### European Winter Conference on Plasma Spectrochemistry 2017

#### Date: Sunday, 19/Feb/2017

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Location</th>
<th>Chair(s)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:00am -</td>
<td><strong>SC Fundamentals: SHORT COURSE: Basic principles of ICP-MS</strong></td>
<td>ARLBERG-well.com Finish Arena (ZIELSTADION) - SEMINAR ROOM Gertrud Gabl</td>
<td>Ramon Barnes</td>
<td>This course will introduce inductively coupled plasma (ICP) mass spectrometry (MS) for elemental, isotopic, and speciation analysis. The presentations will cover basic ICP-MS instrumentation and measuring concepts, as well as ICP-MS features, capabilities and applications. ICP operation, sample introduction and calibration techniques, and mass...</td>
</tr>
<tr>
<td>12:00pm</td>
<td><strong>SC Isotopic Analysis: SHORT COURSE: Isotopic analysis</strong></td>
<td>ARLBERG-well.com SEMINAR ROOM (1st floor)</td>
<td>Frank Vanghaecke Jose Ignacio Garcia Alonso</td>
<td>In the first part of the short course, the sources of natural variation in the isotopic composition of the elements will be discussed. Specific attention will be devoted to elements with radiogenic nuclides (e.g., Sr, Pb) and to mass-dependent and mass-independent isotope fractionation. In the second part of the short course we will discuss the...</td>
</tr>
<tr>
<td>10:00am -</td>
<td><strong>SC LA-ICP-MS: SHORT COURSE: Laser ablation ICP-MS</strong></td>
<td>ARLBERG-well.com Finish Arena (ZIELSTADION) - SEMINAR ROOM Hannes Schneider</td>
<td>Bodo Hattendorf Jhanis J Gonzalez</td>
<td>This short course will cover fundamental and applied aspects of experiments using laser ablation as sampling tool for spatially resolved ICPMS analysis. It will discuss, on a basic level, the phenomena occurring during LA and ICPMS analyses most relevant for interpretation of analytical results.</td>
</tr>
<tr>
<td>4:00pm</td>
<td><strong>SC AGILENT: TECHNICAL MEETING Agilent</strong></td>
<td>ARLBERG-well.com NORTH HALL</td>
<td>Glenn David Woods Naoki Sugiyama</td>
<td>ICP-MS/MS UNDERSTANDING MECHANISMS OF ICP-MS/MS FOR RESOLVING POLYATOMIC, ISOBARIC, AND OTHER SPECTRAL INTERFERENCES</td>
</tr>
<tr>
<td>1:00pm -</td>
<td><strong>SC AGILENT: TECHNICAL MEETING Agilent</strong></td>
<td>ARLBERG-well.com Finish Arena (ZIELSTADION) - SEMINAR ROOM Rudi Matt</td>
<td>Zoltan Mester</td>
<td>An overview of the basics of Chemical Measurement Science will be given. Concepts related to measurement traceability, comparability and uncertainty will be discussed.</td>
</tr>
<tr>
<td>4:00pm -</td>
<td><strong>SC Metrology: SHORT COURSE: Metrology in ICP-MS</strong></td>
<td>ARLBERG-well.com Finish Arena (ZIELSTADION) - SEMINAR ROOM Rudi Matt</td>
<td>Petra Krystek Björn Meermann</td>
<td>SC Nano: SHORT COURSE: ICP-MS and field-flow fractionation for nanomaterial analysis</td>
</tr>
<tr>
<td>6:00pm</td>
<td><strong>SC SHIMADZU: TECHNICAL MEETING Shimadzu</strong></td>
<td>ARLBERG-well.com SEMINAR ROOM (1st floor)</td>
<td>Uwe Oppermann, Helmar Witsche Jürgen Schramm</td>
<td>Shimadzu: TOTAL SOLUTIONS FOR FOOD ANALYSIS</td>
</tr>
<tr>
<td>6:20pm</td>
<td><strong>OPENING LECTURE: Opening lecture: SAM HOUK</strong></td>
<td>ARLBERG-well.com NORTH HALL</td>
<td>Sam Houk</td>
<td>Iowa State University, United States of America</td>
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<tr>
<td>7:20pm</td>
<td><strong>MISNOMERS AND BAD TERMINOLOGY IN ICP SPECTROSCOPY</strong></td>
<td>ARLBERG-well.com NORTH HALL</td>
<td>Sam Houk</td>
<td>Iowa State University, United States of America</td>
</tr>
<tr>
<td>7:20pm</td>
<td><strong>AWARD CEREMONY: AWARD CEREMONY: Spectroscopy Magazine and Agilent Plasma Awards</strong></td>
<td>ARLBERG-well.com NORTH HALL</td>
<td>Sam Houk</td>
<td>Iowa State University, United States of America</td>
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<tr>
<td>7:50pm</td>
<td><strong>EVENING RECEPTION: OPENING VENDOR EXHIBITION // AWARDEE RECEPTION // WINE&amp;CHEESE Party</strong></td>
<td>ARLBERG-well.com SOUTH HALL</td>
<td>Sam Houk</td>
<td>Iowa State University, United States of America</td>
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<td>Time</td>
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<td>Location</td>
<td>Chair</td>
<td>Speaker Details</td>
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<tr>
<td>8:30am</td>
<td>FUN-PL 1: FUNDAMENTALS OF PLASMA SPECTROCHEMISTRY - PLENARY LECTURE 1</td>
<td>ARLBERG-well.com NORTH HALL</td>
<td>Gary M Hieftje</td>
<td>Jacob T. Shelley¹, Sunil P. Badal¹, Andrew J. Schwartz², Courtney L. Walton¹, Kelsey L. Williams³, Yi You³, Garett M. MacLean⁴, Gary M. Hieftje². 1: Department of Chemical and Chemical Biology, Rensselaer Polytechnic Institute, Troy, NY 12180 USA; 2: Department of Chemistry, Indiana University, Bloomington, IN 47405; 3: Department of Chemistry and Biochemistry, Kent State University, Kent, OH 44242, USA.</td>
</tr>
<tr>
<td>9:00am</td>
<td>FUN-IL 1: FUNDAMENTALS OF PLASMA SPECTROCHEMISTRY - INVITED LECTURES 1</td>
<td>ARLBERG-well.com NORTH HALL</td>
<td>Gary M Hieftje</td>
<td>ICP-MS: A better insight through computer modeling. Annemie Bogaerts, Maryam Aghaei. University of Antwerp, Belgium.</td>
</tr>
<tr>
<td>10:00am</td>
<td>CO-MO 1: COFFEE BREAK (sponsored by Thermo Scientific)</td>
<td>ARLBERG-well.com SOUTH HALL</td>
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<td>MO-VE 1: VENDOR EXHIBITION. Location: ARLBERG-well.com SOUTH HALL.</td>
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<tr>
<td>10:20am</td>
<td>FUN-OL 2: FUNDAMENTALS OF PLASMA SPECTROCHEMISTRY - GENERAL SESSION 2</td>
<td>ARLBERG-well.com NORTH HALL</td>
<td>Gary M Hieftje</td>
<td>Coupling of laser ablation with halo-flowing atmospheric pressure afterglow-mass spectrometry as a new molecular imaging technique. Valérie Anne Brückel¹, Uwe Karst¹, Michael Sperling¹,², Jacob T. Shelley³. 1: University of Muenster, Institute of Inorganic and Analytical Chemistry, Corrensstraße 30, 48149 Muenster, Germany; 2: European Virtual Institute for Speciation Analysis, Mendelsstraße 11, 48149 Muenster, Germany; 3: Rensselaer Polytechnic Institute, Department of Chemistry and Chemical Biology, 110 8th Street, Troy, NY 12180 USA.</td>
</tr>
<tr>
<td>11:00am</td>
<td>FUN-OL 2: FUNDAMENTALS OF PLASMA SPECTROCHEMISTRY - GENERAL SESSION 2</td>
<td>ARLBERG-well.com NORTH HALL</td>
<td>Gary M Hieftje</td>
<td>Fundamental plasma investigation using microdroplets with ICP-TOFMS. Lyndsey Hendriks, Alexander Gundlach-Graham, Detlef Günther. ETHZ, Switzerland.</td>
</tr>
<tr>
<td>11:30am</td>
<td>Enhanced sensitivity ICP-MS for routine analysis of geochemical samples by alkali fusion</td>
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<td></td>
<td>Enhanced sensitivity ICP-MS for routine analysis of geochemical samples by alkali fusion. Lou Daniel¹, Andrew Jason Ryan², Rui Santos². 1: DTX Design Pty Ltd, Perth, Western Australia; 2: Analytik Jena, Germany.</td>
</tr>
<tr>
<td>12:30pm</td>
<td>Enhanced sensitivity ICP-MS for routine analysis of geochemical samples by alkali fusion</td>
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<td>MO-VE 1: VENDOR EXHIBITION</td>
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<td>MO-VE 1: VENDOR EXHIBITION. Location: ARLBERG-well.com SOUTH HALL.</td>
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<td>2:00pm</td>
<td>Enhanced sensitivity ICP-MS for routine analysis of geochemical samples by alkali fusion</td>
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<td>Enhanced sensitivity ICP-MS for routine analysis of geochemical samples by alkali fusion. Lou Daniel¹, Andrew Jason Ryan², Rui Santos². 1: DTX Design Pty Ltd, Perth, Western Australia; 2: Analytik Jena, Germany.</td>
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¹: Department of Chemical and Chemical Biology, Rensselaer Polytechnic Institute, Troy, NY 12180 USA; ²: Department of Chemistry, Indiana University, Bloomington, IN 47405; ³: Department of Chemistry and Biochemistry, Kent State University, Kent, OH 44242, USA; ⁴: Department of Analytical Chemistry, Nutrition and Food Science. University of Alicante, Spain; ²: Analysis and Physics division. IFP Energies Nouvelles, France.
Femtosecond laser ablation ICPMS: Beam delivery by two-stage Fourier transform optical processing for high resolution depth profiling of metal layers  
Debora Käser, Joachim Koch, Detlef Günther  
ETH Zurich, Switzerland

Determination of ultra-trace amounts of prosthesis-related metals in whole blood using volumetric absorptive micro-sampling and tandem ICP – Mass Spectrometry  
Lieve Balcaen¹, Eduardo Bolea-Fernandez¹, Kim Phan¹, Martin Resano², Frank Vanhaecke¹  
1: Ghent University, Belgium; 2: University of Zaragoza, Spain

High-sensitive Elemental Analysis of Single Human Cell using Droplet Injection ICP-AES/MS  
Takahiro Iwai¹, Shunsuke Hosoda², Satoshi Kohno², Man Aida², Ken Kakegawa², Tomoko Miyake², Hidekazu Miyahara³, Yoshihisa Matsumoto³, Koichi Chiba¹, Akitoshi Okino¹  
1: Department of Applied Chemistry for Environment, Kwansei Gakuin University; 2: FIRST, Tokyo Institute of Technology; 3: Institute of Innovative Research, Tokyo Institute of Technology

Soft Ionization by a homogeneous plasma or when plasma and ionization place are separated?  
Sebastian Brandt, Felix David Klute, Alexander Schütz, Joachim Franzke  
ISAS-Leibniz Institut für Analytische Wissenschaften, Germany

LIQUID CRYSTAL DISPLAY SURFACE ANALYSIS FOR FAST DISPLAY FAILURE INVESTIGATION BY AMBIENT DESORPTION/IONIZATION MASS SPECTROMETRY  
Christopher Kuhlmann¹, Sunil P. Badal², Jacob T. Shelley², Carsten Engelhard¹  
1: Department Chemistry and Biology, University of Siegen, Adolf-Reichwein-Str. 2, 57076 Siegen, Germany; 2: Department of Chemistry and Chemical Biology, Rensselaer Polytechnic Institute, 110 8th Street, Troy, NY 12180 USA

How does an ICP respond to the introduction of a single micro-droplet? (SPECTROSCOPY MAGAZINE AWARD LECTURE)  
George Chan¹,²  
1: Lawrence Berkeley National Lab, United States of America; 2: Department of Chemistry, Indiana University, Bloomington, United States of America

Distance-of-Flight Mass Spectrometry for Atomic Analyses: Latest Results  
Steven James Ray¹, Gary Hieftje², Chris Enke³, David Koppenaal⁴  
1: State University of New York at Buffalo, United States of America; 2: Indiana University, Department of Chemistry, Bloomington, IN, USA 47405; 3: University of New Mexico, Albuquerque, NM, USA, 98223; 4: Pacific Northwest National Laboratory, Richland, WA, 91181

Spatio-temporal development of a dielectric barrier discharge for analytical applications  
Felix David Klute, Sebastian Burhenn, Antje Michels, Sebastian Brandt, Alexander Schütz, Joachim Franzke  
Leibniz-Institut für Analytische Wissenschaften – ISAS – e.V., Germany

Advancement in Single Particle ICP-MS – Significant Instrument Settings and their Implications on data Quality  
Chady Stephan, Hamid Badiei, Samad Bazargan, Aaron Hineman  
PerkinElmer, Canada

A robust signal processing approach for single particle-ICP-MS analysis with dwell times in both the millisecond and microsecond range  
Samad Bazargan, Hamid Badiei  
PerkinElmer, Canada

A Study of the Particle Frequency and Particle Size Methods to Measure Transport Efficiency for the Counting and Sizing of Nanoparticles by Single Particle ICP-MS  
Karen E. Murphy, Antonio R. Montoro Bustos, Jinyu Liu, Monique E. Johnson, Bryan Calderón Jiménez, George C. Caceres, Michael R. Winchester  
National Institute of Standards and Technology, United States of America

Focusing ions for ion trap based mass spectrometers - methods and applications  
Sebastian Brandt, Alexander Schütz, Felix David Klute, Joachim Franzke  
Leibniz-Institut für Analytische Wissenschaften - ISAS - e.V., Germany

Excitation and ionization mechanisms in a complete dielectric barrier discharge (DBDI) and a partial dielectric barrier discharge (LTP)
**22.2.2017**

**European Winter Conference on Plasma Spectrochemistry 2017**

### Determination of High Field Strength Elements (HFSE) in Soil & Mineral Samples by ICP Spectrometry after Microwave-Assisted High-Pressure Acid Digestion

**Michael Raessler**

MPI Biogeochemie, Germany

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<tr>
<th>Time</th>
<th>Session</th>
<th>Location</th>
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<td>3:30pm</td>
<td><strong>CO-MO 2: COFFEE BREAK</strong></td>
<td>ARLBERG-well.com SOUTH HALL</td>
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<td>4:10pm</td>
<td><strong>MO-VE 3: VENDOR EXHIBITION</strong></td>
<td>ARLBERG-well.com SOUTH HALL</td>
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<td>4:10pm - 4:20pm</td>
<td><strong>MET-PL: METROLOGY - PLENARY LECTURE</strong></td>
<td>ARLBERG-well.com NORTH HALL</td>
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<td>Chair: Zoltan Mester</td>
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<td>Chair: Anika Retzmann</td>
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<tr>
<td><strong>Metrological principles in plasma spectrochemistry</strong></td>
<td>Lu Yang</td>
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<td>National Research Council Canada, Canada</td>
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<td>4:40pm - 6:00pm</td>
<td><strong>MET-IL: METROLOGY - INVITED LECTURES</strong></td>
<td>ARLBERG-well.com NORTH HALL</td>
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<td>Chair: Zoltan Mester</td>
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<td>Chair: Anika Retzmann</td>
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<tr>
<td><strong>Speciation strategies for chromium in high carbon matrices using hyphenated QQQ-ICP-MS: Towards the production of new ‘speciated’ reference materials</strong></td>
<td>Heidi Goenaga-Infante, Susana Nunez, Panayot Petrov, John Entwisle</td>
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<td>LGC Limited, United Kingdom</td>
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<td>6:00pm</td>
<td><strong>MET-OL: METROLOGY - GENERAL SESSION</strong></td>
<td>ARLBERG-well.com NORTH HALL</td>
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<td>Chair: Zoltan Mester</td>
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<td>Chair: Anika Retzmann</td>
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<td><strong>Comparison of performances between ICP-OES and ICP-MS in trace elements analysis on water and soils: the Italian experience of UNICHIM Proficiency Tests</strong></td>
<td>Sandro Spezia, Maurizio Bettinelli, Giovanni Perego</td>
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<td>UNICHIM, Piazzale Morandi 2 – 20129 Milano, Italy</td>
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<td><strong>Reducing the risk of inaccurate results when quantifying trace elements in seawaters using ICP-QQQ-MS</strong></td>
<td>Tamas M Ugrai, Hakan Gürleyük, Geoff Leadbeater, Michelle Briscoe</td>
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<td>Brooks Applied Labs, United States of America</td>
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<td><strong>Development of an apple juice certified reference material for cadmium, lead, total arsenic and arsenic species</strong></td>
<td>Fransiska Dewi, Lay Peng Sim, Juan Wang, Benny Meng Kiat Tong, Richard Y.C Shin, Tong Kooi Lee</td>
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<td>Health Sciences Authority, Singapore, Singapore</td>
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<td><strong>MULTI-ELEMENTAL DETERMINATION OF TRACE METALS IN MILK BY ON-LINE ISOTOPE DILUTION AND INDUCTIVELY COUPLED PLASMA MASS SPECTROMETRY USING A HIGH EFFICIENCY SAMPLE INTRODUCTION SYSTEM</strong></td>
<td>Rachida Chekri, Nathalie Marchond, Thierry Guérin, Petru Jitaru</td>
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<td>Université Paris-Est, Anses, Laboratory for Food Safety, F-94700 Maisons-Alfort, France</td>
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<td><strong>Application of isotope dilution, standard additions calibration strategies in ICP-MS analysis and external calibration strategy in high resolution ICP-OES analysis of Sr, Pb, Na, Cu in drinking water</strong></td>
<td>Vladimir Ivanovich Dobrovolskiy, Aleksei Anatolievich Stakheev, Dmitry Dmitrievich Frolov</td>
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<td>Russian Metrological Institute of Technical Physics and Radio Engineering, Russian Federation</td>
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</tbody>
</table>
LA-ICP-MS as a tool for mapping of Ti, Al and V released from dental implants to soft tissues
Adam Sajnóg¹, Anetta Hanć¹, Krzysztof Makuch², Ryszard Koczorowski², Danuta Baralkiewicz¹
1: Adam Mickiewicz University in Poznan, Poland; 2: Karol Marcinkowski University of Medical Science in Poznan, Poland

Determination of transferrin, albumin and electrolytes in human serum CRM by using isotope dilution HPLC/Laser ablation-ICP-MS
Liuxing Feng
National Metrology Institute, China, China, People's Republic of

<table>
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<tr>
<th>7:30pm</th>
<th>SC ASI: SHORT COURSE APPLIED SPECTRA INSTR.: LIBS-Laser induced breakdown spectroscopy</th>
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<tr>
<td>9:30pm</td>
<td>Location: ARLEBERG-well.com NORTH HALL</td>
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<td>Chair: Jhanis J Gonzalez</td>
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<td>This short course is intended to provide an overview of fundamentals, analysis modes, applications and future direction of Laser Induced Breakdown Spectroscopy (LIBS)</td>
</tr>
</tbody>
</table>
Date: Tuesday, 21/Feb/2017

8:30am
- 9:00am
**SPEC-PL: SPECIATION - PLENARY LECTURE (AGILENT PLASMA AWARD)**
Chair: Jörg Feldmann
Chair: Magdalena Dorothea Blanz

Conferring a molecular dimension to ICP: chemical speciation analysis and -omics

**Joanna Szpunar**
CNRS, Institut des Sciences Analytiques et de Physico-chimie pour l'Environnement et les Matériaux, IPREM UMR 5254, Hélioparc, 2, av. Pr. Angot, 64053 Pau

9:00am
- 9:20am
**SPEC-IL 1: SPECIATION - INVITED LECTURE 1**
Location: ARLBERG-well.com NORTH HALL
Chair: Jörg Feldmann
Chair: Magdalena Dorothea Blanz

The Importance of Plasma Spectrochemistry for Arsenic Speciation Analysis

**Walter Goessler**
University of Graz, Austria

9:20am
- 10:00am
**SPEC-OL 1: SPECIATION - GENERAL SESSION 1**
Location: ARLBERG-well.com NORTH HALL
Chair: Jörg Feldmann
Chair: Magdalena Dorothea Blanz

Determination of the total content of drug-related chlorine and chlorine speciation in human blood plasma using high performance liquid chromatography – tandem ICP-mass spectrometry (HPLC-ICP-MS/MS)

**Balazs Klencsar**¹, Eduardo Bolea-Fernandez¹, Maria R. Florez¹, Lieve Balcaen¹, Filip Cuyckens², Frederic Lynen², Frank Vanhaecke¹
1: Ghent University, Department of Analytical Chemistry, Krijgslaan 281-S12, 9000 Ghent, Belgium; 2: Ghent University, Department of Organic and Macromolecular Chemistry, Krijgslaan 281-54bis, 9000 Ghent, Belgium; 3: Janssen R&D, Pharmacokinetics, Dynamics & Metabolism, Turnhoutseweg 30, 2340 Beerse, Belgium

Small selenium species in human liver cells: Investigations of their cytotoxicity, bioavailability and metabolism by means of isotope dilution (HPLC-) ICP-QQQ-MS methods

**Talke Anu Marschall**¹, Julia Bornhorst¹, Björn Meermann², Doris Kühnelt³, Tanja Schwerdtle¹
1: University of Potsdam, Germany; 2: Federal Institute of Hydrology Koblenz, Germany; 3: University of Graz, Austria

Quantification of Selenoprotein P in serum using isotopically-enriched seleno-peptides and species-specific isotope dilution inductively coupled plasma mass spectrometry

**Christian Deitrich**¹, Susana Cuello-Nunez¹, Diana Kmiotek¹, Frank Torma¹, Maria-Estela Del Castillo Busto², Paola Fisicaro³, Heidi Goenaga-Infante¹
1: LGC, Queens Road, Teddington, TW11 0LY, United Kingdom; 2: Laboratoire National de Métrologie et d’Essais (LNE), 1, Rue Gaston Boissier - 75724 Paris cedex 15, France

Optimized arsenic speciation using anion exchange HPLC-ICP-MS for lichen air pollution biomonitoring

**Eve Mariel Kroukamp**¹, Patricia Belinda Crosby Forbes¹, Taddese Wendimu²
1: University of Pretoria; 2: Ontario Ministry of the Environment and Climate Change, University of Johannesburg

10:00am
- 10:40am
**CO-TU 1: COFFEE BREAK**
Location: ARLBERG-well.com SOUTH HALL

**TU-VE 1: VENDOR EXHIBITION**
Location: ARLBERG-well.com SOUTH HALL

10:40am
- 12:20pm
**VS-VENDOR SESSION: Vendor oral presentations**
Location: ARLBERG-well.com NORTH HALL
Chair: Carsien Engelhard
Chair: Anna Reese

Improved Interface for High Sensitivity ICP-MS - Having Ion Kinetic Energy and Matrix Suppression Control

**Iouri Kalinitchenko**, Peter Zdaril
Analytik Jena AG, Germany

Improvement of the limit of detection for SP-ICP-MS using a desolvator and pseudo resolution to remove interferences with the HR-ICP-MS AttoM.

**Ariane Karine Donard**, Phil Shaw
Nu Instruments, United Kingdom

Profiling Extractable and Leachable elements in ophthalmic drug containers, in accordance with USP<232> by ICP-MS and ICP-OES

**Paige Elena Solomon**, Jenny Nelson
Agilent Technologies, United States of America

Single Cell ICP-MS – Monitoring the uptake of ionic and nanoparticulate metals in individual cells

**Chady Stephan**, Hamid Badiei, Samad Bazargan
PerkinElmer, Canada
The Combination of Superior Interference Suppression and Ease of Use – Recent Developments for Trace Elemental Analysis

Christoph Wehe, Shona McSheehy Ducos, Lothar Rottmann, Julian D. Wills, Marcus Manecki
Thermo Fisher Scientific, Germany

Development of Reference Materials and Methodology for Inorganic Speciation Analysis

Patricia L. Atkins
SPEX CertiPrep, United States of America

Direct Determination of impurities in fuels and naptha – A new approach using pneumatic nebulization and the ARCOS MultiView ICP-OES

Dirk Wüstkamp
SPECTRO Analytical Instruments GmbH, Germany

Method development for the analysis of biological samples by ICP-MS – sample preparation methods and instrument features

Rene Chemnitzer, Sebastian Wuescher, Peio Riss, Iouri Kalinitchenko, Andrew Ryan
Analytik Jena AG, Germany

Determinant of contaminants in beer using ICP-MS spectrometry

Uwe Oppermann1, Jürgen Schram2, Ludivine Fromentoux3, Jan Knoop1
1: Shimadzu Europa GmbH, Germany; 2: University of applied Sciences, 47798 Krefeld, Germany; 3: Shimadzu France, Marne La Vallée, France

How do microwaves support an Analytical Chemist in his daily work?

Linda Kuenstl
Anton Paar GmbH, Austria

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12:20pm - 2:00pm
LUN-AGILENT: LUNCH SEMINAR: Panel discussion - Enabling Technologies for Emerging Talents
Location: ARLBERG-well.com ARLBERGSAAL

12:20pm - 3:40pm
TU-VE 2: VENDOR EXHIBITION
Location: ARLBERG-well.com SOUTH HALL

12:20pm - 3:40pm
POSTER 1 - APP 1: POSTER SESSION 1: Applications I
Location: ARLBERG-well.com NORTH HALL

12:20pm - 3:40pm
POSTER 1 - EL: POSTER SESSION 1: Elemental analysis
Location: ARLBERG-well.com NORTH HALL

12:20pm - 3:40pm
POSTER 1 - FUN: POSTER SESSION 1: Plasma source fundamentals
Location: ARLBERG-well.com NORTH HALL

12:20pm - 3:40pm
POSTER 1 - MET: POSTER SESSION 1: Metrology
Location: ARLBERG-well.com NORTH HALL

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12:20pm
LUN-TU: LUNCH BREAK

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Determinant of trace elements in healthy and malfunctioning hearts of mice

Fabian Zimmermann1, Tibor Kempf2, Julia Bode1, Carla Vogt1
1: Leibniz Universität Hannover, Germany; 2: Medizinische Hochschule Hannover, Germany

Feasibility Study for the Determination of Vitamin B12 in Nutritional Products by Inductively Coupled Plasma Mass Spectrometry

Lawrence, Hazel Pacquette, Karen Schimpf
Abbott Nutrition, United States of America

Has ICP-MS helped to improve the quality of data obtained from geological samples?

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ICP Detection Limits Versus Speed of Analysis

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Minerals determination in food matrices using MP-AES

Marine Nicolas, Céline Fragnière Rime, Sylvie Merinat, Brigitte Rey, Eric Poitevin, Nicola Galaffu
Nestle Research Center, Switzerland

Element concentrations in needles as an indicator for traffic influence on the environment

Jitka Hézagrová1, Stefan Tanda2, Oliver Steiner2
1: University of South Bohemia, Czech Republic; 2: Analytik Jena, Germany

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Revisiting the Importance of Oxidation State Equilibrium of Selenium in Isotope Dilution Inductively Coupled Plasma Mass Spectrometry

Yong-Hyeon Yin, Sook Heun Kim, Boram Kim
KRISS, Korea, Republic of (South Korea)

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Alex Ullianov1, Othmar Müntener2, Urs Schaltegger2, François Bussy1, Niklaus Mühlbacher1
Sanja Asendorf, Nora Bartsch, Matthew Cassap
Thermo Fisher Scientific, Bremen, Germany

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Els Van Meenen
Els Van Meenen, Belgium

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Emma Pérez Hernández, Raquel Serrano Corado, Guillermo Grindlay Lledó, Luis Gras García, Juan Mora Pastor
University of Alicante, Spain

Multi-element analysis of petroleum crude oils using an Agilent 7900 ICP-MS
Jenny Nelson1,2
1: UC Davis, United States of America; 2: Agilent Technologies, Inc., 5301 Stevens Creek Blvd, Santa Clara, CA 95051

Titanium measurement of clinical samples using CRC-ICP-MS and Sector field-ICP-MS
Tomoko Vincent, Shona McSheehy Ducas
Thermo Scientific, Germany

Walter Goessler2, Roman Ličbinský1, Petr Andéř1
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DETERMINATION OF ALUMINIUM IN SOY-BASED FOOD: TOTAL CONTENT AND SOLUBLE FRACTION
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1: University of Campinas, Institute of Chemistry, Campinas, Brazil; 2: Instituto de Tecnologia de Alimentos, Centro de Ciência e Qualidade de Alimentos, Campinas, Brazil

Application of ICP-OQQ-MS for multielemental trace determination of As, Cd, Cr, Hg, Mn, Ni, Sb, Se, Sn and Pb in human hair
Anouar Nouiou1, Abderrazek Hedi1, Marie-Laure Milliand2, Frédérique Bessuelle2, Linda Ayouni-Derouiche2
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DETERMINATION OF SILVER IN WOUND DRESSING MATERIALS BY ICP-MS
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Multi-elemental characterization of anode materials used for Plasma-Optical Plasma-Atomic Emission Spectrometry for the Analysis of Cu and K in Infant Formula
Sung Woo Heo, Myungsun Han, Youngran Lim, Yong-Hyeon Yim
KRIS, Korea, Republic of (South Korea)

IUPAC Commission on Isotopic Abundances and Atomic Weights - CIAW
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1: Helmholtz-Centre Geesthacht, Germany; 2: University of Natural Resources and Life Sciences, Austria; 3: University of Calgary, Canada; 4: National University of Singapore; 5: National Research Council Canada, Canada

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Exact Matrix-Matching Inductively Coupled Plasma-Optical Emission Spectroscopy for the Analysis of Cu and K in Infant Formula
Sung Woo Heo, Myungsun Han, Youngran Lim, Yong-Hyeon Yim
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<td>University of Münster, MEET - Battery Research Center, Germany</td>
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<td>Ghent University, Faculty of Bioscience Engineering, Department of Applied Analytical and Physical Chemistry, Coupure links 653, B-9000 Gent, Belgium; Flemish Institute for Technological Research (VITO), Boeretang 200, 2400 Mol, Belgium</td>
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<td>Institute of Analytical Chemistry, University of Vienna, Währinger Strasse 38, 1090 Vienna (Austria); Institute of Cancer Research, Medical University of Vienna, Borschkegasse 8A, 1090 Vienna (Austria).</td>
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<td>MEET Battery Research Institute Münster, Germany; Helmholtz-Zentrum Münster, Germany</td>
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<td>MEET Battery Research Center, University of Münster, Germany; Helmholtz-Zentrum Münster, Germany</td>
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<td>MEET Battery Research Center, University of Münster, Germany; Helmholtz-Zentrum Münster, Germany</td>
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<td>MEET Battery Research Center, University of Münster, Germany; Helmholtz-Zentrum Münster, Germany</td>
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Selenoprotein analysis of cellular glutathione peroxidase in mouse livers after intravenous injection of 82Selenium-enriched selenomethionine

Hiroki Otsuka, Sho Nishida, Naoki Furuta
Chuo University, Japan

TOTAL AND FRACTIONATED IRON, FERRITIN CONCENTRATION AND Fe:FERRITIN RATIOS IN DIFFERENT MALIGNANCY BREAST CANCER CELL LINES: ON THE SEARCH FOR CANCER BIOMARKERS

Elisa Blanco-González1, Javier Alonso-García1, Daniel Turiel-Fernández1, Elena Añón-Álvarez2, María Montes-Bayón1
1: Department of Physical and Analytical Chemistry. Faculty of Chemistry. University of Oviedo. Spain; 2: Servicio de Bioquímica. Hospital Central Universitario de Asturias (HUCA). Oviedo, Spain

Determination of Lead (Pb) distribution in individual Chlamydomonas reinhardtii cells by means of Single-Cell - ICP-MS

Emmanouil Mavarakis1, Nikos Lydias-Symantiris2, Chady Stephan3, Riccardo Magarin1, Spiros Pergantis1
1: University of Crete, Greece; 2: Department of Environmental and Natural Resources Engineering, University of Applied Sciences Crete; 3: Perkin Elmer

NEW STRATEGIES FOR SENSITIVE IMMUNODETECTION OF MMP-11 IN BREAST CANCER PATIENTS

Patricia Absolo Linares1, Maria Luisa Fernandez-Sanchez2, Marcos Garcia Ocaña2, Raquel Gonzalez de Vega1, Noemi Eiro3, Francisco Vizoso3, Alfredo Sanz-Medel1
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Single cell analysis by inductively coupled plasma mass spectrometry

Bonann4, Paul Watson3
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Coupling dispersive liquid-liquid microextraction with inductively coupled plasma based techniques

Emma Pérez Hernández, David Martinez Rubio, Daniel Torregrosa, Carretero, Guillermo Grindlay LLedó, Luis Gras Garcia, Juan Mora Pastor
University of Alicante, Spain

A high temperature total sample consumption system for blood analysis via ICP-MS

María Esperanza García-Ruíz1, Agueda Cañabate2, Martín Resano3, José Luis Todoí3
1: UNIVERSIDAD DE ZARAGOZA. Spain; 2: Universidad de Alicante, Spain

Advantages of Flexible Auto-dilution Sample Introduction Solutions for ICP OES

Nora Bartsch, Sanja Asendorf, Matthew Cassap
Thermo Fisher Scientific, Bremen, Germany

Analysis of fuel samples by on-line chemical vapor generation using a Flow Blurring® multiple nebulizer in ICP-OES

Miriam García Martínez, Miguel Ángel Aguirre, Antonio Canals
University of Alicante, Spain

Direct Analysis of High Purity Acids by Online Dilution and the Method of Standard Additions

Brad McKelvey, Geoff Badham
Seastar Chemicals, Canada

Electrospray-ICP-AES for Small Amount Sample Analysis

Ken Kakegawa, Abe Tetsuya, Shunsuke Hosoza, Naoto Yarie, Mari Aida, Hidekazu Miyahara, Akitoshi Okino
Tokyo Institute of Technology, Japan

Performance Characteristics of the OptiSolids XL High Solids Nebulizer for Analysis of MS and the study of species interconversion

Fanny Hernandez1, Florence Cornet1, Nassima Merrat1, Fabienne Séb2, Laurent Noël3, Petru Jitaru1, Thierry Guérin1

Determination of inorganic arsenic in rice, puddy soil, and pore water by ion chromatography coupled with inductively coupled plasma mass spectrometry

San-Ho Nam, Min-Young Park, Sung-Hoon Son, Sul-Woo Kwon
Mokpo National University, Korea, Republic of (South Korea)

Development of an HILIC-ESI-MS method for lanthanides speciation in nuclear fuel treatment processes

Blanchard Evelyn1,2, Bresson Carole3, Nonell Anthony1, Benoit Martelat1, Charter Frederic3
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FLUORINE SPECIATION USING ICP-IMS/MS: AN APPLICATION FOR FLUORIDE AND FLUOROCATE IN TEA

Nor Laili Azua Jamari1, Andrea Raab, Eva Krupp, Joerg Feldmann
Trace Element Speciation Laboratory (TESLA), Department of Chemistry. University of Aberdeen, Aberdeen, AB24 3UE, Scotland, United Kingdom

Ultra-Trace Speciation Analysis of Arsenic in Milk by Anion Exchange-HPLC coupled to ICP-MS

Axelle Leufroy, Julie Zinck, Thierry Guérin, Petru Jitaru
Université Paris-Est, Anses, Laboratory for Food Safety. F-94710 Maisons-Alfort, France

Technological Advancements for Integrated Elemental speciation by GC, LC and GC coupled to ICP-MS

Julian David Wills, Daniel Kutscher, Shona McSheehy Duco, Antonella Guzzonato
Thermo Scientific, Germany

Chromatographic speciation analysis by ICP-IMS under Empower software

Simone Korstan1, Helmut Ernstberger2, Thomas Kolb3
1: PerkinElmer, Germany; 2: PerkinElmer, UK; 3: Metrohm, Germany

Current Trends, Analytical Workflows and a Case Study in Extractables and Leachables Analysis, combining LC/MS, GC/MS and ICP-MS data analysis

Paige Elana Solomon, Jenny Nelson
Agilent Technologies, United States of America

Direct, Rapid Analysis of Undiluted Seawater using ICP-MS with an Aerosol Dilution System

Glenn David Woods1, Shaun Fletcher1
1: Agilent Technologies LDA UK Ltd., 5500 Lakesides, Cheadle Royal Business Park, Stockport. SK8 3GR, United Kingdom; 2: Environment Agency Starcross Laboratory. Staplake Mount Starcross Exeter EX6. 8FD, United Kingdom

Practical Benefits of Abundance Sensitivity when Using ICP-QQQ

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plasma mass spectrometry to study the quantitative uptake of As

Ana Lopez-Serrano Oliver\textsuperscript{1}, Sören Meyer\textsuperscript{2}, Tanja Schwerdtle\textsuperscript{3}, Norbert Jakubowski\textsuperscript{1}


Organic Materials by ICP-ES

Gerhard Meyer\textsuperscript{1,} Sergei Leikin\textsuperscript{2}

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Method Development for Trace Elemental Analysis of Manganese in Lithium Ion Battery Electrolytes by Means of Inductively Coupled Plasma-Sector Field-Mass Spectrometry (ICP SF MS)

Lenard Hanf, Kristina Wentker, Martin Winter, Sascha Nowak

University of Münster, Germany

Quantitative Analysis of Nanoparticles and Membrane Proteins in Single Cells by Laser Ablation Inductively Coupled Plasma-Mass Spectrometry

Lingna Zheng, Meng Wang, Wei-Yue Feng

IKey Laboratory for Biomedical Effects of Nanomaterials and Nanosafety, Institute of High Energy Physics, Chinese Academy of Sciences

Lipophilic arsenic containing compounds in Glocibephalas melas (long-finned pilot whale)

Johannes Florian Kopp, Zuzana Gajdošová, Andrea Raab, Eva Krupp, Jörg Feldmann

University of Aberdeen, United Kingdom

Method development for quantification of selenocysteine in yeast samples by HPLC-ICP MS

Katarzyna Biela, Ryszard Lobinński, Joanna Szpunar

CNRS, Institut des Sciences Analytiques et de Physico-chimie pour l'Environnement et les Matériaux, IPREM UMR 5254, Hélioparc, 2, av. Pr. Angot, 64053 Pau, France

Stability of selenium compounds in enriched pea sprouts

Ana Kroňíková\textsuperscript{1,2}, Bernhard Michalka\textsuperscript{3}, Vekoslava Stibíjová\textsuperscript{1,2}

1: Department of Environmental Sciences, Jožef Stefan Institute, Ljubljana, Slovenia; 2: Jožef Stefan International Postgraduate School, Ljubljana, Slovenia; 3: Research Unit Analytical BioGeoChemistry, Helmholtz Zentrum München, Neuherberg, Germany

Speciation of As, Cr and Sb in bottled water samples using hyphenated technique HPLC/ICP-DRC-MS

Witok Lorenc, Monika Marcinkowska, Adam Sajnóg, Danuta Barańkiewicz

Adam Mickiewicz University in Poznan, Poland

The multi-methodical application of using ICP-MS in combination with off-line thermal desorption GC-MS and direct-inlet MS for the identification of organometallic substances

Franky Puype

Institute for Testing and Certification, Czech Republic

Testing for maximum levels of inorganic arsenic in rice via hydride generation ICP-MS

David J. Bellis\textsuperscript{1}, Danielle Sawdon\textsuperscript{1}, Helmut Ernstberger\textsuperscript{2}, David Price\textsuperscript{2}


Sulfuric Acid, Phosphoric and Semiconductor-grade Matrices using a unique calibration

Peio Riss, Rene Chemnitzer, Andrew Ryan

Analytik Jena AG, France

Rare Earth Elemental Trace Analysis in Granite and Sandstone by High Resolution ARRAY ICP-OES and ICP-MS with iCRC technology

Rene Chemnitzer, Heike Gleiener, Rui Santos, Sebastian Wünscher, Jan Scholz, Andrew Jason Ryan

Analytik Jena, Germany

Simultaneous Multielement Determination in Urine and Serum Samples by Quadrupole Cell ICP-MS using FAST-Technique

Dr. Jörg Michel

PerkinElmer LAS (Germany) GmbH, Germany

Speciation of Arsenic in Drugs and Excipients for compliance with USP <232> and ICH Q3D

Jonathan Sims, Helmut Ernstberger

PerkinElmer, United Kingdom

Using a Desolvating Nebulizer System with Inductively Coupled Plasma Mass Spectrometry: Key Optimization Parameters

Bill Spence, Fred Smith, Peter Winship

Teledyne CETAC Technologies, United Kingdom
On-line fractionation of aqueous samples using acoustic standing wave particle manipulation with ICP-OES
Felix Horak, Cosima Koch, Bernhard Lendl, Andreas Limbeck
Vienna University of Technology, Austria

Development of an HPLC-ICP-MS method for the speciation analysis of different contrast agents in environmental samples
Marijan Ercegovac1,2, Daniel Pröfrock1
1: Helmholtz-Centre for Materials and Coastal Research, Institute of Coastal Research, Department for Marine Bioanalytical Chemistry, Max-Planck-Strasse 1, D-21502 Geesthacht, Germany; 2: University of Hamburg, Department of Chemistry, Institute for Inorganic and Applied Chemistry, Martin-Luther-King-Platz 6, 20146 Hamburg, Germany

Speciation analysis of iodine in drinking water and raw water using ICP-MS and SEC-ICPMS
Maki Asami, Sho Nishida, Naoki Furuta
Chuo University, Japan

High Sensitivity Tin Speciation Using a New GC Interface with Sector Field High Resolution ICP-MS
Torsten Lindemann, Antonella Guzzonato, Shona McSheehy Ducos
Thermo Fisher Scientific (Bremen) GmbH, Germany

Collaborative study on mercury and methylmercury quantification in fish samples from the German Environmental Specimen Bank
Paola Fisicaro1, Emilia Vasileva2, Ina Fettig3, Jan Koschorreck3, Christian Piechotta4, Caroline Oster1, Enrica Alasonati1, Maria Estela Del Castillo Busto1, Sabine Azemard2
1: Biomedical and Inorganic Chemistry Department, LNE, France; 2: Environment laboratory, IAEA, Monaco; 3: Umwelt Bundesamt, Germany; 4: Bundesanstalt fuer Materialforschung und – pruefung (BAM), Germany

Direct determination of Al, B, Co, Cr, Mo, Ti, V and Zr in HF acid-digested nickel alloy using the Agilent 4210 Microwave Plasma-Atomic Emission Spectrometer
Elizabeth Kulikov, Alejandro Amorín
Agilent Technologies Melbourne, Australia

Easy & fast determination of trace elements in clinical samples using quadrupole ICP-MS
Jan Knoop1, Nils Garnebode, Konstantin Kartaschew2, Uwe Oppermann1, Ludvine Fromontoux3
1: Shimadzu Europa GmbH, Germany; 2: Shimadzu Deutschland GmbH, Germany; 3: Shimadzu France S.A.S., France

Determination of heavy metals in Italian wine using ICP-MS
Uwe Oppermann1, Jürgen Schram3, Ludvine Fromontoux3, Jan Knoop1, Nils Garnebode4
1: Shimadzu Europa GmbH, Germany; 2: University of applied Sciences, Krefeld, Germany; 3: Shimadzu France, Marne La Vallee, France; 4: Shimadzu Deutschland GmbH, Germany
3:40pm - 4:40pm

**SPEC-OL 2: SPECIATION - GENERAL SESSION 2**
Location: ARLBERG-well.com NORTH HALL
Chair: Maria Montes Bayón
Chair: Anna Maria Rathgeb

- **Hg detoxification in organs of Pilot Whales**
  
  **Eva M. Krupp**¹, Zuzana Gajdosechova¹, Mohammed Lawan¹, Urgast Dagmar¹, Brownlow Andrew²
  
  1: University of Aberdeen, United Kingdom; 2: Scottish Marine Animal Stranding Scheme, Inverness

- **Iodine in seaweed - occurrence, speciation, bioavailability and risk assessment**
  
  **Jens J. Sloth**, Rie R. Rasmussen, Susan L. Holdt, Max Hansen
  
  Technical University of Denmark, Denmark

- **Not only seafood can contain a lot of arsenic**
  
  **Simone Braeuer**¹, Jan Borovička², Walter Goessler¹
  
  1: Institute of Chemistry - Analytical Chemistry, University of Graz, Austria; 2: Nuclear Physics Institute, v.v.i., The Czech Academy of Sciences, Řež near Prague, Czech Republic

4:40pm - 5:20pm

**TU-VE 3: VENDOR EXHIBITION**
Location: ARLBERG-well.com SOUTH HALL

5:20pm - 6:30pm

**SPEC-OL 3: SPECIATION - GENERAL SESSION 3**
Location: ARLBERG-well.com NORTH HALL
Chair: Maria Montes Bayón
Chair: Anna Maria Rathgeb

- **The Modern Toolbox for Speciation Analysis: Getting Ready for Routine Application**
  
  **Daniel Kutscher**, Shona McSheehy Ducos
  
  Thermo Fisher Scientific, Germany

- **Speciation analysis of arsenic in seafood and seaweed based on stepwise extraction of water-soluble and non-polar species**
  
  **Mesay Mulugeta Wolle**, Sean D. Conklin
  
  US Food and Drug Administration, United States of America

- **Determination of Arsicalcals in Atmospheric Aerosols by HPLC-ICPQQQSMS**
  
  **Stefan Tanda**¹, Oliver Steiner², Jitka Hegrova², Roman Ličbinsky², Walter Goessler¹
  
  1: University of Graz, Institute of Chemistry, Department of Analytical Chemistry, Austria; 2: Transport Research Centre, Czech Republic

- **Chemical analysis of Permafrost samples using LIMS**
  
  **Andreas Riedo**¹², Euan Monaghan¹, Marek Tulej², Peter Wurz², Pascale Ehrenfreund¹
  
  1: Leiden Observatory, Leiden University, The Netherlands; 2: Physics Institute, Space Research and Planetary Sciences, University of Bern, Switzerland

- **Arsenic Speciation in Wine by HPLC-ICP-MS - FDA EAM 4.10 Extension method**
  
  **Jenny Nelson**¹², Courtney Tanabe¹, Helene Hopfer¹², Susan Ebeler¹², Sean Conklin³, Kevin Kubachka⁴, Robert Wilson⁴
  
  1: Dept. Viticulture & Enology, University of California, Davis, CA, 95616, USA.; 2: Food Safety & Measurement Facility, University of California, Davis, CA, 95616; 3: US FDA, Center for Food Safety and Applied Nutrition, College Park, MD 20866, USA; 4: US FDA Forensic Chemistry Center, Cincinnati, OH 45237; USA

- **Gas chromatography coupled to triple quadrupole ICP-MS quantification of organophosphate pesticides in honey bee products after miniaturized QuEChERS extraction**
  
  **David Munoz**¹, Julio Landero², Joan Stevens³, Jenny Nelson³
  
  1: Autonomous University of Yucatan, Merida, Yucatan, Mexico; 2: University of Cincinnati, Cincinnati OH, USA; 3: Agilent Technologies, Inc., Santa Clara, CA, USA

- **Material analysis of solid fuels by ETV-ICP-QES – Speciation of Sulfur and Oxygen**
  
  **Daniela Bauer¹, Thomas Vogt¹, Dirk Wüstkamp²**
  
  1: TU Bergakademie Freiberg, Institute for Analytical Chemistry; 2: SPECTRO Analytical Instruments GmbH, Germany
<table>
<thead>
<tr>
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<th>Location</th>
<th>Chair</th>
<th>University/Institute</th>
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<tbody>
<tr>
<td>8:30am</td>
<td>CO-WED 1: WAKE-UP COFFEE (sponsored by TOFWERK)</td>
<td>ARLBERG-well.com SOUTH HALL</td>
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<tr>
<td>9:00am</td>
<td>ISO-PL: ISOTOPE RATIO ANALYSIS - PLENARY LECTURE</td>
<td>ARLBERG-well.com NORTH HALL</td>
<td>Heidi Goenaga-Infante</td>
<td>Ghent University, Belgium</td>
</tr>
<tr>
<td>9:30am</td>
<td>New developments in isotopic tracing of trace metals in earth, environmental and planetary sciences</td>
<td></td>
<td>Mark Rehkämper</td>
<td>Dept. of Earth Science &amp; Engineering, Imperial College London, UK</td>
</tr>
<tr>
<td>9:50am</td>
<td>Development of δ37Cl isotope analysis by Ion Chromatography/MC-ICPMS and its application for studying biodegradation of perchlorate</td>
<td></td>
<td>Yevgeni Zakon, Ludwik Halicz, Zeev Ronen, Faina Gelman</td>
<td>1: Department of Chemistry, The Hebrew University, Jerusalem 91904, Israel; 2: Geological Survey of Israel, Jerusalem 95501, Israel; 3: Faculty of Chemistry, Biological and Chemical Research Centre, University of Warsaw,02-089 Warsaw, Poland; 4: Ben-Gurion University of the Negev, Sede Boqer Campus,84990 Midreshet Ben-Gurion, Israel</td>
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<tr>
<td>10:10am</td>
<td>ISO-IL 1: ISOTOPE RATIO ANALYSIS - INVITED LECTURE 1</td>
<td>ARLBERG-well.com NORTH HALL</td>
<td>Heidi Goenaga-Infante</td>
<td>University of Oviedo, Spain</td>
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<tr>
<td>10:50am</td>
<td>ISO-OL 1: ISOTOPE RATIO ANALYSIS - GENERAL SESSION 1</td>
<td>ARLBERG-well.com NORTH HALL</td>
<td>Heidi Goenaga-Infante</td>
<td>University of Oviedo, Spain</td>
</tr>
<tr>
<td>11:00am</td>
<td>Multi-isotope tracers to investigate processes in river catchment systems: Selected application examples using B, Mo, Sr, Pb, and Ti isotope ratios assessed by MC ICP-MS</td>
<td></td>
<td>Johanna Irgeheer, Florian Dutschke, Anna Reesa, Anika Retzmann, Tristan Zimmermann, Thomas Prohaska, Michael E. Wieser, Andreas Zitek, Daniel Proefrock</td>
<td>1: Helmholtz-Zentrum Geesthacht, Germany, Institute of Coastal Research, Marine Bioanalytical Chemistry, 2: University of Hamburg, Germany, Department of Chemistry, Inorganic and Applied Chemistry; 3: University of Natural Resources and Life Sciences Vienna, Austria, Dept. of Chemistry, Division of Analytical Chemistry, VIRIS Laboratory; 4: University of Calgary, Canada, Dept. of Physics and Astronomy, Stable Isotope Laboratory</td>
</tr>
<tr>
<td>11:50am</td>
<td>ISO-OL 2: ISOTOPE RATIO ANALYSIS - GENERAL SESSION 2</td>
<td>ARLBERG-well.com NORTH HALL</td>
<td>Heidi Goenaga-Infante</td>
<td>University of Oviedo, Spain</td>
</tr>
<tr>
<td>12:00pm</td>
<td>Optimization of a new fully automated sample preparation system for the isotopic analysis of Sr, Pb and Nd in sediment digests via MC ICP-MS</td>
<td></td>
<td>Tristan Zimmermann, Anika Retzmann, Johanna Irgeheer, Thomas Prohaska, Daniel Proefrock</td>
<td>1: Helmholtz-Zentrum Geesthacht, Institute of Coastal Research, Marine Bioanalytical Chemistry, Max-Planck Str. 1, 21502 Geesthacht, Germany; 2: University of Natural Resources and Life Sciences, Vienna, Department of Chemistry, Division of Analytical Chemistry, VIRIS Laboratory, Konrad-Lorenz-Str. 24, 3430 Tulln, Austria</td>
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</table>

**Spectral Insights: Multi-dimensional approach to evaluate the diagenetic status of skeletal remains with respect to strontium isotope ratio measurements**

**Optimization of a new fully automated sample preparation system for the isotopic analysis of Sr, Pb and Nd in sediment digests via MC ICP-MS**

**Current trends in high-precision isotopic analysis using multi-collector ICP-mass spectrometry**

**New developments in isotopic tracing of trace metals in earth, environmental and planetary sciences**

**Development of δ37Cl isotope analysis by Ion Chromatography/MC-ICPMS and its application for studying biodegradation of perchlorate**

**Multi-isotope tracers to investigate processes in river catchment systems: Selected application examples using B, Mo, Sr, Pb, and Ti isotope ratios assessed by MC ICP-MS**

**Optimization of a new fully automated sample preparation system for the isotopic analysis of Sr, Pb and Nd in sediment digests via MC ICP-MS**

**Spectral Insights: Multi-dimensional approach to evaluate the diagenetic status of skeletal remains with respect to strontium isotope ratio measurements**
### Water-rock interactions and fluid flow behavior within an alpine karst spring system (Johnsbachtal, Austria) - A multi-proxy approach including 87Sr/86Sr and δ26Mg signatures

Dorothee Hippler¹, Marcus Spitz₁, Jessica A. Stammeyer₁, Oliver Nebel², Gerfried Winkler³, Martin Dietzel¹
1: Graz University of Technology, Austria; 2: Monash University Melbourne, Australia; 3: University of Graz, Austria

### Iron isotopic analysis of finger-prick blood via multi-collector inductively coupled plasma mass spectrometry after volumetric absorptive microsampling (VAMS)

Yulia Anoshkina, Marta Costas-Rodriguez, Frank Vanhaecke

Department of Analytical Chemistry, Ghent University, Belgium

### Determination of europium isotope ratios in natural waters by MC-ICP-MS

Gabriel Gustinelli Arantes de Carvalho¹,², Pedro Vitoriano Oliveira², Lu Yang¹
1: National Research Council Canada, Ottawa, Canada; 2: Institute of Chemistry, University of Sao Paulo, Brazil

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<table>
<thead>
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<tr>
<td>12:00pm</td>
<td>LU-WED: LUNCH BREAK</td>
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<tr>
<td>1:40pm</td>
<td>ISO-IL 3: ISOTOPE RATIO ANALYSIS - INVITED LECTURE 3</td>
<td>ARLBERGwell.com NORTH HALL</td>
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</tbody>
</table>
| 2:00pm     | Hyphenated MC ICP-MS methods for environmental research                | CNRS - University of Pau, IPREM, France
| 2:00pm     | ISO-OL 3: ISOTOPE RATIO ANALYSIS - GENERAL SESSION 3                   | ARLBERGwell.com NORTH HALL    |
| 2:40pm     | Copper isotopic fractionation in the intestine of transgenic mice       | Vienna University of Technology, Austria
| 3:20pm     | µ-Dried-Droplets as standards for Tandem single particle LIBS/LA-ICP-MS analysis | University of Vienna, Austria; University of Natural Resources and Life Sciences, BOKU-Vienna
| 3:50pm     | MO-PL: METALLOMICS - PLENARY LECTURE                                   | ARLBERGwell.com NORTH HALL    |
| 4:00pm     | It is metallomics, isn't it?                                          |                               |
| 4:30pm     | CO-WED 3: COFFEE BREAK                                                 | ARLBERGwell.com SOUTH HALL    |
| 5:00pm     | MT-IL 1: METALLOMICS - INVITED LECTURE 1                               | ARLBERGwell.com NORTH HALL    |
| 5:30pm     | ICP-MS based strategies to monitor the fate of nanostructured drugs in cell models | University of Oviedo, Spain
| 6:00pm     | CO-WED 4: VENDOR EXHIBITION                                             | ARLBERGwell.com SOUTH HALL    |
Single Cell Analysis Based on Inductively Coupled Plasma Mass Spectrometry
Lingna Zheng, Meng Wang, Weiyue Feng
Institute of High Energy Physics, China, People’s Republic of

The highly sensitive analytical method of the metabolite: Development of the metal tag reagents for the low molecular weight hydrophilic compound.
Daiso Iwahata, Hiroshi Miyano
Ajinomoto Co., Inc., Japan

Application of 2D-ICP-MS and GC-SF-ICP-MS for the Speciation of Organophosphates in Lithium Ion Battery Electrolytes
Yannick Philipp Stenzel, Jennifer Menzel, Vadim Kraft, Martin Winter, Sascha Nowak
University of Münster, Germany

Application of ICP-MS/MS for the clinical determination of chromium (VI) in human erythrocytes and chromium in blood, plasma and urine
Peter Heitland, Helmut D. Köster
Medical Laboratory Bremen, Germany

Towards routine capillary electrophoresis hyphenation to ICP-MS
Hannah U. Holtkamp, Stuart J. Morrow, Mario Kubanik, Christian G. Hartinger
University of Auckland, New Zealand

Elemental analysis and imaging of human fingerprints: a new technique for forensic sciences
Meng Wang
INSTITUTE OF HIGH ENERGY PHYSICS, CHINESE ACADEMY OF SCIENCES, China, People’s Republic of

Advances in single-cell ICP-MS for determining elemental distributions in cell populations
Emmanouil Mavrakis1, Nikos Lydakis-Symantiris2, Chady Stephan3, Riccardo Magarini3, Spiros Pergantis1
1: Department of Chemistry, University of Crete, Greece; 2: Department of Environmental and Natural Resources Engineering, University of Applied Sciences Crete; 3: Perkin Elmer

Pt-based cytostatics: Where are they accumulated?
Tomas Vaculovic1,2, Michaela Tvrdonova1, Michal Masarik3, Hana Poilanska3, Viktor Kanicky1,2
1: Masaryk University, Faculty of Science, Czech Republic; 2: Masaryk University, CEITEC, Czech Republic; 3: Masaryk University, Faculty of Medicine, Czech Republic

A novel take on ion interaction chromatography for fast and sensitive arsenic speciation analysis in rice using LC-ICP-MS
Helmut Ernstberger1, Ken Neubauer2
1: PerkinElmer, United Kingdom; 2: PerkinElmer, USA

DEVELOPMENT OF ANALYTICAL APPROACHES TO UNRAVEL METAL COMPLEXES AND MORE SPECIFICALLY METALLOPHORES IMPLICATED IN METAL HOMEOSTASIS IN CELLS
Laurent Ouerdane, Shuanglong Wang, Ryszard Lobinski
LCABIE/IPREM UMR5254, France

6:00pm - 8:00pm
WED-VE 5: VENDOR EXHIBITION (Evening social mixer at ESI/Meinhard booth)
Location: ARlBERG-well.com SOUTH HALL

YOUNG SCIENTISTS: Young Scientists Career Event
Location: ARlBERG-well.com NORTH HALL
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<tbody>
<tr>
<td>8:30am - 9:00am</td>
<td>LA-PL: LASER-ASSISTED ANALYSIS / GLOW DISCHARGE - PLENARY LECTURE 1</td>
<td>ARLBERG-well.com NORTH HALL</td>
<td>Chair: Norbert Jakubowski, Daniel Pröfrock, Andreas Zitek, Richard E Russo, Sabrina Rovelli, Jhanis J. Gonzalez</td>
</tr>
<tr>
<td>9:00am - 9:20am</td>
<td>NANO-PL: NANOMATERIAL ANALYSIS - PLENARY LECTURE</td>
<td>ARLBERG-well.com ARLBERGSAAL</td>
<td>Chair: Norbert Jakubowski, Andreas Zitek, Björn Meermann, Maria Montes Bayón, Daniel Turiel Fernández, Thomas Temes, Wolfgang Tremel, Frank Vanhaecke, Kristina Wichmann, Carlos Engelhard, Ingo Strenge, Darya Mozhayeva</td>
</tr>
<tr>
<td>9:00am - 9:20am</td>
<td>ICP-MS - a powerful and versatile tool in “Nanalytics”</td>
<td>-</td>
<td>Chair: Mario Montes Bayón, Daniel Turiel Fernández, Thomas Temes, Wolfgang Tremel, Frank Vanhaecke, Kristina Wichmann, Carlos Engelhard, Ingo Strenge, Darya Mozhayeva</td>
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<td>9:00am - 9:20am</td>
<td>NANO-IL 1: NANOMATERIAL ANALYSIS - INVITED LECTURE 1</td>
<td>ARLBERG-well.com ARLBERGSAAL</td>
<td>Chair: Norbert Jakubowski, Andreas Zitek, Björn Meermann, Maria Montes Bayón, Daniel Turiel Fernández, Thomas Temes, Wolfgang Tremel, Frank Vanhaecke, Kristina Wichmann, Carlos Engelhard, Ingo Strenge, Darya Mozhayeva</td>
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<tr>
<td>9:20am - 10:00am</td>
<td>NANO-OL 1: NANOMATERIAL ANALYSIS - GENERAL SESSION 1</td>
<td>ARLBERG-well.com ARLBERGSAAL</td>
<td>Chair: Norbert Jakubowski, Andreas Zitek, Björn Meermann, Maria Montes Bayón, Daniel Turiel Fernández, Thomas Temes, Wolfgang Tremel, Frank Vanhaecke, Kristina Wichmann, Carlos Engelhard, Ingo Strenge, Darya Mozhayeva</td>
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**Date: Thursday, 23/Feb/2017**

**LA-PL: LASER-ASSISTED ANALYSIS / GLOW DISCHARGE - PLENARY LECTURE 1**

- **Location:** ARLBERG-well.com NORTH HALL
- **Chair:** Norbert Jakubowski, Daniel Pröfrock

**NANO-PL: NANOMATERIAL ANALYSIS - PLENARY LECTURE**

- **Location:** ARLBERG-well.com ARLBERGSAAL
- **Chair:** Norbert Jakubowski, Andreas Zitek

**ICP-MS - a powerful and versatile tool in “Nanalytics”**

- **Chair:** Mario Montes Bayón, Daniel Turiel Fernández, Thomas Temes, Wolfgang Tremel, Frank Vanhaecke, Kristina Wichmann

**NANO-IL 1: NANOMATERIAL ANALYSIS - INVITED LECTURE 1**

- **Location:** ARLBERG-well.com ARLBERGSAAL
- **Chair:** Norbert Jakubowski, Andreas Zitek

**NANO-OL 1: NANOMATERIAL ANALYSIS - GENERAL SESSION 1**

- **Location:** ARLBERG-well.com ARLBERGSAAL
- **Chair:** Norbert Jakubowski, Andreas Zitek

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**NANO-PL: NANOMATERIAL ANALYSIS - PLENARY LECTURE**

- **Location:** ARLBERG-well.com ARLBERGSAAL
- **Chair:** Norbert Jakubowski, Andreas Zitek

**ICP-MS - a powerful and versatile tool in “Nanalytics”**

- **Chair:** Mario Montes Bayón, Daniel Turiel Fernández, Thomas Temes, Wolfgang Tremel, Frank Vanhaecke, Kristina Wichmann

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**LA-IL 1: LASER-ASSISTED ANALYSIS / GLOW DISCHARGE - INVITED LECTURES 1**

- **Location:** ARLBERG-well.com NORTH HALL
- **Chair:** Norbert Jakubowski, Daniel Pröfrock

**NANO-IL 1: NANOMATERIAL ANALYSIS - INVITED LECTURE 1**

- **Location:** ARLBERG-well.com ARLBERGSAAL
- **Chair:** Norbert Jakubowski, Andreas Zitek

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**LA-OL 1: LASER-ASSISTED ANALYSIS / GLOW DISCHARGE - GENERAL SESSION 1**

- **Location:** ARLBERG-well.com NORTH HALL
- **Chair:** Norbert Jakubowski, Daniel Pröfrock

**NANO-OL 1: NANOMATERIAL ANALYSIS - GENERAL SESSION 1**

- **Location:** ARLBERG-well.com ARLBERGSAAL
- **Chair:** Norbert Jakubowski, Andreas Zitek

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**NANO-PL: NANOMATERIAL ANALYSIS - PLENARY LECTURE**

- **Location:** ARLBERG-well.com ARLBERGSAAL
- **Chair:** Norbert Jakubowski, Andreas Zitek

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**ICP-MS - a powerful and versatile tool in “Nanalytics”**

- **Chair:** Mario Montes Bayón, Daniel Turiel Fernández, Thomas Temes, Wolfgang Tremel, Frank Vanhaecke, Kristina Wichmann

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**LA-IL 1: LASER-ASSISTED ANALYSIS / GLOW DISCHARGE - INVITED LECTURES 1**

- **Location:** ARLBERG-well.com NORTH HALL
- **Chair:** Norbert Jakubowski, Daniel Pröfrock

**NANO-IL 1: NANOMATERIAL ANALYSIS - INVITED LECTURE 1**

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**LA-OL 1: LASER-ASSISTED ANALYSIS / GLOW DISCHARGE - GENERAL SESSION 1**

- **Location:** ARLBERG-well.com NORTH HALL
- **Chair:** Norbert Jakubowski, Daniel Pröfrock

**NANO-OL 1: NANOMATERIAL ANALYSIS - GENERAL SESSION 1**

- **Location:** ARLBERG-well.com ARLBERGSAAL
- **Chair:** Norbert Jakubowski, Andreas Zitek

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**NANO-PL: NANOMATERIAL ANALYSIS - PLENARY LECTURE**

- **Location:** ARLBERG-well.com ARLBERGSAAL
- **Chair:** Norbert Jakubowski, Andreas Zitek
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<td>10:10am - 10:50am</td>
<td>CO-THU 1: COFFEE BREAK Location: ARLBERG-well.com SOUTH HALL</td>
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<tr>
<td>10:50am - 11:30am</td>
<td>LA-IL 2: LASER-ASSISTED ANALYSIS / GLOW DISCHARGE - INVITED LECTURES 2 Location: ARLBERG-well.com NORTH HALL Chair: Cornel Venzago Chair: Daniel Pröfrock Trends and challenges in Glow Discharge Mass Spectrometry for Direct Analysis of Innovative Materials. Jorge Pisonero, Jonatan Fandino, Alfredo Sanz-Medel, Nerea Bordel University of Oviedo, Spain Taming Laser-Generated Ions for Their Use in Mass Spectrometry Bodo Hattendorf, Lorenzo Querci, Victor Varentsov, Detlef Günther 1: ETH Zurich, Switzerland; 2: bFaculty for Antiporton and Ion Research in Europe (FAIR GmbH), Darmstadt, Germany</td>
</tr>
<tr>
<td>11:30am - 12:10pm</td>
<td>LA-OL 2: LASER-ASSISTED ANALYSIS / GLOW DISCHARGE - GENERAL SESSION 2 Location: ARLBERG-well.com NORTH HALL Chair: Cornel Venzago Chair: Daniel Pröfrock Formation of particles during laser ablation ICP-MS Markéta Holá, Hana Nováková, Jakub Ondráček, Michal Vojtěšek 1: CEITEC, Masaryk University, Brno, Czech Republic; 2: Faculty of Mechanical Engineering, Czech Technical University of Prague, Czech Republic; 3: Institute of Chemical Process Fundamentals of the ASCR, Prague, Czech Republic; 4: Faculty of Science, Masaryk University, Brno, Czech Republic Analysis of minor and trace elements in polymers using Tandem LA/LIBS Maximilian Bonta, Andreas Limbeck TU Wien, Austria QUANTITATIVE ELEMENTAL ANALYSIS OF POLYMERS BY LASER ABLATION-INDUCTIVELY COUPLED PLASMA Angela Villasenor Milan, Marina Boccongelli, José Luis Todoli 1: Department of Analytical Chemistry, Nutrition and Food Sciences, University of Alicante, Spain; 2: Total Research &amp; Technology Felyx, Belgium</td>
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<tr>
<td>12:10pm - 1:50pm</td>
<td>LU-TELEDYNE CETAC: LUNCH SEMINAR Teledyne Cetac - Recent</td>
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<tr>
<td>Time</td>
<td>Session</td>
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<tr>
<td>1:50pm</td>
<td>THE QUANTITATIVE ELEMENTAL MICROSCOPE: FOR WHAT IS IT GOOD FOR?</td>
</tr>
<tr>
<td>2:20pm</td>
<td>NANO-OL 3: NANOMATERIAL ANALYSIS - GENERAL SESSION 3</td>
</tr>
<tr>
<td>3:40pm</td>
<td>Single Particle ICP-MS: Keeping the feet on the ground</td>
</tr>
<tr>
<td>1:50pm</td>
<td>Imaging of Cerium Oxide Nanoparticles in Rat Lung Tissue by Means of LA-ICP-MS</td>
</tr>
<tr>
<td>2:20pm</td>
<td>EVALUATION OF DIFFERENT INDUCTIVELY COUPLED PLASMA MASS SPECTROMETRY-BASED IMMUNOASSAYS FOR THE DETERMINATION OF AFLATOXIN M1 IN MILK</td>
</tr>
<tr>
<td>2:20pm</td>
<td>Characterization of nanoparticles uptake and adsorption by red microagal cells using single particle ICP-MS</td>
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<td>Simultaneous on-line detection of SiO2, TiO2 and Al2O3 particles in toothpaste by asymmetric flow field-flow fractionation hyphenated to inductively coupled plasma mass spectrometry</td>
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<td>Extension and validation of FFF online with ICP-MS for the quantification of carbon in natural and engineered (nano)particles</td>
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<td>Characterization of metallic nanoparticles in tattoo ink using Asymmetrical Flow Field-Flow Fractionation coupled with ICP-MS</td>
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### Quantitative imaging of potential protein biomarkers in oral cancer tissues with LA-ICP-MS using bioconjugated gold nanoclusters

**Maria Cruz-Alonso**, 1 Beatriz Fernandez, 2 Aurora Astudillo, 2 Juan Carlos de Vicente, 3 Rosario Pereiro, 1 Alfredo Sanz-Medel 1

1: Dept. of Physical & Analytical Chemistry, University of Oviedo, Julian Claveria 8, 33006 Oviedo, Spain; 2: BioBanco del Principado de Asturias, Hospital Universitario Central de Asturias, 33011 Oviedo, Spain; 3: Department of Maxillofacial Surgery, Hospital Universitario Central de Asturias, 33011 Oviedo, Spain

### Laser ablation with high speed and high spatial resolution: emerging applications in biological imaging

**Amy J Managh**, Tharwat Abduljabbar, Helen J Reid, Barry L Sharp

Loughborough University, LE11 3TU, United Kingdom

### Elemental bioimaging for the investigation of Wilson’s disease by means of LA-ICP-MS

**Oliver Hachmöller**, 1 Andree Zibert, 2 Hans Zischka 3, Michael Sperling 1, 4, Hartmut H.-J. Schmidt, 2 Uwe Karst 1

1: Institute of Inorganic and Analytical Chemistry, University of Münster; 2: Experimental Transplant Hepatology, University Hospital Münster; 3: Institute of Molecular Toxicology and Pharmacology, Helmholtz Center Munich; 4: European Virtual Institute for Speciation Analysis (EVISa)

### High resolution LA-ICP-MS imaging in three dimensional tumor spheroids

**Sarah Theiner** 1, Sijin Van Malderen 2, Thibaut Van Acker 2, Anton Legin 3, Michael Jakupec 2, Bernhard Keppler 3, Frank Vanhaecke 2, Gunda Koellensperger 1

1: Institute of Analytical Chemistry, University of Vienna, Vienna, Austria; 2: Department of Analytical Chemistry, Ghent University, Ghent, Belgium; 3: Institute of Inorganic Chemistry, University of Vienna, Vienna, Austria

### Elemental Bioimaging in Plant Tissue Sections: Techniques for Overcoming Interferences and Reducing High Background Concentrations

**Georgina Madeleine Thyssen** 1, Michael Holtkamp 1, Michael Sperling 1, 2, Uwe Karst 1

1: University of Münster, Germany; 2: European Virtual Institute for Speciation Analysis, Germany

### Characterizing cisplatin induced ototoxicity using ICP-MS and laser ablation ICP-MS

**Lauren Amable** 1, Eric Shide 1, Andrew Breglio 2, Aaron Rusheen 2, Katharine Fernandez 2, Chady Stephan 3, Lisa Cunningham 2

1: National Institute on Minority Health and Health Disparities, National Institutes of Health, Bethesda, MD, United States of America; 2: National Institute on Deafness and Other Communication Disorders, National Institutes of Health, Bethesda, MD, United States of America; 3: Perkin Elmer, Shelton, CT, United States of America

| 3:40pm | POSTER 2 - APP II: POSTER SESSION 2: Applications II Location: ARLBerg-well.com SOUTH HALL |
| 5:30pm | POSTER 2 - BI: POSTER SESSION 2: Bioimaging Location: ARLBerg-well.com NORTH HALL |

### Determination of Br and I in polymers by ICPMS

**Georgia Sanabria**

Evans Analytical Group, France

### ELEMENTAL DIFFERENCES IN SINGLE VINEYARD PINOT NOIR WINES FROM SIX SUB-APPELLATIONS

**Helene Hopfer**, 1 Courtney Tanabe, 2 Joshua Godshaw 2, Susan Ebeler 2, Jenny Nelson, 2 Roger Boulton 2

1: Department of Food Science, The Pennsylvania State University, University Park, PA 16802; 2: Department of Viticulture and Enology, University of California

### High resolution laser ablation NWImage system for single cell imaging

**Diego Esteban-Fernandez** 1, Heike Traub 2, Norbert Jakubowski 3, Katherine McLachlin 4, Leif Summerfield 5, Rob Hutchinson 1

1: Electro Scientific Industries, United States of America; 2: Shimadzu, Japan; 3: BAM, Germany

### The impact of reaction and collision cell ICP-MS on laser ablation bio-imaging

**Anna Maria Rathgeb** 1, Tim Causon 1, Regina Krachler 2, Stephan Hann 1

1: BOKU Vienna, Austria; 2: University of Vienna, Austria
Elemental profiles of whiskies allow differentiation by type and region by inductively coupled plasma – optical emission spectroscopy (ICP-OES)

Jenny Nelson1,2, Helene Hopfer4, Greg Gillesland3, Susan Ebeler1,2
1: Department of Viticulture & Enology, University of California, Davis, CA, USA; 2: Food Safety & Measurement Facility, University of California, Davis, CA, USA; 3: Agilent Technologies, Inc., Santa Clara, CA, USA; 4: Department of Food Science, The Pennsylvania State University, University Park, PA, USA

Development of new strategies based on HPLC- and LA-ICP-MS to study the Zinc-Metallothionein system in the human eye and its implication in Age Related Macular Degeneration

Beatriz Fernandez-Garcia1,2, Sara Rodriguez-Menendez1,2, Héctor Gonzalez-Iglesias2,3, Montserrat Garcia2, Lydia Alvarez2, M. Luisa Fernández1, Miguel Coca-Prados2,4, Rosario Pereiro1,2, Alfredo Sanz-Medel1
1: 1Department of Physical and Analytical Chemistry, University of Oviedo, c/Julian Clavería, 8, 33006, Oviedo, Spain; 2: 2Instituto Universitario Fernández-Vega, Fundación de Investigación Oftalmológica, Universidad de Oviedo, Spain.; 3: 3 Instituto Oftalmológico Fernández-Vega, Avda. Dres. Fernández-Vega, 34, 33012, Oviedo, Spain.; 4: 4 Department of Ophthalmology and Visual Science, Yale University School of Medicine, New Haven, CT. 06510, USA

Mapping Ti, Al and V originated from dental implants in oral mucosa tissue by LA-ICP-MS

Adam Sajnóg1, Anetta Hanč1, Krzysztof Makuch2, Ryszard Koczonowski2, Danuta Barałkiewicz1

Determination of phosphorus in high dissolved solids solutions to assess nutrient behaviour in ancient oceans

Stephen Reid
University of Leeds, United Kingdom

Applications of Isotopic Measurements for Determination of Long Lived Radionuclides in the Open Ocean

Emilia Vassileva1, Irena Wysocka1,2, Eumni Han1
1: IAEA Environment Laboratories, Monaco; 2: Polish Geological Institute National Research Institute

Comparative Study on the Effect of Ultra-Trace Mercury in Plastic Wastes in the Kuwait Beaches

Abdul Hadi Bu-Olayan, BV
Thomas KUWAIT UNIVERSITY, Kuwait

Magnetic nanoparticles coated with ionic liquid for the pre-concentration of Pb in drinking water and the subsequent quantification by FI-ICP-OES

Sara Hossein Zadegan, Winfried Nischkauer, Katharina Bica, Andreas Limbeck
TU Wien, Austria

Measurement of elements in airborne particulate matter: comparison between real-time monitoring data and filter-collection data

Ryohei Fukushi, Takashi Nakazawa, Shuo Nishida, Naoki Furuta
Chuo University, Japan

Direct analysis of gaseous mercury in ambient air by inductively coupled plasma mass spectrometry coupled with gas to particle conversion-gas exchange technique

Masaki Ohata1, Kohei Nishiguchi2
1: National Metrology Institute of Japan, Japan; 2: J-Science Lab Co. Ltd.

Determination of Dissolved Trace Zn in Seawater with Different Salinity by flow injection

Volker Hoffmann3, Thomas Hofmann2, Cornel Venzago2
1: Oviedo University, Spain; 2: Evonik Technology & Infrastructure GmbH, Germany; 3: Leibniz Institute for Solid State and Materials Research Dresden, Germany

Calibration factors in Fast Flow Glow Discharge Mass Spectrometry (FF-GD-MS): Continuous vs. Pulsed Mode

Joachim Hinrichs, Shona McSheehy Ducos
Thermo Fisher Scientific, Germany

SICRIT Mass Spectrometry: Simple, Smart and Sensitive

Jan-Christoph Wolf1, Klemens Maria Thaler2, Klaus Wutz1, Christoph Haich3, Reinhard Niessner2
1: Plasmion GmbH, Alter Postweg 4, 86159 Augsburg, Germany; 2: Institut für Wasserchemie und Chemische Balneologie der TU-München, Marchioninstr. 17, 81377, Germany

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<th>Title</th>
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<th>Institution(s)</th>
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<tr>
<td>LA-ICP-QQQMS for the High Resolution Elemental Bio-Imaging of Trace Elements</td>
<td>David Clases¹, David Bishop², Philip Doble², Uwe Karst¹</td>
<td>1: University of Muenster, Germany; 2: University of Technology Sydney, Australia</td>
</tr>
<tr>
<td>Investigating Biogenic versus Diagenetic Arsenic Incorporation in Sheep's Teeth</td>
<td>Magdalena Dorothea Blanz²,³, Kate Britton³, Eva Krupp¹, Jörg Feldmann¹</td>
<td>1: Trace Element Speciation Laboratory (TESLA), University of Aberdeen, United Kingdom; 2: Archaeology Institute, University of the Highlands and Islands, Orkney College; 3: Department of Archaeology, University of Aberdeen, St. Mary's, Elphinstone Road, Aberdeen, AB24 3UF, Scotland, UK</td>
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<td>Bioimaging of Metallothioneins in ocular tissue sections by LA-ICP-MS using biocjugated gold nanoclusters</td>
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</tr>
<tr>
<td>Utilising Prescriptive and Intelligent Dilution for the High Throughput Analysis of Metals in Wastewaters</td>
<td>Niel Williams¹, Peter Winship¹, Jon Peters¹, Graham Coe², Philip Mosley², James Hannan³</td>
<td>1: Teledyne CETAC Technologies, United States of America; 2: Thames Water, United Kingdom; 3: Thermo Fisher Scientific, United Kingdom</td>
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<td>DETERMINATION OF Ce, Eu, Gd, Sm AND Yb IN MINERAL FERTILIZER BY ICP-MS</td>
<td>Pedro Vitoriano Oliveira¹, Alexandre Minami Fioroto¹, Luiza Gimeses Rodrigues Albuquerque¹, Fábio Ferreira da Silva², Rodolfo Lorenzatto², Pedro Vitoriano Oliveira¹</td>
<td>1: Institute of Chemistry, University of Sao Paulo, SP, Brazil; 2: Agilent Technologies Brasil Ltda., Barueri, SP, Brasil</td>
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<tr>
<td>Stabilization of potable water containers with silver ions in emergency situations - challenges for sampling and analysis</td>
<td>Gerald Bauer</td>
<td>CBRN-Defence School &quot;Lise Meitner&quot;, Austrian Armed Forces, Austria</td>
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<td>Investigation of the speciation change of chlorine, bromine and iodine in the process of advanced water treatment in a public water treatment plant</td>
<td>Naoya Ohata, Sho Nishida, Naoki Furuta</td>
<td>Chuo university, Japan</td>
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<td>Magnetic solid-phase extraction using ZSM-5 zeolite/Fe2O3 as a sorbent for determination of cadmium, mercury and lead in urine samples</td>
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<td>Tracing the origin of the “black gold”: Elemental and isotopic pattern of sturgeon caviar and the influence of water, feeding and processing Anastasiya Tchaikovsky, Andreas Zitek, Johanna Irgerhe, Christine Oppen, Rudolf Scheiber, Thomas Prohaska</td>
<td>Short-Circuit Determination by Spatially Resolved Analysis of the Quantitative Lithium Distribution on Cycled Lithium Ion Battery Electrodes via Laser Ablation – Inductively Coupled Plasma - Optical Emission Spectrometry (LA-ICP-OES) Constantin Lürenbaum, Britta Vortmann-Westhoven, Martin Winter, Sascha Nowak</td>
<td>Reconsidering hydrodynamic chromatography coupled to ICP-MS for the analysis of nanomaterials Maria S. Jimenez, Maria T. Gomez, Francisco Laborda, Juan R. Castillo</td>
<td>Analysis of macro- and micronutrients in soils and fertilizers by ICP-OES Nick Spivey, Ken Neubauer, Helmut Ernstberger</td>
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<td>1: University of Natural Resources and Life Sciences, Department of Chemistry – VIRIS Laboratory, Konrad-Lorenz-Strasse 24, 3430 Tulln, Austria; 2: Helmholtz-Centre for Materials and Coastal Research, Institute for Coastal Research, Dept. for Marine Bioanalytical Chemistry, Max-Planck-Strasse 1, 21502 Geesthacht, Germany</td>
<td>1: Department of Analytical Chemistry, Ghent University, Campus Sterre, Krijgslaan 281 - S12, 9000 Ghent, Belgium; 2: Department of Applied Ecology and Environmental Biology, Ghent University, Jozef Plateaustraat 22, 9000 Ghent, Belgium; 3: TOFWERK AG, Utitgenstrasse 22, 3600 Thun, Switzerland</td>
<td>Group of Analytical Spectroscopy and Sensors (GEAS). Institute of Environmental Sciences (IUCA). University of Zaragoza. Zaragoza, Spain</td>
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<td>The application of Sr isotope ratios to study human migration in the late Bronze Age in Stillfried/March (AT) Anna-Maria Kriechbaum, Anika Retzmann, Monika Grieb, Thomas Prohaska</td>
<td>Reconstruction of the 3D full elemental profile of Ceriodaphnia dubia using multimodal registration approaches Stijn J. M. Van Malderen, Brecht Laforce, Thibaut Van Acker, Charlotte Nys, Maarten De Rijcke, Colin Janssen, Olga Borovinskaya, Laszló Vincze, Frank Vanhaecke</td>
<td>Use of ultrafiltration and AF4-I CP-MS for the study of silver released from silver nanoparticles-based clay additives used in animal feeding Isabel Abad-Alvaro, Eduardo Bolea, Francisco Laborda, Juan R. Castillo</td>
<td>Analysis of trace elements and nutrients in food by ICP-MS Helmut Ernstberger, Ewa Pruszkowski</td>
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<td>Unlocking isotopic and elemental archives in marine phosphorites: a case study from the Precambrian-Cambrian boundary Ciprian Cosmin Stremlan, Olga Borovinskaya, Virgil Drăgușin, Dominique Blamart</td>
<td>LA IcpTOF – a reliable tool for rapid elemental imaging of carbonates Ciprian Cosmin Stremlan, Olga Borovinskaya, Virgil Drăgușin, Dominique Blamart</td>
<td>Analysis of gold and silver nanoparticles and their aggregates by means of spICP-MS using milliseconds and microsecond dwell times Joshua Fuchs, Michael Sperling, Uwe Karst</td>
<td>Improvement in high mass abundance sensitivity for multicollector ICP-MS using a novel ion optics design that reduces several factors that contribute to peak tailing. Phil Shaw, Mark Mills, Yvan Gerard, Ye Zhao, Andrew Burrows Anmetik Nu Instruments, United Kingdom</td>
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<td>1: University of Muenster, Institute of Inorganic and Analytical Chemistry, Correnstr 28/30, Münster, 48149, Germany; 2: European Virtual Institute for Speciation Analysis, Mendelstr. 11, Münster, 48149, Germany</td>
<td>Impurity Analysis in Low-Boiling Point Gasoline by High Resolution ARRAY ICP-OES Jan Scholz, Margrit Killenberg, Andrew Jason Ryan Analytik Jena, Germany</td>
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<td>prior to inductively coupled plasma optical emission spectrometry Paola Baile Pomares, Lorena Vidal Martinez, Miguel Angel Aguirre Pastor, Antonio Canals Hernández Universidad de Alicante, Spain</td>
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Jessica Alexandra Stammer1, Dorothee Hippler1, Oliver Nebel3, Florian Mittermayer1, Cyrill Greng1, Albrecht Leis4, Martin Dietzel1
1: Graz University of Technology, Austria; 2: JR AquaConSol GmbH, Graz, Austria; 3: Monash University, Melbourne, Australia

Sr and Nd chromatographic separation procedure for precise isotope ratio measurement using TIMS and MC ICP methods—MS

Maria Streletskaya, Maria Zaytceva, Natalia Soloshenko
Institute of Geology and Geochemistry UB RAS, Russia

Determination of lead isotope ratios in seawater

Emilia Vassileva1, Irena Wysocka1,2
1: IAEA Environment Laboratories, Monaco; 2: Polish Geological Institute National Research Institute

Investigation of elemental and isotopic fingerprints in riverine sediments from the German Elbe catchment

Anna Reese1,2, Johanna Irgeher1, Tristan Zimmermann1,2, Daniel Prötter1
1: Helmholtz-Centre for Materials and Coastal Research, Institute of Coastal Research, Department for Marine Bioanalytical Chemistry, Max-Planck-Strasse 1, D-21502 Geesthacht, Germany; 2: University of Hamburg, Department of Chemistry, Institute for Inorganic and Applied Chemistry, Martin-Luther-King-Platz 6, 20146 Hamburg, Germany

MEASUREMENT OF COPPER, LEAD AND ANTIMONY ISOTOPE RATIOS IN 27 EARLY BRONZE AGE ARTEFACTS BY MULTICOLLECTOR ICP-MS.

Jose Ignacio García Alonso, Aída Reguera Galán, Mariella Moldovan, Rosario Pereiro, Lara Lobo
University of Oviedo, Spain

Experimental evaluation and minimization of memory effect in isotope ratio determination of boron with high


Investigation of the cause of elemental fractionation in laser ablation-inductively coupled plasma mass spectrometry

Yusuke Ono, Daiki Yamada, Sho Nishida, Naoki Furuta
Chuo university, Japan

Bloodhound technology from ESI: ultrafast signals

Katherine McLachlin, Leif Summerfield, Rob Hutchinson, Ciaran O’Connor
Electro Scientific Industries, United States of America

Application of LA-ICP-MS in the search of elements pattern in feathers of Red-breasted flycatcher (Ficedula parva)

Anetta Hanc1, Piotr Zduniak2, Wiktor Lorenz1, Krzysztof Mieczka1, Danuta Baralkiewicz1
1: Department of Trace Element Analysis by Spectroscopy Method, Faculty of Chemistry, Adam Mickiewicz University; 2: Department of Avian Biology and Ecology, Faculty of Biology, Adam Mickiewicz University; 3: Ornithology Research Center, Ondokuz Mayis University, Kurupelit Samsun, Turkey

Assuring the geographical origin of food products by labelling with rare earth elements and detection using solution based and laser ablation ICP-MS

Christoph Walkner, Donata Bandonione, Daniela Zetti, Thomas Meisel
Chair of General and Analytical Chemistry, Montanuniversität Leoben, Austria

Benefits of Fast Data Acquisition with Laser Ablation and Quadrupole ICP-MS

Jason Day1, Sally Gibson1, David Price2, Rob Hutchinson3
1: Department of Earth Sciences, University of Cambridge, United Kingdom; 2: PerkinElmer, United Kingdom; 3: Electro Scientific

Inductively Coupled Plasma Mass Spectrometry

Albert Kér1, Ildikó Káromi1, Dorina Dobó2, Koppány Levente Juhász2, András Sápi2, Gábor Galbács1

Determination of Graphite Oxide Nanosheets in Biological Tissues Using Post-Administration Labeling with Oligonucleotide-Conjugated Gold Nanoparticles

Po-Jui Wang1, Pei-Xin Lai2, Cheng-Kuan Su2, Chin-Ching Huang2, Yu-Chang Sun1
1: Department of Biomedical Engineering and Environmental Sciences, National Tsing Hua University, Hsinchu, 30013, Taiwan.; 2: Department of Bioscience and Biotechnology, National Taiwan Ocean University, Keelung, 20224, Taiwan.

Fate of nanoparticles in environmental matrix: Dissolution Study

Alessandro Bonetto, Andrea Brunelli, Elena Badetti, Antonio Marcomini
University Cà Foscari, Venice, Italy

Interaction studies of silver nanoparticles with soils using inductively coupled plasma techniques

Laura Torrent, Mónica Iglesias, Eva Marguí, Manuela Hidalgo
Chemistry Department, University of Girona, Spain

IMPLEMENTATION OF CE-SP-ICP-MS FOR SEPARATION OF SILVER NANOPARTICLES WITH DIFFERENT SURFACE COATINGS

Darya Mozhayeva, Carsten Engelhardt
University of Siegen, Germany

NEW POSSIBILITIES FOR ONLINE PRE-CONCENTRATION, SEPARATION, AND CHARACTERIZATION OF NANOPARTICLES IN BIOLOGICAL SAMPLES

Iron Isotope Ratios in Biological Samples by PLASMAQUANT® MS

Rui Santos, René Chemnitzer, Sebastian Wünsche, Peio Riss, Katharina Vlach, Andrew Ryan, Jan Scholz
Analytik Jena AG, Germany

Routine Analysis of Total Arsenic in Californian Wines using the AGILENT 4200/4210 MP-AES

Courtney Tanabe1,2, H Hopfer1,2, Greg Gillegand4, A Liba4, S.E. Ebeler1,2, Jenny Nelson1,2, Elizabeth Kulikov5
1: Dept. Viticulture & Enology, University of California, Davis, CA, USA; 2: Food Safety and Measurement Facility, University of California, Davis, CA, USA; 3: Dept. Food Science, The Pennsylvania State University, University Park, PA, USA; 4: Agilent Technologies, Inc., Santa Clara, CA, USA; 5: Agilent Technologies Australia, VIC, AU

Ultra-High Speed Analysis of Soil Extracts using an Advanced Valve System Installed on an AGILENT 5150 SDV ICP-OES

Elizabeth Kulikov, John Cauduro
Agilent Technologies Australia, VIC, AU

Improved Productivity for the Determination of Metals in Oil Samples using the AGILENT 5150 RADIAL VIEW (RV) ICP-OES WITH ADVANCED VALVE SYSTEM

Elizabeth Kulikov, Neli Drvodel
Agilent Technologies Australia, VIC, AU

Determination of ultratrace level impurities in high-purity metal samples by ICP-QQQ

Naoki Sugiyama, Michiko Yamanaka
Agilent Technologies, 9-1, Takakura-machi, Hachioji-shi, Tokyo 192-8510, Japan

Fundamental Studies of a Nitrogen Microwave Plasma for
resolution multi-collector inductively coupled plasma source mass spectrometry (MC-ICPMS)

Suresh Kumar Aggarwal,1,2 Tzu-Hao Wang,3 Chen-Feng You,1,3 Chuan-Hsiung Chung,4
1: Fuel Chemistry Division, BARC, Mumbai 400085, India; 2: 2Dep. Earth Sciences, National Cheng-Kung University, Tainan 70101, Taiwan; 3: Earth Dynamic Systems Research Centre, NCKU, Tainan, Taiwan

Elemental composition and Sr isotopic ratio for authentication of primary agricultural products on the example of Asparagus from Bassano del Grappa and early potatoes in Southern Italy

Carmela Zannella,1,4 Diana Agrelli,1 Christine Opper2, Thomas Prohaska2, Paola Adamo1
1: Department of Agricultural Sciences - University of Naples Federico II, Portici (NA), Italy; 2: Department of Chemistry - VIRIS Laboratory, University of Natural Resources and Life Sciences, Tulln, Austria

Development of a rapid and quantitative nickel purification technique for accurate nickel isotopic analysis in geochemical reference materials

Yuki Kobayashi1, Shotaro Takano2, Masaharu Tanizumi1
1: Kwansei Gakuin University, Japan; 2: Institute for Chemical Research, Kyoto University, Japan

Development of a methodology for the accurate and precise measurement of compound-specific Hg isotopic composition in human and other biological samples by GC-MC-ICPMS.

Silvia Queipo-Abad, Pablo Rodríguez-González, José Ignacio García-Alonso
University of Oviedo, Spain

Chemical and Pb-isotopic zonality of galena (Berezovskoe deposit, Middle Urals): LA-Q-ICP-MS vs HR-MC-ICP-MS data

Evgeny Shagaylov1,2, Maria Zaytseva1, Maria Industries, Inc, United Kingdom

Qualitative discrimination analysis of corn hybrids by laser-induced breakdown spectroscopy

Dávid Jenő Palásti1, Anikó Metzinger1, Éva Kovács-Szél2, Gábor Galbács1
1: Department of Inorganic and Analytical Chemistry, University of Szeged, Hungary; 2: Hungarian Academy of Sciences, Centre for Energy Research, Budapest, Hungary

Quantification of trace elements in sintered silicon carbide by inductively coupled plasma-mass spectrometer with laser ablation in liquid and isotope-dilution analysis

Masahide Fujiwara1, Koki Hirosawa1, Ryo Machida1, Naoko Nonose2, Sho Nishida1, Naoki Furuta1
1: Chuo University, Japan; 2: National Metrology Institute of Japan, Japan

Hydrocolloid gels and chelating media disks as calibration standards in LA-ICP-MS imaging

Vid Simon Šelih1, Martin Šala1, Johannes T. van Elteren1, Zdenka Šlejkovec2
1: National Institute of Chemistry Slovenia, Hajdrihova 19, Ljubljana, Slovenia; 2: Jožef Stefan Institute, Jamova 39, Ljubljana, Slovenia

Investigation of the kinetic energy distribution generated with a Laser Ablation-Ion Funnel (LAFU) source

Lorenzo Querci1,2, Victor Varentsov2, Detlef Güntner1, Bodo Hattendorf1
1: Laboratory of Inorganic Chemistry, ETH Zurich, Vladimir-Prelog-Weg 1, Zurich, Switzerland; 2: Facility for Antiproton and Ion Research in Europe (FAIR GmbH), Darmstadt, Germany

Depth Profiling of Galvaloaumium-Nickel Coatings on Steel by UV- and VIS-LIBS: Hints to wavelength-dependent plasma coupling influencing the effective ablation rate

Morris Jhängi Joseph Weimerskirch1, Tristan

Analytical Emission Spectrometry

Nahid Chalyv1, Peter S. Dudge1, Richard J. S. Morrison1, Guthrie B. Partridge2
1: Agilent Technologies Melbourne, Australia; 2: Agilent Technologies Santa Clara, USA

Application of a new interface to the 634S speciation analysis of volatile organic compounds in crude oil by GC-MC-ICP-MS.

Grant Craig, Antonella Guzzonato, Christopher Brodie, Shona McSheehy Ducos, Claudia Bouman
Thermo Fisher Scientific (Bremen) GmbH, Hannover-Kunath Str. 11, 28199 Bremen, Germany

Alternative sample preparation and analysis approach for ICH/USP controlled metals by ICP-MS

Radney S. Dhuria1, Vinay Jain1, Gaurav Kapadnis1, Samir Vyas1, Peter Planitz1
1: Center of Excellence Agilent Technologies, Manesar, India; 2: Agilent Techn. Walbronn, Germany

Simultaneous determination of various elements in infant formula using ICP-MS 2030

Ludvína Fromontoux1, Jan Knoop1, Uwe Oppermann2, Konstantin Kartaschew2
1: Shimadzu France SAS, Marne La Vallee, France; 2: Shimadzu Europa GmbH, Duisburg, Germany; 3: Shimadzu Deutschland GmbH, Duisburg, Germany

Determination of heavy metals in flavored e-liquids using ICP-OES

Uwe Oppermann1, Ludvína Fromontoux2, Míra Markuši3, Jan Knoop1
1: Shimadzu Europa GmbH, Germany; 2: Shimadzu France, Marne La Vallee, France; 3: Shimadzu d.o.o. Zagreb, Croatia

Analysis of Platinum Group Elements (PGEs) in road dust using the Agilent 8900

Ìndex.php?page=browseSessions&print=yes&doprint=yes&mode=table&presentations=show

26/31
Oliver Nagy1, Ariane Giesriegl2, Wolfgang Kautek2
1: University of Vienna, Faculty of Physics, Austria; 2: University of Vienna, Faculty of Chemistry, Department of Physical Chemistry, Austria

Analysis of SiO2-enforced conducting polymer using ICP-MS and LIBS
Heung Bin Lim, Eunji Kim
Dankook Univ., Korea, Republic of (South Korea)

Application of ICP-MS Neptune Plus multicollector and ICP-MS NexION 300s quadrupole spectrometers for LA-ICP-MS U-Pb dating of zircon: comparison and evaluation
Maria Zaitceva1, Alexander Pupyshev2, Sergei Votyakov1
1: Institute of Geology and Geochemistry UB RAS, Russian Federation; 2: Ural Federal University, Russian Federation

Analysis of radioactive iodine-129 by ICP-QQQ using MS/MS mode and a new octopole reaction cell with axial acceleration
Yasuyuki Shikamori1, Kazumi Nakano1, Naoki Sugiyama1, Maki Honda1, Naoki Sugiyama1

Geochemical characteristics of hydrothermal fluids observed along Median Tectonic Line in Mie-Prefecture, Japan
Masaharu Tanimizu1, Ryo Nakai1, Naoto Sugimoto1, Yasunori Mori2
1: Kwansei Gakuin Univ., Japan; 2: University of Tsukuba, Center for Research in Isotopes and Environmental Dynamics (CRIED)

Modelling elemental distributions and 87Sr/86Sr ratios in river water based on catchment geology: challenges and applications
Andreas Zitek1, Anastassiya Tchalkovsky1, Johanna Irigehe2, Thomas Prohaska1
1: University of Natural Resources and Life Sciences Vienna, Austria; 2: Helmholtz Centre Geesthacht, Germany

Conference on Plasma Spectrochemistry 2017 - ConTool Pro Printout

Streltekskaya1, Daria Kiseleva1, Sergei Sustavov2
1: Institute of geology and geochemistry UB RAS, Russian Federation; 2: Ural State Mining University, Russian Federation

Wasowicz2, Jhanis J. Gonzalez1,4
1: Applied Spectra, Inc, United States of America; 2: Department of Toxicology and Carcinogenesis, Nofer Institute of Occupational Medicine, Poland; 3: Department of Biological and Environmental Monitoring, Nofer Institute of Occupational Medicine, Poland; 4: Lawrence Berkeley National Laboratory, United States of America

Possibilities and Challenges of spICP-MS
Michiko Yamanaka1, Steve Wilbur2, Naoki Sugiyama1

Single Particle ICP-MS as an online detector for Field-Flow Fractionation
Robert Reed1, Soheyl Tadjiki1, Tony Pfaffo2, Evelin Moldenhauer2, Florian Meier2, Thorsten Klein2
1: Postnova Analytics Inc., United States of America; 2: Postnova Analytics GmbH, Landsberg am Lech, Germany

Detection of aluminum nanoparticles in biological media and in vitro
Benjamin Krause1, Holger Sieg1, Thomas Meyer1, Philipp Reichardt1, Julia Tentscher1, Harald Jungnickel1, Peter Laux1, Albert Braeuning1, Valerie Fessard2, Fabienne Gauffre3, Irina Estrela-Lopis4, Alfonso Lampen1, Andreas Luch1
1: German Federal Institute of Risk Assessment (BfR), Department of Chemical and Product Safety, Max-Dohrn-Strasse 8-10, 10589 Berlin, Germany; 2: ANSES, French Agency for Food, Environmental and Occupational Health Safety, Fougères Laboratory, 10B rue Claude Bourgelat, 35306, Fougères Cedex, France; 3: Institut des Sciences Chimiques de Rennes, UMR-CNRS 6226, Université de Rennes 1, France; 4: Institute of Medical Physics and Biophysics, University of Leipzig, Härtelesstrasse 16-18, 04275 Leipzig, Germany

Development of a new Quantification concept for the Characterization of Nanoparticle Solutions with Hydrodynamic Chromatography

ICP-MS AFTER THEIR SIMULTANEOUS SEPARATION FROM THE MATRICE
Mechthild Burow, Myroslav Zory
Forschungszentrum Jülich GmbH, Department Safety and Radiation Protection, Germany

Procedures for precise isotopic analysis of trace Pu in environmental materials by multi-static MIC-ICPMS
James Andrew Dunne, John W. Cairns, Pareen Patel, Allan J. Piddock
AWE Materials and Analytical Science, AWE plc, Aldermaston, Reading, Berkshire, RG7 4PR, UK plc., United Kingdom

Systematic Assessment of the Potential of Elemental and Strontium Isotopic Signatures for Provenancing of Fruit Raw Products on the Example of Strawberries - Part II
Christine Opper1, Sylvie Bonnet1, Johanna Irrgeher2, Konstantin Leonhartsberger1, Caroline Eigner1, Melanie Diesner1, Thomas Prohaska1
1: University of Natural Resources and Life Sciences, Austria; 2: Helmholtz-Centre for Materials and Coastal Research, Geesthacht, Germany

5:30pm - 6:50pm
BI-OL 2: BIOIMAGING - GENERAL SESSION 2
Location: ARLEBERG-well.com NORTH HALL
Chair: Andreas Limbeck
Chair: Anna-Maria Kriechbaum

Quantitative Bioimaging by LA-ICP-MS for Studying the Migration of Silver from Silver-coated Endoprostheses
Michael Sperling1,2, Mandy Großgarten1, Ann-Christin Niehoff1, Astrid Jeibmann3, Werner Paulus3, Uwe Karst1
1: University of Münster, Institute of Inorganic and Analytical Chemistry, Münster, Germany; 2: European Virtual Institute for Speciation Analysis, Münster, Germany; 3: University Hospital Münster, Institute of Neuropathology, Münster, Germany

Bioimaging of Zn and MMP-11 in Breast Cancer Tissues by LA-ICP-MS and MALDI-IMS
Raquel Gonzalez de Vega1, María Luisa Fernandez-Sanchez1, Noemi Eiró2, Francisco Vizoso2, Alfredo Sanz-Medel1, Uwe Karst1
1: Department of Physical and Analytical Chemistry, University of Oviedo, Spain; 2: Research Unit, Hospital de Jove Foundation, Gijon, Spain; 3: Institute of Inorganic and Analytical Chemistry, University of Münster, Germany

Spatially resolved quantification of gadolinium in human brain thin sections by means of LA-ICP-MS after administration of gadolinium-based contrast agents
Stefanie Fingerhut1, Ann-Christin Niehoff1, Michael Sperling1,2, Astrid Jeibmann3, Werner Paulus3, Thomas Niederstadt4, Thomas Allkemper4, Walter Leonhard Heindel4, Markus Helling5, Uwe Karst1
1: University of Münster, Institute of Inorganic and Analytical Chemistry, Münster, Germany; 2: European Virtual Institute for Speciation Analysis (EViSA), Germany; 3: University Hospital Münster, Institute of Neuropathology, Germany; 4: University Hospital Münster, Institute of Clinical Radiology, Germany; 5: University Hospital Münster, Department of Neurosurgery, Germany

New strategies for analysis of biological samples via ICP-MS
Martin Resano1, Esperanza Garcia-Ruiz1, Diego Pereira Leite1, Maite Aramendia2, Luis Rello3, Águeda Cañabate5, José Luis Todó4, Eduardo Bolea-Fernández5, Lieve Balcaen5, Frank Vanhaecke5, Sylvain Bérail6, Christophe Pécheyrans6
1: University of Zaragoza, Spain; 2: Centro Universitario de la Defensa, Spain; 3: “Miguel Servet” University Hospital, Spain; 4: University of Alicante, Spain; 5: Ghent University, Belgium; 6: CNRS - Université de Pau et des Pays de l’Adour, France
Quantitative LA-ICP-MS of single cells: Comparison of single spot ablation and imaging
Konrad Loehr, Antje Herrmann, Norbert Jakubowski
BAM, Germany

Application of LA-ICP-MS, EDX and confocal microscopy for imaging and quantifying Cd, Cu, Zn and Pb in tissues of pea (Pisum sativum L.)
Anetta Hanc1, Arlet Malecka2, Agnieszka Kutrowska2, Danuta Baralkiewicz1
1: Department of Trace Element Analysis by Spectroscopy Method, Faculty of Chemistry, Adam Mickiewicz University in Poznan, Poland; 2: Department of Biochemistry, Faculty of Biology, Adam Mickiewicz University

Laser ablation inductively coupled plasma mass spectrometry in elemental imaging of inorganic and biological materials
Viktor Kanicky1,2, Michaela Vasinova Galiova1,2, Marketa Hola1,2, Tomas Vaculovic1,2
1: Masaryk University, Faculty of Science, Brno, Czech Republic; 2: Masaryk University, Central European Institute of Technology, Brno, Czech Republic
### Date: Friday, 24/Feb/2017

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Location</th>
<th>Chair</th>
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<tr>
<td>8:30am - 9:00am</td>
<td><strong>APP-PL: APPLICATIONS AND FUTURE TRENDS - PLENARY LECTURE</strong></td>
<td>ARLBERG-well.com NORTH HALL</td>
<td>Steven James Ray</td>
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<td><strong>A Brief Gaze into the Plasma Spectrochemistry Crystal Ball</strong></td>
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<td>Florian Dutschke</td>
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<td>9:00am - 9:40am</td>
<td><strong>APP-IL: APPLICATIONS AND FUTURE TRENDS - INVITED LECTURES</strong></td>
<td>ARLBERG-well.com NORTH HALL</td>
<td>Steven James Ray</td>
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<td><strong>Hg fractionation, speciation, fish: New tools to unravel the global cycling of Hg</strong></td>
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<td>Florian Dutschke</td>
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<td>Olivier F.X. Donard(^1), David Amouroux(^1), Sylvain Berail(^1), Emmanuel Tessier(^1), Julien Barre(^1), Mathilde Monperrus(^1), Zoyne Pedrero(^1), Russel D. Day(^2)</td>
<td>1: Institut des Sciences Analytiques et de Physicochimie pour l'Environnement et le Matériaux, Pau, (France); 2: NIST, Hollings Marine Laboratory, Charleston (USA)</td>
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<td>9:40am - 10:50am</td>
<td><strong>APP-OL 1: APPLICATIONS AND FUTURE TRENDS - GENERAL SESSION 1</strong></td>
<td>ARLBERG-well.com NORTH HALL</td>
<td>Steven James Ray</td>
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<td><strong>Advances in Nuclear Forensics</strong></td>
<td></td>
<td>Florian Dutschke</td>
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<td>M. Paul Field(^1), Kayron N. Tevepaugh(^2), Brian W. Ticknor(^2), Hwan Kim(^1), Shalina C. Bottorff(^2), Cole R. Hexel(^2)</td>
<td>1: Elemental Scientific, United States of America; 2: Oak Ridge National Labs, United States of America</td>
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<td><strong>Dual-channel Concentric Grid Nebulizer for applying online standard addition ICP-OES</strong></td>
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<td>Kazumi Inagaki, Rina Matsushita, Koyo Ido, Shin-ichi Miyashita, Shin-ichiro Fujii</td>
<td>National Metrology Institute of Japan (NMIJ/AIST), Japan</td>
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<td>10:50am - 11:20am</td>
<td><strong>CO-FRI 1: COFFEE BREAK</strong></td>
<td>ARLBERG-well.com SOUTH HALL</td>
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<td><strong>Application of high pressure microwave-assisted digestion flow system for juice and milk sample preparation</strong></td>
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<td>Thiago Linhares Marques(^1), Joaquim Araújo Nóbrega(^1), Helmar Wiltsc(^1), Monika Winkler(^2), Günter Knapp(^2)</td>
<td>1: Group for Applied Instrumental Analysis, Department of Chemistry, Federal University of São Carlos,13565-905, São Carlos, SP, Brazil; 2: Institute of Analytical Chemistry and Food Chemistry, Graz University of Technology, 8010, Graz, Styria, Austria</td>
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<td>11:20am - 12:50pm</td>
<td><strong>APP-OL 2: APPLICATIONS AND FUTURE TRENDS - GENERAL SESSION 2</strong></td>
<td>ARLBERG-well.com NORTH HALL</td>
<td>Steven James Ray</td>
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<td><strong>Measuring of BaF by ICP-QMS/QMS for Determination of F in Drinking Water</strong></td>
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<td>Florian Dutschke</td>
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<td>Yanbei Zhu(^1), Kazumi Nakano(^2), Yasuyuki Shikamori(^2)</td>
<td>1: Leibniz Universität Hannover, Institut für Anorganische Chemie, Germany; 2: Leibniz Universität Hannover, Institut für Mineralogie, Germany</td>
<td></td>
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1: Institut des Sciences Analytiques et de Physicochimie pour l'Environnement et le Matériaux, Pau, (France); 2: NIST, Hollings Marine Laboratory, Charleston (USA)
How can TOF contribute to LA-ICP-MS applications?

**Olga Borovinskaya¹, Martin Tanner¹, Hao Wang², Julien Mercadier³, Jon Woodhead⁴**
1: TOFWERK AG, 3600 Thun, Switzerland; 2: Swiss Gemological Institute SSEF, 4051 Basel, Switzerland; 3: Université de Lorraine, 54506 Vandœuvre-Les-Nancy, France; 4: School of Earth Sciences, University of Melbourne, Melbourne, VIC 3010, Australia

The Analysis of Brines by ICP-OES

**Kenneth Neubauer, Erica Cahoon, Chady Stephan**
PerkinElmer Inc., United States of America

Table-top XUV Plasma-Laser for Chemical Imaging

**Davide Bleiner¹², Yunieski Arbelo¹, Francesco Barbato¹, Greta Patzke²**
1: Swiss Federal Laboratories for Materials & Technology (Empa), Switzerland; 2: University of Zurich

Validation of an Online Sequential extraction (OSE) method for the Elemental Characterisation of Fine Dust Sources

**Nicole Asante¹, Volker Nischwitz¹, Bernd G. Lottermoser²**
1: Forschungszentrum Juelich, Germany; 2: RWTH Aachen University, Germany

Matrix-matched calibration in LA-ICP-MS of silicate, phosphate and carbonate minerals: application of G-Probe samples

**Daria Kiseleva**
Institute of Geology and Geochemistry UB RAS, Russian Federation

Trace Element Analysis of Gemstones using LA-ICP-TOF-MS

**Hao A.O. Wang, Michael S. Kremnicki**
Swiss Gemological Institute SSEF, Switzerland

Determination of radium in natural waters using IC-ICP-MS after on-line preconcentration

**Hakan Gurleyuk, Tamas Ugrai**
Brooks Applied Labs, United States of America

Few-body physics with ultracold potassium rubidium mixtures

**Ridha Horchan**
Dhofar university, Oman

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**Programme**

1:30pm - 2:00pm  
**FRI-VE 2: VENDOR EXHIBITION**  
Location: ARLBERG-well.com SOUTH HALL

2:00pm - 4:00pm  
**SKI RACE: SKI RACE @ZIELSTADION (sponsored by Agilent, AMETEK/Spectro, Analytik Jena, Meinhard/ESI, Perkin Elmer, Solutions 4 Science, Shimadzu and Thermo Fisher)**  
Location: SKIING SLOPE - ARLBERG-well.com Finish Arena (ZIELSTADION)  
Chair: Stephan Hann  
Chair: Norbert Jakubowski

6:00pm - 9:00pm  
**CONFERENCE DINNER: CONFERENCE DINNER (beverages sponsored by Analytik Jena, Meinhard/ESI, Teledyne/Cetac and Thermo Fisher)**  
Location: ARLBERG-well.com NORTH HALL