

# ASAC

AUSTRIAN SOCIETY OF ANALYTICAL CHEMISTRY

## Young Analytical Chemists Forum 2022

12<sup>th</sup>-13<sup>th</sup> May

# Programme

### Thursday 12<sup>th</sup> May

08:30 - 09:30 Registration  
09:40 Welcome  
09:40 - 11:15 Session 1  
11:15 - 11:45 *Coffee Break*  
11:45 - 13:00 Session 2  
13:00 - 14:00 *Lunch Break*  
14:00 - 15:00 Session 3  
15:00 - 15:30 *Coffee Break*  
15:30 - 16:30 Session 4  
16:45 - 17:45 Poster Session  
18:00 Departure Conference Dinner  
18:30 Conference Dinner

### Friday 13<sup>th</sup> May

09:30 – 09:45 Welcome  
09:45 – 10:45 Session 5  
10:45 – 11:15 *Coffee Break*  
11:15 – 12:15 Session 6  
12:15 – 13:30 *Lunch Break*  
13:30 – 14:30 Session 7  
15:00 Award Ceremony  
15:30 Conference End & Farwell



Agilent



BRUCKNER  
ANALYSENTECHNIK GmbH

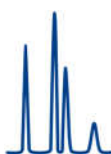


TULLN/DONAU



chemiereport.at  
AustrianLife Sciences Österreichs Magazin für  
Wirtschaft, Technik und Forschung

WISSENSCHAFT • FORSCHUNG  
NIEDERÖSTERREICH



KNAUER

**Session 1, 12<sup>th</sup> May, 09:40 – 11:15, Polymer and Material Characterization**

09:40 – 10:00	<b>Welcome / Introducing ASAC</b> Rudolf Krska
10:00 – 10:15	<b>JAF-Award Lecture: Comparison of the Functional Barrier Properties of Chitosan Acetate Films with Conventionally Applied Polymers</b> Andrea Hochegger, Institute of Analytical Chemistry and Food Chemistry, Graz University of Technology
10:15 - 10:30	<b>A LIBS based classification approach for encapsulation materials to ensure the reliability of electronic devices</b> Veronika Zeller, TU Wien, Institute of Chemical Technologies and Analytics
10:30 – 10:45	<b>Chloride Sensitive Dyes for Concrete Imaging</b> Karl Leonard Sterz, Institute of Analytical Chemistry and Food Chemistry, Graz University of Technology
10:45 – 11:00	<b>Analysis of Poly- and Perfluoroalkyl Substances in Paper and Board Food Contact Materials</b> Milica Jovanovic, Institute of Analytical Chemistry and Food Chemistry, Graz University of Technology
11:00 – 11:15	<b>Laser Ablation combined with Electron Ionization-MS and ICP-OES for advanced polymer characterization</b> Laura Kronlachner, TU Wien, Institute of Chemical Technologies and Analytics

**Coffee Break 11:15 – 11:45**



**Agilent**



BRUCKNER  
ANALYSENTECHNIK GmbH



TULLN/DONAU



chemiereport.at  
AustrianLife Sciences Österreichs Magazin für  
Wirtschaft, Technik und Forschung

WISSENSCHAFT • FORSCHUNG  
NIEDERÖSTERREICH



**KNAUER**

## Session 2, 12<sup>th</sup> May, 11:45 - 13:00, LC-MS & Metabolomics

11:45 – 12:00	<b>Utilization of Dual Column LC-HRMS to Assess of Below Ground Chemical Communication by Allelopathic Cover Crops</b> Alexandra Bennett, University of Natural Resources and Life Sciences, Institute of Analytical Chemistry, Vienna
12:00 – 12:15	<b>Utilization of high-resolution mass spectrometry in routine analysis of natural toxins</b> Lidija Kenjeric, FFOQSI – Austrian Competence Centre for Feed and Food Quality, Safety & Innovation,
12:15 – 12:30	<b>Development of a targeted LC-MS/MS method for the simultaneous detection of recently discovered bile acid conjugates</b> Daniel Wasinger, University of Vienna, Department of Food Chemistry and Toxicology
12:30 – 12:45	<b>Metabolomics of plasma and fecal samples obtained from a cohort of extremely premature infants</b> Manuel Pristner, University of Vienna, Department of Food Chemistry and Toxicology
12:45 – 13:00	<b>Investigating the Metabolome of <i>Trichoderma atroviride</i> and <i>Botrytis cinerea</i> under different light conditions using stable isotopic labelling</b> Kristina Missbach, University of Natural Resources and Life Sciences, Vienna, Department of Agrobiotechnology IFA-Tulln

### Group Photo and Lunch Break 13:00 – 14:00

## Session 3, 12<sup>th</sup> May, 14:00 – 15:00, NIR & AFM-IR

14:00 – 14:15	<b>Portable vs. Benchtop NIR-Sensor Technology for Classification and Quality Evaluation of Black Truffle</b> Christoph Kappacher, Institute of Analytical Chemistry and Radiochemistry; Leopold-Franzens University Innsbruck
14:15 – 14:30	<b>Inline Process Monitoring in the Production of Polyhydroxy-alkanoates with fully-integrated Near-Infrared Spectroscopy</b> Sebastian Friedl, RECENDT-Research Center for Non Destructive Testing, Linz, Austria
14:30 – 14:45	<b>Nanoscale characterizing of organic-inorganic perovskites with AFM-IR</b> Ufuk Yilmaz, Institute of Chemical Technologies and Analytics, TU Wien
14:45 – 15:00	<b>Modelling thermal expansion as a point spread function for nanoscale chemical imaging</b> Yide Zhang, Institute of Chemical Technologies and Analytics, TU Wien

### Coffee Break 15:00 – 15:30



Agilent



BRUCKNER  
ANALYSENTECHNIK GmbH

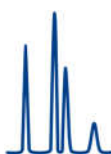


TULLN/DONAU



chemiereport.at  
AustrianLife Sciences  
Österreichs Magazin für  
Wirtschaft, Technik und Forschung

WISSENSCHAFT • FORSCHUNG  
NIEDERÖSTERREICH



KNAUER

## Session 4, 12<sup>th</sup> May, 15:30 – 16:45, Environment & Biotechnology

15:30 – 15:45	<b>Polycyclic aromatic hydrocarbons and where to find them: highlights and obstacles of the development of analytical methods for PAH quantification in different environmentally important matrices</b> Bernadette Kirchsteiger, TU Wien, Institute of Chemical Technologies and Analytics
15:45 – 16:00	<b>Analysis and purification of ice nucleating macromolecules from birch pollen leading to new insights of their properties</b> Florian Reyzek, Institute of Materials Chemistry, TU Wien
16:00- 16:15	<b>MALDI-intact cell mass spectrometry as a monitoring tool for fermentation processes</b> Cristian Zanetti, TU Wien, Institute of Chemical Technologies and Analytics
16:15 – 16:30	<b><sup>13</sup>C-tracer based metabolomics reveals a hidden methanol and CO<sub>2</sub> assimilation pathway in the methylotrophic yeast <i>Pichia pastoris</i></b> Bernd Mitic, Institute of Microbiology and Microbial Biotechnology, University of Natural Resources and Life Sciences, Vienna
16:45 - 17:45	<b>Poster Session</b>

**Departure Conference Dinner 18:00 (IFA-Tulln)**

**Conference Dinner 18:30**

## Day 2

### Session 5, 13<sup>th</sup> May, 09:45 – 10:45, Miscellaneous

09:45 – 10:00	<b>Fluorescence labeling of C1 oxidized cellulose: Method development</b> David Budischowsky, Institute of Chemistry of Renewable Resources, University of Natural Resources and Life Sciences, Vienna
10:00 – 10:15	<b>Extracellular vesicle characterization via nano-electrospray gas-phase electrophoretic mobility analysis (nES GEMMA)</b> Stephanie Steinberger, TU Wien, Institute of Chemical Technologies and Analytics
10:15 – 10:30	<b>A new method for the determination of cobalamins in mushrooms</b> Martin Walenta, Institute of Chemistry – Analytical Chemistry, University of Graz
10:30 – 10:45	<b>Liquid-phase microextraction of cannabidiol from cosmetics by means of recyclable ionic liquids</b> Susanne Huber, Institute of Analytical Chemistry and Radiochemistry, Leopold-Franzens University of Innsbruck

**Coffee Break 10:45 – 11:15**



**Agilent**



BRUCKNER  
ANALYSENTECHNIK GmbH



TULLN/DONAU



chemiereport.at  
AustrianLife Sciences  
Österreichs Magazin für  
Wirtschaft, Technik und Forschung

WISSENSCHAFT • FORSCHUNG  
NIEDERÖSTERREICH



**KNAUER**

## Session 6, 13<sup>th</sup> May, 11:15 – 12:15, Mid-IR

11:15 – 11:30	<b>Mesoporous Zirconia Coating for Sensing Applications Using Attenuated Total Reflection Fourier Transform Infrared (ATR FT-IR) Spectroscopy</b> Dominik Wacht, Institute of Chemical Technologies and Analytics, Technische Universität Wien
11:30 – 11:45	<b>Application of Laser-Based Mid-Infrared Spectroscopy for Inline Monitoring of Proteins from Preparative Liquid Chromatography</b> Christopher Karim Akhgar, Institute of Chemical Technologies and Analytics, Technische Universität Wien
11:45 – 12:00	<b>Fast investigation of chirality: Balanced detection and Quantum Cascade Lasers for improved Vibrational Circular Dichroism</b> Daniel-Ralph Hermann, Institute of Chemical Technologies and Analytics, TU Wien, Vienna
12:00 – 12:15	<b>Mid-IR dispersion spectroscopy for chemical analysis in the liquid-phase</b> Alicja Dabrowska, Institute of Chemical Technologies and Analytics, Technische Universität Wien

**Lunch Break 12:15 – 13:30**

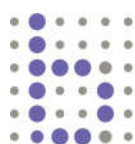
## Session 7, 13<sup>th</sup> May, 13:30 – 14:30, ICP-MS

13:30 – 13:45	<b>Determination of technology-critical elements (TCEs) in 7 plant reference materials by ICP-MS/MS</b> Simone Trimmel, Montanuniversität Leoben, Department Allgemeine, Analytische und Physikalische Chemie
13:45 – 14:00	<b>LA-ICP-TOFMS: High-resolution imaging and quantification of platinum in mouse organs and tumor tissue</b> David Loibnegger, Institute of Analytical Chemistry, Faculty of Chemistry, University of Vienna
14:00 – 14:15	<b>Application of Diffusive Gradients in Thin Films (DGT) in Combination with LA-ICP-MS for Tracking Localised Aluminium Corrosion</b> Gulnaz Mukhametzianova, Montanuniversität Leoben, Chair of General and Analytical Chemistry
14:15 – 14:30	<b>Statistical analysis of the distribution of the cell cycle phases of different cell cultures via LA-ICP-TOFMS</b> , Claude Molitor, Institute of Analytical Chemistry, Faculty of Chemistry, University of Vienna

**Award Ceremony 14:45 Farwell 15:15**



**Agilent**



BRUCKNER  
ANALYSENTECHNIK GmbH



TULLN/DONAU



chemiereport.at  
AustrianLife Sciences  
Österreichs Magazin für  
Wirtschaft, Technik und Forschung

WISSENSCHAFT • FORSCHUNG  
NIEDERÖSTERREICH



**KNAUER**



Poster Session, 12<sup>th</sup> May, 16:45 - 17:45

1	<p><b>Content and inhibitory potential of wheat amylase-trypsin inhibitors as putative triggers of wheat-related diseases</b>                  Lisa Call, University of Natural Resources and Life Sciences, Vienna, Institute of Plant Breeding and Institute of Food Technology</p>
2	<p><b>Identification of hypoallergenic soy and wheat cultivars using specific soy and wheat allergens</b>                  Andrea Krisai, University of Natural Resources and Life Sciences, Vienna, Austria</p>
3	<p><b>Preparation of Immunogens for the Molecular Measurement of Food Allergens with antibody-based Immunoassays</b>                  Michael Wiederstein, University of Natural Resources and Life Sciences, Vienna, Department of Agrobiotechnology</p>
4	<p><b>Pushing the limits of adsorption enhanced attenuated total reflection spectroscopy using metal-organic frameworks for trace analysis of phosphates in water</b>                  Felix Frank, Institute of Chemical Technologies and Analytics, Technische Universität Wien</p>
5	<p><b>An Automated Tool for Quality Assessment of Raman Spectra</b>                  Daniel Zimmermann, FH Wiener Neustadt Biotech Campus Tulln</p>
6	<p><b>Laser Based Mid-IR Spectroscopy for Monitoring Temperature-induced Protein Denaturation of BSA and Stabilization Effects of Sugars</b>                  Shilpa Vijayakumar, Institute of Chemical Technologies and Analytics, Technische Universität Wien</p>
7	<p><b>Theory, implementation and characterization of low-frequency Laser-Cavity-Locking schemes for Interferometric Cavity-Assisted Photothermal Spectroscopy (ICAPS)</b>                  Stefan Lindner, Institute of Chemical Technologies and Analytics, Technische Universität Wien</p>
8	<p><b>Mass balance analysis of PFAS in soil, snowmelt and ski waxes</b>                  Viktoria Mueller, Institute of Chemistry, University of Graz, Universitätsplatz</p>
9	<p><b>A new solvent system for the analysis of hydroxy groups of liginosulfonates by <sup>31</sup>P NMR</b>                  Gerhild K. Wurzer, University of Natural Resources and Life Sciences, Vienna (BOKU), Department of Chemistry, Institute of Chemistry of Renewable Resources</p>
10	<p><b>Volumetric Absorptive Microsampling for drug use confirmation with non-targeted LC-MS/MS</b>                  Vera Reinstadler, Institute of Legal Medicine and Core Facility Metabolomics, Medical University of Innsbruck</p>



Agilent



BRUCKNER  
ANALYSENTECHNIK GmbH



TULLN/DONAU



chemiereport.at  
AustrianLife Sciences  
Österreichs Magazin für  
Wirtschaft, Technik und Forschung

WISSENSCHAFT • FORSCHUNG  
NIEDERÖSTERREICH



KNAUER

Poster Session, 12<sup>th</sup> May, 16:45 – 17:45

11	<b>An Exposome-Scale Sample Clean-up Method based on Solid Phase Extraction</b> Yunyun GU, Department of Food Chemistry and Toxicology, University of Vienna
12	<b>Influence of sample preparation on protein identification in bottom-up-proteomics</b> Theresa Reischenböck, FH Wiener Neustadt – Biotech Campus Tulln
13	<b>Antarctic psychrotolerant bacteria enhance plant tolerance to cold stress by modulating the plant metabolome</b> Giorgio Licciardello, Center Agriculture Food Environment, University of Trento, Italy
14	<b>Development of a negative-thermal gradient GC for fast gas chromatography and its application for the study of volatile products formed in lithium-ion batteries</b> Bernhard Klampfl, Vienna University of Technology, Institute of Chemical Technologies and Analytics
15	<b>Novel cellulose-based stationary phases for chiral separations using HPLC</b> Anna Florentina Lehrhofer, University of Natural Resources and Life Sciences, Vienna (BOKU), Department of Chemistry, Institute of Chemistry of Renewable Resources
16	<b>Miniaturized LC in small molecule -omics – sensitivity vs. coverage</b> Veronika Fitz, Department of Analytical Chemistry, Faculty of Chemistry, University of Vienna
17	<b>Integrating veterinary drugs and pesticides in a targeted LC-MS/MS exposome approach</b> Md Zakir Hossain, Department of Food Chemistry and Toxicology, University of Vienna
18	<b>Quick determination of erucic acid in mustard oils and seeds</b> Bernhard Blank-Landeshammer, University of Applied Science, Wels, Austria;



Agilent



BRUCKNER  
ANALYSENTECHNIK GmbH



TULLN/DONAU



chemiereport.at  
AustrianLife Sciences Österreichs Magazin für  
Wirtschaft, Technik und Forschung

WISSENSCHAFT • FORSCHUNG  
NIEDERÖSTERREICH



KNAUER