4, Thursday

Poster session 2

✦ Exhibition Hall, 1F

16:45–18:30

[P] Poster session 2	
Date/Time	Dec. 4 (Thur.), 2025 / 16:45-18:30
Place	Exhibition Hall, 1F

[2-P-1] 16:45–18:30

Characterisation of Metastatic Lesions in Human Bone by Infrared and Neutron

Maria Paula Marques

University of Coimbra, Portugal

[2-P-2] 16:45–18:30

Spatial Distribution of Concretion Components Revealed by Raman Imaging

Yaxuan Han

Kwansei Gakuin University, Japan

[2-P-3] 16:45–18:30

Optimized Pretreatment Strategy for Raman-Based Nanoplastic Detection

Enxi Jin

INHA University, Republic of Korea

[2-P-4] 16:45–18:30

Prediction of milk composition from mid-infrared spectral data: comparing PLSR to alternative machine learning algorithms

Josefina Andrea Barrera Morelli

The University of Auckland, New Zealand

[2-P-5] 16:45–18:30

Development of Agar-Based SERS Substrates for In Situ Detection of Soil Fungal Secondary Metabolites

Yiming Huang

Lund University, Sweden

[2-P-6] 16:45–18:30

Charge Migration Pathways and Reaction Kinetics in Plasmon-Induced Redox Chemistry on Ag/TiO_2 Hybrid Substrates: Insights from SERS, PIERS, and Morphological Characterization

Adrian Warzybok

Jagiellonian University, Poland

[2-P-7] 16:45–18:30

Unusual Hydrogen Bonding Structure of the p-Cyanophenol (PCP) on its Aqueous Solution Surface Probed with Sub-1 cm-1 High Resolution Broadband Sum-Frequency Generation Vibrational Spectroscopy

Bo-Jun Zhao

Westlake University, China

[2-P-8] 16:45–18:30

Plasmon-free SERS Sensing enabled by enhanced charge transfer and Coupled Resonance in Ni-Doped Sub-Stoichiometric Tungsten Oxide Nanostructures

Sirsendu Ghosal
Indian Institute of Technology Guwahati, India

[2-P-9] 16:45–18:30

Dual-Mode Vibrational Probe of SERS/SEIRA on Hexagonal Cesium Tungsten Bronze

Yan Ding
The University of Tokyo, Japan

[2-P-10] 16:45–18:30

Hydrogen Bond Structures at Charged Interfaces Probed with Sub-1cm-1 High-Resolution Broadband Sum-Frequency Generation Vibrational Spectroscopy

Jinhua Jiang
Westlake University, China

[2-P-11] 16:45–18:30

Fluorescence-Based 2D-COS Analysis of Bloodstain Aging

Sila Jin
Kangwon National University, Republic of Korea

[2-P-12] 16:45–18:30

Chiral Vibrational SFG Signals of Leucine Monolayer at Air–Water Interface

Zekun Zhang
Westlake University, China

[2-P-13] 16:45–18:30

Simultaneous, Highly Sensitive SERS Detection of Reactive Oxygen Species

GEGE WU
Chung-Ang University, Republic of Korea

[2-P-14] 16:45–18:30

Vibrational and Nanospectroscopic Characterization of a PAS-Domain Protein at Model Interfaces

Montserrat Roman Quintero
Humboldt Universität zu Berlin, Germany

[2-P-15] 16:45–18:30

Investigation of biomolecule degradation induced by plasmonic catalysis

Xiaobin Yao
The Hong Kong University of Science and Technology, China

[2-P-16] 16:45–18:30

Rethinking Vibrational Mode Coupling: High-resolution Broadband Sum-frequency Generation Vibrational Spectroscopy Exposes Normal Mode's Limitations in vibrational Spectroscopy Analysis

Zihui Liu
Westlake University, China

[2-P-17] 16:45–18:30

Investigation of Methyl-terminated Silicon (111) Using 100 kHz sub-1 cm^{-1} High-resolution Broadband Sum-Frequency Generation Vibrational Spectrometer

Hongxin Zhang
Westlake University, China

[2-P-18] 16:45–18:30

Beyond the Evanescent Field: A New Perspective on ATR Spectroscopy

Thomas Mayerhöfer
Leibniz-Institut f. Photonische Technologien, Germany

[2-P-19] 16:45–18:30

Interfacial Water Vibrational Spectra and Structure at Charge-Neutral Mixed Surfactant Monolayers Revealed by High Resolution Sum Frequency Generation Vibrational Spectroscopy

Ashwini Kumar Rawat
Westlake University, China

[2-P-20] 16:45–18:30

Direct Comparison Between Fitted and Heterodyne-Detected Phase Information of Sum Frequency Generation Vibrational Spectroscopy

Zhihao Wu
Westlake University, China

[2-P-21] 16:45–18:30

Accelerated Microplastics Detection with Raman Microscopy Leveraging Essential Information and Real-Time Spectral Unmixing

Andrii Kutsyk
Lightnovo ApS, Denmark

[2-P-22] 16:45–18:30

Design and Fabrication of a Portable SERS Biosensor for Trace-Level Detection of Cyanotoxins in Aquatic Environments

Ioana-Andreea Brezestean
National Institute for Research and Development of Isotopic and Molecular Technologies, Romania

[2-P-23] 16:45–18:30

A High-Repetition-Rate Sub-1 cm-1 High-Resolution Broadband Sum-Frequency Generation (HR-BB-SFG) Vibrational Spectroscopy System Based on 200 kHz Fiber Laser and CMOS Camera

Ruitong Liu
Westlake University, China

[2-P-24] 16:45–18:30

Comparative Analysis of Mid-IR Brilliance and Integral Power: Conventional FT-IR Sources vs. Synchrotron

Alexey Matyash
International Tomography Center SB RAS, Russia

[2-P-25] 16:45–18:30

A Quantitative Raman Imaging Method for Fast and Preparation-Free Crystal

KONSTANTINOS STERGIOU
Lightnovo ApS, Denmark

[2-P-26] 16:45–18:30

Carrier Modulation in Metal-Semiconductor Composites: Mechanistic

Lei Chen
Jilin Jianzhu University, China

[2-P-27] 16:45–18:30

Are Highly Volatile Liquid/Vapor Interfaces Well-Structured or Relatively Disordered? A Study Using High-Resolution Broadband Sum Frequency Generation Vibrational Spectroscopy

Guochao Zeng
Westlake University, China

[2-P-28] 16:45–18:30

Spectroscopic studies of liposome carriers in the transport of biologically active substances

Katarzyna Cieślik-Boczula
University of Wroclaw, Poland

[2-P-29] 16:45–18:30

In Vivo Surface-Enhanced Transmission Raman Spectroscopy and Impact of Frozen Biological Tissues on Lesion Depth Prediction

Yutong Zhou
Shanghai Jiao Tong University, China

[2-P-30] 16:45–18:30

SERS sensing of 2-hydroxyglutaric acid in urine

Wynona Alexandra Potrovita
Babeș-Bolyai University, Romania

[2-P-31] 16:45–18:30

Fluorescence Correlation Spectroscopy (FCS) Explores Rare Earth-Coordinated Nanoprobes for Efficient Exosomes Capture and Analysis

Yan Zhou

Jilin University, China

[2-P-32] 16:45–18:30

SERS-based profiling of DNA methylation: Ca 2+ -mediated DNA adsorption on silver nanoparticles

Oana Maria Biro

Babeș-Bolyai University, Romania

[2-P-33] 16:45–18:30

Formation, Stability and Structural Changes of Protein Corona on Gold and Polystyrene Nanoparticles Studied by Vibrational Spectroscopy

Kateřina Hofbauerová

Charles University, Czech Republic

[2-P-34] 16:45–18:30

Diagnosis of Pediatric Diabetes Mellitus using Infrared Spectroscopy and Chemometrics

Leiying Xie

Zhejiang University, China

[2-P-35] 16:45–18:30

Deep Learning Assisted Spectral Restoration of Transmission Raman Spectroscopy Through Biological Tissues

Haoqiang Xie

Shanghai Jiao Tong University, China

[2-P-36] 16:45–18:30

Comparison of near-field light intensities: Plasmon nanofocusing vs plasmon resonance

Tongyao Li

The University of Osaka, Japan

[2-P-37] 16:45–18:30

Facile Synthesis of Trimetallic Plasmonic Nanostructures as Quantitative SERS Platform for Trace Level Detection of Dyes and Biological Molecules

Zubia Sajid

Xiamen University, China

[2-P-38] 16:45–18:30

Putting Charge Transfer Degree as a Bridge Connecting Surface-Enhanced Raman Spectroscopy and Photocatalysis

Wei Song
Jilin university, China

[2-P-39] 16:45–18:30

Reorientation of Pyridine on Silver Electrode Induced by the Applied Potential

Juan Carlos Otero
Universidad de Málaga, Spain

[2-P-40] 16:45–18:30

Unraveling two distinct spectral features in the SERS spectra of dopamine

Sungjun Kwak
Seoul National University, Republic of Korea

[2-P-41] 16:45–18:30

Green Electrochemical Synthesis of Nano-porous Silver SERS Substrates and Their Potential in Early Cancer Screening

Chengye Zhao
Zhejiang University, China

[2-P-42] 16:45–18:30

Temperature-controlled Optical Photothermal Infrared Spectroscopy for high-resolution material analysis

Karolina Kadela
SOLARIS National Synchrotron Radiation Centre, Jagiellonian University, Poland

[2-P-43] 16:45–18:30

Precision Mapping of Molecular Events in Cancer Using SERS Nanoprobes

Jyothi Balachandran Nair
Leibniz Institute of Photonic Technology Albert-Einstein-Straße 9, 07745, Germany

[2-P-44] 16:45–18:30

Realization of qualitative to semi-quantitative trace detection via SERS-ICA based on internal standard method

Xiaoming Li
East China University Of Science And Technology, China

[2-P-45] 16:45–18:30

Optimizing Surface Chemistry for Stable LSPR Responses in Gold Nanoparticle-Functionalized Fiber Probes

Doohyun Baik
Seoul National University, Republic of Korea

[2-P-46] 16:45–18:30

Luminescent Synaptic Behavior in Rare-Earth-Based Phosphors for Neuromorphic Computing

Yunsang Lee
Soongsil University, Republic of Korea

[2-P-47] 16:45–18:30

Towards Real-Time Stem Cell Probing: an IRRS-based analytical strategy to follow MSCs differentiation

Karolina Augustyniak
Jagiellonian University, Poland

[2-P-48] 16:45–18:30

Investigating Species Ratio-Driven Multiscale Variations in Dual-Species Pathogenic Biofilms Using Confocal and Fiber-Probe-Based Raman Spectroscopy

DongyuCui
Institute of Physical Chemistry and Abbe Center of Photonics, Friedrich Schiller University, Germany

[2-P-49] 16:45–18:30

Uncovering Mitochondrial Redox Dynamics During Cuproptosis by Reconstructed Surface-Enhanced Raman Spectroscopy Mapping

Chengye Xi
East China University of Science and Technology, China

[2-P-50] 16:45–18:30

Quantitative SERS Analysis of Adsorption Kinetics for Hydrophobic Sudan I on AuNPs SAM Substrates

Ting-Wei Weng
Xiamen University, China

[2-P-51] 16:45–18:30

SERS of Molecular Tunnel Junctions

Danbi Lee
Seoul National University, Republic of Korea

[2-P-52] 16:45–18:30

Evaluating Electronic-Molecular Temperature Differences in Photothermally Heated Plasmonic Nanostuctures and Adsorbates

Jeeyeon Park
Seoul National University, Republic of Korea

[2-P-53] 16:45–18:30

Influence of nanoparticle plasmonic properties and surface adsorption on SERS sensitivity

Miruna Alexandra Ibrian
Babeș-Bolyai University, Romania

[2-P-54] 16:45–18:30

SERS Liquid Biopsy for Colorectal Cancer Detection and Treatment Response Monitoring

Nicolae Leopold
Babeș-Bolyai University, Romania

[2-P-55] 16:45–18:30

SERS-based Assessment of Purine Metabolite Imbalance for Cancer Screening

Loredana Florina Leopold
University of Agricultural Sciences and Veterinary Medicine, Romania

[2-P-56] 16:45–18:30

Investigating Relationship between Nanostructure Geometry and Optical Responses In Plasmonic Nanogaps

Seongmin Lim
Kangwon National University, Republic of Korea

[2-P-57] 16:45–18:30

Molecular hydration: Interfacial supersolidity and its functionality

Yong Zhou
Dongguan University of Technology, Dongguan, Guangdong, China

[2-P-58] 16:45–18:30

Chiral Molecular Imprinting-based SERS Detection Strategy for Absolute Enantiomeric Discrimination

Maryam Arabi
Yantai Institute of Coastal Zone Research, Chinese Academy of Sciences, China

[2-P-59] 16:45–18:30

Molecular Imprinting-Based SERS Detection Strategy for the Large-Size Protein Quantitation and Curbing Non-Specific Recognition

Abbas Ostovan
Yantai Institute of Coastal Zone Research, Chinese Academy of Sciences, China

[2-P-60] 16:45–18:30

Plasmon-Driven Photothermal Crystallization of TiO2 Shells on Gold Nanorods

Soeun Ryu
Chung-Ang University, Republic of Korea

[2-P-61] 16:45–18:30

Lateral flow immunoassay using nano-enhanced fluorescent probe

Di Yang

Shanxi Datong University, China

[2-P-62] 16:45–18:30

Study on the Effect of MoS_2 Layer-Dependent Electronic Structure on Charge Transfer Mechanism in SERS

Shuang Guo

Jilin Normal University, China

[2-P-63] 16:45–18:30

Anomalous Phonon Population of Shear modes in Graphite Induced by a Plasmonic Cavity

Nuo Yang

Nanjing University, China

[2-P-64] 16:45–18:30

Mechano-Raman Spectroscopy with a Graphene Isolation Layer

Shujin Zhou

Nanjing University, China

[2-P-65] 16:45–18:30

Nanoscale Chemical Imaging of the On-Surface Plasmon-Induced C–C coupling Reactions by Tip-Enhanced Raman Spectroscopy

Yang Zhao

Nanjing Tech University, China

[2-P-66] 16:45–18:30

Hetero-charged electric adsorption assisted SERS in situ rapid detection strategy for real marine polystyrene nanoplastics

Tianshuo Lan

Shanghai Jiao Tong University, China

[2-P-67] 16:45–18:30

Advances in Biopharmaceutical Sub-visible Particulate Analysis with Sub-micron Multimodal IR (O-PTIR) Micro-spectroscopy

Mustafa Kansiz

Photothermal Spectroscopy Corp, USA

[2-P-68] 16:45–18:30

Surface-Specific Vibrational Spectroscopy Reveals Oxidation Level of Graphene in Contact with Water

Xianglong Du

Xiamen University, China

[2-P-69] 16:45–18:30

Improving the rapid detection sensitivity of solid SERS substrate based on capillary force and intermolecular interaction

Shengfu Zhi

State Key Laboratory of Marine Environmental Science, College of the Environment and Ecology, Xiamen University, China

[2-P-70] 16:45–18:30

AI-Enhanced Rapid SERS Screening of Trace Quinolone Antibiotics across Source-Pathway-Sink Ecosystem

Jing Xu

Xiamen University, China

[2-P-71] 16:45–18:30

Spatial heterogeneity of sulfate in tap water across China: Insights from a rapid and reliable SERS analysis

Qiuting Huang

Xiamen University, China

[2-P-72] 16:45–18:30

Investigations of the Bilayer Structure and Dynamic Properties of the Acetone-Water Binary Mixture at the Air Interface

Lu Cao

College of Chemistry and Chemical Engineering, Xiamen University, Xiamen, 361005, China

[2-P-73] 16:45–18:30

Probing Chemical Pathways of Hydrogen Production on Core-Shell Nanostructures Using SFG Spectroscopy

Zohreh Moghaddasi

Universite Paris Saclay, Institut de Chimie Physique, France

[2-P-74] 16:45–18:30

Tip-Enhanced Single-Photon Emission from hBN Defects

Hyeonmin Oh

Pohang university of Science and Technology (POSTECH), Republic of Korea

[2-P-75] 16:45–18:30

SERS based on home-built dual-laser Raman microscope for the detection of diabetes

Jing Huang

South China Normal University, China

[2-P-76] 16:45–18:30

What Drives the Inflammatory Response from Contemporary Polyethylene Liners in Total Knee Arthroplasty?

Songyun Liu
Rush University Medical Center, USA

[2-P-77] 16:45–18:30

Experimental parameters optimization for reliable urine SERS analysis

Ramona-Gabriela Cozan
Babes-Bolyai University, Cluj-Napoca, Romania

[2-P-78] 16:45–18:30

Revealing the Role of Surface Oxophilicity in the Electrocatalytic Ammonia Oxidation on Platinum

Mingyu Chen
Xiamen University, China

Exhibitors' Information

Booth No. A1

RENISHAW (SHANGHAI) TRADING CO LTD		
雷尼绍 RENISHAW apply innovation™	President	
	Address	1F, Building 18, No. 288, Jiangchang 3rd Road, Jingan District,Shanghai,China
	Country	China
	TEL	+86 21 6180 6416
	FAX	
	E-mail	shanghai@renishaw.com
	Website	https://www.renishaw.com/en/raman-spectroscopy--6150
	Contents of exhibit	

Introduction

Renishaw is a world leading supplier of measuring systems and manufacturing systems. Its products give high accuracy and precision, gathering data to provide customers and end users with traceability and confidence in what they're making. It is a global business, with over 5,000 employees located in 36 countries.

Booth No. A2

Edinburgh Instruments Ltd		
EDINBURGH INSTRUMENTS A Techcomp Company	President	Roger Fenske
	Address	2 Bain Square, Kirkton Campus, EH54 7DQ
	Country	United Kingdom
	TEL	+44 1506 425 300
	FAX	
	E-mail	sales@edinst.com
	Website	www.edinst.com
	Contents of exhibit	Raman Spectrometer

Introduction

At Edinburgh Instruments, we harness over fifty years of spectroscopic expertise to deliver advanced solutions for scientific and industrial research. Our products span photoluminescence, Raman, UV-Vis, FTIR, and transient absorption, each engineered for precision, performance, and long-term reliability. Driven by innovation and a commitment to quality, Edinburgh Instruments continues to set new standards in optical spectroscopy and scientific discovery.

Booth No. A3

Zhendian (Suzhou) Medical Technology Co., Ltd.		
VibroniX 振电科技	President	Pu Wang
	Address	Room 307, Building B1, Bio-nanotechnology Park, No. 218 Xinghu Street, Suzhou Industrial Park, Suzhou, Jiangsu Province
	Country	China
	TEL	400 018 2112
	FAX	
	E-mail	microscopy@zhendian.tech
	Website	http://www.zhendian.tech
	Contents of exhibit	Multimodal Nonlinear Microscopy (Ultraview), Coherent Raman Scattering Microscopy (Superview), Ultra-sensitive Transient Absorption Microscopy (Hyperview)

Introduction

VibroniX is committed to the development of advanced optical imaging and sensing technologies for applications in disease diagnosis and therapy, as well as in life science and materials science research. To date, the company has secured exclusive licensing rights from Purdue University and Boston University for patented technologies in coherent Raman scattering (CRS) imaging. VibroniX has successfully commercialized a portfolio of innovative systems, including multimodal nonlinear microscopy, coherent Raman scattering microscopy, high-sensitivity transient absorption microscopy.

Booth No. A4

HORIBA		
HORIBA	President	Yuko KIMURA
	Address	Unit D, 1F, Building A, Synnex International Park,1068 West Tianshan Road, Shanghai
	Country	China
	TEL	021-6289 6060-101
	FAX	021-6289 5553
	E-mail	info-sci.cn@horiba.com
	Website	https://www.horiba.com/chn/
	Contents of exhibit	HORIBA NanoRaman, Raman Spectroscopy, Fluorescence Spectroscopy, Custom Spectroscopy

Introduction

HORIBA is an established multinational corporation with a long-standing history. Headquartered in Japan, the company has expanded its presence across 29 countries with 50 subsidiaries, establishing a comprehensive global network for R&D, manufacturing, sales, and service.
Across diverse fields such as energy, environment, life sciences, healthcare, advanced materials, and semiconductors, HORIBA provides highly precise measurement instruments and advanced analytical solutions to governments, universities, and industrial enterprises worldwide.

Booth No. B1

Quantum Design China		
Quantum Design CHINA	President	Lambert CAO
	Address	Room 501, 5th Floor, Building B22, Universal Business Park, No. 10 Jiuxianqiao Road, Chaoyang District, Beijing, P.R.China. 100015
	Country	China
	TEL	85120280
	FAX	
	E-mail	info@qd-china.com
	Website	https://www.qd-china.com/zh
	Contents of exhibit	**NeaSCOPE**, Nanoscale Imaging & Spectroscopy. **MIRage IR microscope,** Non-contact submicron resolution synchronous Infrared-Raman microscope measurement system.

Introduction

Quantum Design is a well-known manufacturer of scientific instruments. A series of magnetic measurement systems and comprehensive physical property measurement systems developed and produced by Quantum Design have become recognized measurement platforms and are widely distributed in scientific research laboratories in the fields of materials, physics, chemistry and nano research around the world.

Booth No. B3

Bruker (Beijing) Scientific Technology Co., Ltd		
BRUKER	President	
	Address	8th Floor, Tower C, Building B-6, Zone B, Zhongguancun Dongsheng Science Park 66 Xixiaokou Road, Haidian District, Beijing
	Country	China
	TEL	400-777-2600
	E-mail	Info.BOPT.CN@bruker.com
	Website	https://www.bruker.com/en/products-and-solutions/infrared-and-raman.html
	Contents of exhibit	FTIR, Raman and terahertz spectrometers, Raman microscopes, Gas Analysis, IR Laser Imaging Microscopes

Introduction

Bruker Optics is a part of the Bruker Corporation and offers FTIR, FT-NIR, Raman, TeraHertz and spectrometers as well as imaging spectrographs for various markets and applications. Bruker Optics R&D and manufacturing centers are in Ettlingen, Germany, with supporting technical centers and offices throughout Europe, North and South America and Asia. Whether it is a high-end research system, a life sciences tool, a routine quality control instrument or a process analyzer, Bruker Optics offers a wide variety of innovative analytical tools for all your demanding needs. The countless innovations found on our products, delivering unmatched analytical power, represent our philosophy: think forward.

Booth No. B4

Photothermal Spectroscopy Corp		
PHOTOTHERMAL SPECTROSCOPY CORP	President	Roshan Shetty
	Address	325 Chapala Street, Santa Barbara, CA 93101
	Country	USA
	TEL	+1 805 845 6568
	FAX	+1 805 845 6568
	E-mail	info@photothermal.com
	Website	www.photothermal.com
	Contents of exhibit	Photothermal Stimulated Raman Microscope, Laser Scanning O-PTIR Microscope, Highest resolution IR for life science research, High speed, label free, chemical imaging, Correlated Raman & IR spectroscopy and imaging, Submicron IR spectroscopy and Imaging, Flexibility for a broad range of applications

Introduction

Photothermal Spectroscopy Corp (Photothermal) has pioneered the breakthrough technique of Photothermal IR and stimulated Raman microscope for advanced chemical imaging in biology, materials science, pharmaceutics and semiconductor industrial. The mIRage series, OPTIR not only provides submicron spatial resolution for IR spectra in non-contact mode, but also combines Raman technology for comprehensive IR and Raman analysis from the exact same spot, time and spatial resolution. The stRAMos, Photothermal Stimulated Raman Microscope (PT-SRS) delivers the combined highest sensitivity and highest spatial resolution chemical imaging in a single system with high speed, laser-scanning based imaging and advanced microscopy characterization capabilities – all in a robust, easy to use platform.

Booth No. B5

Oxford Instruments Technology (Shanghai) Co. Ltd		
OXFORD INSTRUMENTS	President	Jerry HE 何峻
	Address	1F, Building 18, No. 288, Jiangchang 3rd Road, Jingan District,Shanghai,China
	Country	China
	TEL	400 678 0609
	FAX	
	E-mail	china.info@oxinst.com
	Website	www.oxinst.com
	Contents of exhibit	Oxford Instruments witec360 Raman Microscope andHexalight Spectrometer

Introduction

- Research-Grade: Wide spectral range and high sensitivity, withautomatic switching of six gratings.
- Multi-Technique Integration: Capable of integrating with PL, AFM, SNOM, SHG, FLIM, SEM, and profilometry.
- Modular Customization: Modular design supports customization and long-term upgrade needs.
- Smart and Convenient: Rich automation options and multi-user access functionality.
- User-Friendly: Stable optical path and streamlined control software.

Booth No. C1

Luxiang Jiayi (Xiamen) Technology Co., Ltd.		
鹭翔嘉仪 LU XIANG JIA YI	President	Zhou He
	Address	3rd Floor, Building A, Chuangye Building, No. 106 Anling 2nd Road, Huli District, Xiamen
	Country	China
	TEL	0592-2882880
	FAX	
	E-mail	service@ikkem-jiayi.com
	Website	www.ikkem-jiayi.com
	Contents of exhibit	Integrated Raman Microscope, Educational Multifunctional Raman Spectrometer, Electrochemical Workstation, etc.

Introduction

Luxiang Jiayi (Xiamen) Technology Co., Ltd. specializes in spectral detection systems, electrochemical analysis instruments, and electrochemical energy devices. Leveraging the academic advantages of Xiamen University and the Tan Kah Kee Innovation Laboratory in electrochemistry, spectroscopy, and energy materials, the company integrates R&D, design, production, and sales. our mission is to deliver advanced scientific instruments, high-end teaching equipment, and integrated analytical platforms with multi-technique coupling functionalities. we further provide bespoke consulting and tailored instrumentation solutions for specialized application scenarios.

Booth No. C2

DHS Instruments Co., Ltd		
DHS Instruments 华洋科仪 A Word Leader of Vibrational Optical Activity Spectroscopy VCD • ROA BioTools	President	Jenny Qi
	Address	Rm.2510, No.4K Wuwu Rd., Zhongshan District, Dalian 116001, China
	Country	China
	TEL	0411-82364123
	FAX	0411-82364006
	E-mail	jenny@dhsi.com.cn
	Website	www.dhsi.com.cn
	Contents of exhibit	BioTools Chiral*IR*-2X™ VCD Spectroscopy, Chiral*RAMAN*-2X™ ROA Spectroscopy, Bio-Logic MOS-500 Multifunction Circular Dichroism Spectroscopy, and Starna Cuvettes for Spectrometers and NIST traceable Certified Reference Materials for Spectrometers.

Introduction

DHS Instruments was established in 1993, with its headquarters in Dalian. The company has branches or offices in Beijing, Shanghai and Guangzhou. DHSI has always adhered to the business philosophy of technology leadership, integrity, and rigorousness, It was the first to promote Circular Dichroism spectroscopy technology in China. DHSI has become the exclusive distributor for Starna (UK), Bio-Logic (France) and BioTools (U.S.) in China covering Hong Kong, Marco and Taiwan for more than 20 years, providing chiral researchers with advanced and reliable cutting-edge international technologies, analysis instruments, as well as comprehensive solutions. The company serves a wide range of users, including numerous research institutions, universities, and enterprises in fields of chemistry, biomedicine, life sciences, energy materials and etc.

Booth No. C3

Wiley		
WILEY Science Solutions	President	Matthew Kissner (CEO); Molly Zhang (China Lead)
	Address	No.805-808,8th Floor, Sun Palace, No.12A, Taiyanggong Middle Road, Chaoyang District, Beijing, P.R China (Beijing Office)
	Country	United States
	TEL	+86-10-85419300
	FAX	86(10)8541 9400
	E-mail	csun@wiley.com
	Website	https://sciencesolutions.wiley.cn/
	Contents of exhibit	KnowItAll 2026: An Integrated Platform for Spectral Databases and Analytical Intelligence

Introduction

KnowItAll is a vendor-neutral, integrated platform that brings together the breadth of Wiley's spectral databases with refined analytical capabilities. Designed to transcend instrument boundaries, it provides a unified environment for IR, Raman, NMR, MS, and UV-Vis data, enabling rigorous, cross-platform interpretation. With authoritative libraries, precise search functions, and thoughtfully structured workflows, KnowItAll guides researchers from raw measurements to well-supported conclusions with exceptional clarity. Whether confirming structures or advancing analytical understanding, KnowItAll delivers a cohesive, elegant solution that elevates scientific decision-making.

Booth No. C4

PulsePower Technology Limited		
PulsePower 脉动科技	President	Ming Lu
	Address	84-8 Zhongguancun East Road, Haidian District, Beijing, P.R.China
	Country	China
	TEL	010-62565117
	FAX	010-62565117
	E-mail	info@pulsepower.cn
	Website	www.pulsepower.cn
	Contents of exhibit	

Introduction

Pulsepower is a leading professional laser distributor dedicated to the agency, sales, technical services, and importation of advanced foreign lasers and optoelectronic products. Serving high-end scientific research and advanced industrial markets both domestically and internationally, Pulsepower has established itself as one of China's largest laser equipment distributors. The company represents a comprehensive portfolio of laser types and leading global brands, collaborating with numerous world-renowned companies.

Pulsepower service team comprises top-tier professionals from prestigious universities such as Tianjin University, University of Science and Technology of China (USTC), Beijing Institute of Technology, and Changchun University of Science and Technology, specializing in laser technology. Over 70% of the team holds master's degrees or higher, with core members boasting over 12 years of experience in laser sales and technical services.

Booth No. C5

SPECS-TII Technology(Beijing)Co.,Ltd.		
SPECS UNISOKU TII Group	President	
	Address	Room 418A, Building 39, No. 4, Workers' Stadium North Road, Chaoyang District, Beijing
	Country	China
	TEL	+8610-65010355
	FAX	
	E-mail	sales@specs-tii.com.cn
	Website	http://www.specs-tii.com.cn/
	Contents of exhibit	ARPES,HV-SPM/NAP-SPM,PEEM/LEEM,NAP-XPS

Introduction

SPECS specializes in the development and production of customized UHV surface analysis systems. Focus provides modern surface analysis components and advanced micro fabrication systems. Nanonis nanotechnology measurement solutions are designed for the uncompromising demands of scientific excellence.
Enviro Analytical Instruments introduces a new innovative era of surface analysis, which opens up new possibilities for analytical applications.

Booth No. C6

Beijing Haozhen Technology Co., LTD		
昊真科技 HAOZHEN TECHNOLOGY	President	Li xiaoqing
	Address	Building A, Mindray Research Institute, Changping District, Beijing
	Country	China
	TEL	15971418668
	FAX	
	E-mail	15971418668@163.com
	Website	https://haozhen.tech
	Contents of exhibit	Spirit 300 Raman spectrometer

Introduction

Beijing Haozhen Technology Co., Ltd. was established in Beijing in 2024, with its headquarters strategically located in the core zone of the Life Science Park in Changping District.
Committed to integrity, customer-centricity, and technological innovation, we are an innovative enterprise dedicated to high-end scientific imaging equipment. We specialize in the R&D and commercialization of precision instruments, including Confocal Raman Spectrometers, Ultrafast Raman Imaging Microscopes, Fluorescence Confocal Microscopes, and Transient Absorption Microscopes. Our mission is to provide intelligent online solutions for professional fields such as microbial detection, pharmaceutical quality control, and dynamic monitoring of chemical reactions

Booth No. C7

CIQTEK Co., LTD		
	President	He Yu
	Address	No.1969, Kongquetai Road, High-tech Zone, Hefei, Anhui, China, 230088
	Country	China
	TEL	+86 17305605055
	FAX	
	E-mail	gylz@ciqtek.com
	Website	https://www.ciqtek.com/
	Contents of exhibit	EPR,NMR,SNVM

Introduction

CIQTEK's main business includes Electron Microscopy (FIB/SEM, TEM), Nuclear Magnetic Resonance (NMR) Spectroscopy, Electron Paramagnetic Resonance (EPR/ESR) Spectroscopy, and BET Surface Area & Pore Analyzers. The company delivers advanced, customized products and solutions across environmental science, biochemistry, semiconductor technology, and materials science, empowering its customers to innovate and boost productivity.

With a workforce of over 700 employees, 40% of whom are R&D specialists, CIQTEK operates 12 R&D centers, including the Engineering R&D Center, Ultra-Clean Pilot Testing Center, Electron Microscopy Application Center, Optically Detected Magnetic Resonance Laboratory, and Precision Measurement Laboratory.

Booth No. C8

Fortec (Changchun) Technology Co., LTD		
	President	Hedy Zou
	Address	Rooms 808 and 809, 8th Floor, Building 9-2, Changxin Chuanggu, Future Science City, Beihu Science and Technology Development Zone, Changchun City, Jilin Province
	Country	China
	TEL	+86 18043005091
	FAX	
	E-mail	fortec_hedy@126.com
	Website	Gated Raman spectroscopy system
	Contents of exhibit	

Introduction

FORTEC (Changchun) TECHNOLOGY Co., Ltd. relies on advanced spectroscopy technology to provide customized analytical testing system services for universities and research institutions. These include: small and medium-sized fluorescence/Raman spectroscopy systems, high-pressure spectroscopy measurement systems, photoelectric detection instruments, gated Raman spectroscopy systems, optical fibers, various types of light sources and detectors, precision displacement stages, and a wide range of optical components.

Booth No. C9

Tangent Optics Co., LTD		
	President	Neil Tan
	Address	Room 801, Yinhong building,1st Xin'an Road, Bao'an District, Shenzhen
	Country	China
	TEL	0755-86531852
	FAX	0755-8653 1927
	E-mail	neil@tanopto.com
	Website	https://www.tanopto.com/
	Contents of exhibit	Laesr ; Single photon detection system; Iccd; EMCCD; spectrometer

Introduction

Tangent Optics focuses on the field of optoelectronics and has established long-term partnerships with outstanding global manufacturers of optical science instruments and components. We are dedicated to providing high-quality products and services for fields such as biophotonics, quantum, physical optics, chemical material analysis, and nano-optics. Our products cover light sources, optical filters, detectors, signal processors, nano-displacement systems, as well as functional fluorescence and Raman systems.

Booth No. C10

JASCO China(Shanghai)Co.,LTD		
	President	
	Address	Room603B,No.1168 Century Avenue Pudong New Area,Shanghai,P.R.China 200120
	Country	China
	TEL	021-68887871
	FAX	
	E-mail	hui.chen@jasco.co.jp
	Website	http://www.jasco-global.com/
	Contents of exhibit	FT/IR,Raman

Introduction

Booth No. C11

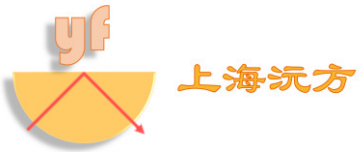
Lightnovo ApS		
	President	Oleksii Ilchenko
	Address	Blokken 11, 1.3460 Birkerød Denmark (DK)
	Country	Denmark
	TEL	+45 61 46 89 10
	FAX	+45 61 46 89 10
	E-mail	info@lightnovo.com
	Website	lightnovo.com
	Contents of exhibit	miniRaman Spectrometer, miniRaman Microscope, RG Spectrometer, RG Microscope

Introduction

A spin-off from the Technical University of Denmark, Lightnovo was founded in 2019 by an enthusiastic team united by the goal of revolutionizing the field of Raman spectroscopy through innovative, high-performance solutions.

We aim to provide premium performance Raman spectrometers and microscopes with the world's smallest form factors without compromising the performance. With this innovation, Lightnovo addresses the need for portable, reliable field instruments at an affordable price.

Booth No. C12

Shanghai Yuanfang Technology Co., LTD		
	President	
	Address	Room 1502, Building A6, Bay Valley Science and Technology Park, No. 1688 Guoquan North Road, Yangpu District, Shanghai
	Country	China
	TEL	1660171821
	FAX	
	E-mail	yuanfang_ecir@126.com
	Website	www.shyftech.cn/
	Contents of exhibit	In-situ electrochemical infrared spectroscopy, in-situ electrochemical Raman spectroscopy, in-situ electrochemical mass spectrometry, testing services

Introduction

Booth No. C13

Chroma Technology Corp		
	President	Newell Lessell
	Address	10 Imtec Lane, Bellows Falls, VT 05101 USA
	Country	US
	TEL	+1-802-428-2500
	FAX	+1-802-428-2525
	E-mail	sales@chroma.com, china@cn.chroma.com
	Website	www.chroma.com
	Contents of exhibit	Precision optical filters

Introduction

Founded in 1991 as a 100% employee-owned company, Chroma is a leading manufacturer of highly precise optical filters using thin-film coating technology. Chroma provides filter solutions for life sciences, agriculture, manufacturing, inspection, security and aerospace. The broad array of applications served include fluorescence microscopy, Raman spectroscopy, cytometry, biomedical instrumentation and surgical devices, machine vision, multi spectral imaging, remote sensing, colorimetry and astronomy.

Booth No. C14

NPI Lasers Co., LTD		
	President	Fengqiu Wang
	Address	Cuiping science and Technology Innovation Park, No. 37, Jiangjun Avenue, Jiangning District, Nanjing, Jiangsu Province
	Country	China
	TEL	025-84989433
	FAX	
	E-mail	jiaqi.yuan@npilasers.com
	Website	www.npilasers.com
	Contents of exhibit	Rainbow OEM/SuperTune QCL.etc.

Introduction

NPI Lasers is a national high-tech enterprise specializing in the R&D and large-scale production of high-reliability ultrafast and infrared fiber lasers. Its products are widely used in industrial processing, spectroscopic instrumentation, and advanced scientific research. The company has a highly skilled R&D and operations team and has mastered all key technologies across the full production chain of ultrafast and infrared fiber lasers.

Memo: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College of Chemistry & Chemical Engineering, Xiamen University
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