

# 4<sup>th</sup> INTERNATIONAL PLANT SPECTROSCOPY CONFERENCE

2024 September 24-27, Vienna AUSTRIA



<b>Tuesday 24.09.2024</b>	
<b>10:00 - 18:00</b>	<b>REGISTRATION &amp; RECEPTION</b>
<b>11:00 - 12:00</b>	<b>Company workshop</b> “Multimodal imaging: Sub-micron, Simultaneous IR (O-PTIR) and Raman with co-located Fluorescence imaging” by <b>Photothermal Spectroscopy Corp.</b>
<b>13:00 - 13:20</b>	<b>OPENING CEREMONY</b>
<b>13:20 - 14:40</b>	<b>Session: Infrared Spectroscopy I (Chair: B. Hinterstoisser)</b>
13:20 - 14:00	<b>L. Salmén: Why dynamic FTIR for studies on wood and other complex materials?</b>
14:00 - 14:20	A. Ponzeccchi: Investigating the development of heartwood in Quercus robur in Denmark
14:20 - 14:40	L. Sommerauer: NIR integration for the evaluation of compost quality with extruded wood fibers
14:40 - 15:10	Coffee break
<b>15:10 - 15:50</b>	<b>Session: Infrared Spectroscopy II (Chair: MF Devaux)</b>
15:10 - 15:30	M. Zohmann-Neuberger: Characterizing food items of grouse species via FT-IR
15:30 - 15:50	B. Hinterstoisser: How infrared spectroscopy conquered wood research
<b>15:50 - 16:30</b>	<b>POSTER FLASH presentations (Chair: S. Rosner)</b>
<b>16:30 - 18:00</b>	<b>POSTER SESSION with Beer &amp; Snacks</b>

<b>Wednesday 25.09.2024</b>	
<b>09:00 - 12:40</b>	<b>Session: Raman Spectroscopy (Chair: N. Gierlinger)</b>
<b>09:00 - 09:40</b>	<b>P. Matousek: Non-invasive Probing of Opaque Materials with Raman Spectroscopy</b>
09:40 - 10:00	R. Elbaum: Polymerization of silica on a lignin matrix modifies the chemistry of the associated lignin
10:00 - 10:20	C. Distefano: Raman determination of nitrate content in spinach leaves: from single descriptors to multivariate data analysis
10:20 - 10:40	G. Tiloca: Raman microspectroscopy uncovers the chemical adaptations of alpine azalea leaves
10:40 - 11:10	Coffee break
<b>11:10 - 12:00</b>	<b>J. Pilátová: Newly found cellular structures in the spotlight of Raman microscopy</b>
12:00 - 12:20	B. Bakan: RAMAN-AFM mapping highlighted chemical clustering associated to heterogenous mechanical properties within the fruit cutin polymer matrix
12:20 - 12:40	A.D. Orlando: Linear unmixing of a series of hyperspectral Raman images to reveal variations of outer layers during wheat grain development
12:40 - 13:40	Lunch break
<b>13:40 - 15:10</b>	<b>Session: Nano &amp; Physical Spectroscopy (Chair: J. Huss)</b>
13:40 - 14:10	<b>G. Ramer: Label-free chemical analysis at nanoscale spatial resolution</b>
14:10 - 14:30	C.M. Johnson: Infrared nanospectroscopy of cellulose-based materials
14:30 - 14:50	M. Weinberger: How mosses cope with heavy-metal stress: Applying $\mu$ -SRXRF to moss samples to determine and quantify heavy-metal distribution
14:50 - 15:10	M. Vasiljevic: Wood Moisture Monitoring by Impedance Spectroscopy
15:10 - 15:40	Coffee break
<b>15:40 - 16:30</b>	<b>Session: Mass based spectrometries (Chair: F. Guillon)</b>
<b>15:40 - 16:10</b>	<b>D. Ropartz: New dimensions in the characterization of carbohydrates by emerging technologies in mass spectrometry</b>
16:10 - 16:30	J. Kubásek: Stable isotopes in plant science: A general fairy tale subtly focusing on the plant cuticle
17:00 - 18:30	BOKU Tour
<b>19:30 - 21:00</b>	<b>Heuriger s´Pfiff (Rathstraße 4, 1190 WIEN)</b>

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<b>Thursday</b>	<b>26.09.2024</b>
<b>09:00 - 10:00</b>	<b>Session: Data analysis (Chair: A. Gorzsás)</b>
09:00 - 09:40	<b>A. Mosig: Theory is dead, long live theory: Hypothesis-centric machine learning in vibrational spectroscopy</b>
09:40 - 10:00	M.F. Devaux: A tool for comparing large multispectral images: PCA score distributions
<b>10:00 - 10:40</b>	<b>A. Gorzsás: A chemometrics approach to plant cell walls</b>
10:40 - 11:10	Coffee break
<b>11:10 - 12:20</b>	<b>Session: NMR spectrometry (Chair: C. Deborde)</b>
11:10 - 12:00	M. Musse: MRI and Time Domain NMR: Opportunities and Challenges in Plant Investigations
12:00 - 12:20	C. Drießlein: Dandelion species for rubber yield enhancement evaluated by NMR metabolite profiles using artificial intelligence methods
12:20 - 13:20	Lunch break
13:20 - 14:20	<i>Discussion: Future activities of the IPSC?</i>
	FREE AFTERNOON
<b>20:00 - 23:00</b>	<b>Conference Dinner RATHAUSKELLER (Lehárssaal), Rathausplatz 1, 1010 WIEN</b>

<b>Friday</b>	<b>27.09.2024</b>
<b>09:00 - 10:20</b>	<b>Session: Fluorescence Spectroscopy (Chair: C. Barron)</b>
09:00 - 09:40	<b>L. Donaldson: Auto-fluorescence-based techniques in plant sciences</b>
09:40 - 10:00	G. Paës: Automated autofluorescence-based intensity and morphological quantification of plant cell wall
10:00 - 10:20	F. Guillon: Multi-hyperspectral and multimodal imaging to map the distribution of cell wall compounds in <i>Brachypodium distachyon</i> mutants
10:20 - 10:50	Coffee break
<b>10:50 - 11:10</b>	<b>Poster prize</b>
<b>11:10 - 11:30</b>	<b>Closing ceremony</b>

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