



European Winter Conference on Plasma Spectrochemistry

10-15 February 2013, Krakow, Poland

programme



UNIVERSITAS
IAGELLONICA
CRACOVIENSIS



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CONFERENCE SECRETARIAT

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**Mobile phones are active
from 9th to 17th February 2013.**

CONFERENCE VENUE

**Auditorium Maximum, Jagiellonian University
Krupnicza 33, Kraków**

The Conference will be held in Auditorium Maximum, Jagiellonian University. All oral and poster presentations, the exhibition, as well as the Welcome Reception, Opening of the exhibition and social mixer and lunches will be organized there.

The Conference Office in Auditorium Maximum UJ will be open from Sunday to Friday during the conference session hours.

We kindly inform that admission to Auditorium Maximum is allowed only upon presenting the conference ID badge.

EXHIBITION

During the Conference there will be a display of analytical instrumentation, laboratory equipment and specialist literature. Stalls of the exhibitors will be located on level -1.

Official opening of the exhibition will take place on 11th February at 18:00.

All participants of the conference are cordially invited to the opening of the exhibition joined with a social mixer.

COFFEE BREAKS

Beverages, coffee, tea and snacks will be available for all participants during the Conference. They will be constantly served on level -1 from 10:30 to the last lecture.

PAPERS

Submitted papers, based on oral or poster presentations given at the 2013 Winter Conference on Plasma Spectrochemistry, will be considered for publication as original research papers in a themed issue of JAAS (i.e. full papers, urgent communications or technical notes).

The submission deadline is 1st April 2013.

Submitted manuscripts should be prepared in the format laid out in the "Instructions to Authors" available on the website (www.rsc.org/jaas).

Each manuscript deemed suitable for consideration as a submission will be reviewed by at least two referees, whose names are not disclosed to the authors. Papers will only be accepted if they conform to the normal high standards required for publication in the journal.

Accepted papers will be published on the RSC website as Advance Articles as soon as they are ready. The printed issue is provisionally scheduled to be published in August 2013. A PDF file will be supplied (and distributed) free of charge to the corresponding author of each paper published so that they can produce reprints on demand.

CONFERENCE PRESENTATIONS

Lectures and communications

All multimedia presentations which are to be displayed with the use of conference computers should be prepared in Power Point 2013 format or lower. Participants are kindly requested to pass on their presentations to the service staff at least **half an hour before the session** during which their presentation will be given, in order to copy them onto the conference computer.

Participants who wish to make use of their own computers are requested to test them **beforehand** to assure correct communication with a multimedia projector in a conference room.

Posters

The maximum dimensions of the posters: 90 cm × 120 cm (width × height).

Poster sessions will take place on level -1.

The organizers supply all the materials needed to fasten posters onto the boards.

The posters should be put up on the morning of the presentation day and removed when the poster session has finished.

Symbol	Explanation	Time	Total number
H	Honorary Lecture	40 + 5 min	7
P	Plenary Lecture	40 + 5 min	5
K	Keynote Lecture	25 + 5 min	10
E	Emerging Scientist Lecture	25 + 5 min	4
O	Oral Presentation	10 + 5 min	99
P	Poster Presentation	90 min	222

LIST OF CONFERENCE PRESENTATIONS

ORAL PRESENTATIONS

SYMBOL AND SECTION TOPIC	H	P	K	E	O	Total number
Opening session	2					2
A Fundamentals and instrumentation	1	1	2	1	30	35
B Stable isotope analysis & HR ICP MS	1	1	2	1	18	23
C Glow discharge	1	1	2	0	6	10
D Elemental speciation	1	1	2	1	21	26
E Laser ablation	1	1	2	1	24	29
Total number	7	5	10	4	99	125

POSTER PRESENTATIONS

SYMBOL AND SECTION TOPIC	Total number
F Fundamentals and instrumentation	17
G Sample preparation and introduction	5
H Applications of plasma spectrometry	45
I Glow discharge	10
J Atomic emission spectroscopy	19
K Laser ablation and elemental imaging	41
L Isotopic analysis	15
M Speciation analysis, metallomics and nanoparticle analysis	70
Total number	222

LUNCH & LEARN SYMPOSIUM

Expand your horizons with Agilent Technologies

Join our interactive symposium on 12th February at 13:00, Auditorium Maximum UJ room F level +2, Krupnicza 33, Krakow, and learn about the benefits and application capabilities of the new technologies, such as the 8800 ICP-QQQ and the 4100 MP-AES. The session will include a panel discussion with key scientists using the latest innovations and will be moderated by Professor Ryszard Łobiński, the National Research Council of France.

SOCIAL EVENTS

Welcome reception

Sunday, 10th February at 19:30, Auditorium Maximum UJ, Hall Level 0

Opening of the exhibition and social mixer

Monday, 11th February at 18:00, Auditorium Maximum UJ, Level -1

During official opening of the exhibitions all participants of the conference are cordially invited to an informal dinner. Traditional Polish cuisine will be served including selected fine liqueurs.

Vendors' event

Agilent Technologies Evening Event Stara Zajezdnia

Meet us on 13th February at 18:30 in Auditorium Maximum UJ, Krupnicza 33, Krakow, to depart for a friendly evening event with our atomic spectroscopy team. Reserve your seat now for our popular user group meeting, with dinner, drinks and music: seats are limited. Don't forget to come to booths no. 8&9 to pick up your evening event free pass.

Thermo Innovation Club Night

Join us on 13th February at the Lizard King Club (entertainment, food and drinks supplied). See the conference bag flyer for registration details and visit the Thermo Scientific booth to collect your entrance ticket. Visit www.thermoscientific.com/ewpc2013

PerkinElmer Users' Event

Let's go underground – take a walk with us through the Rynek Underground Museum.

We will start on 13th February at 18:00 at Main Square 1, Krakow, with a visit of the Rynek Underground Museum followed by a traditional dinner at the foot of the Wawel Hill. Registration/Tickets: available during the Conference at PerkinElmer booths no. 10&11

Sightseeing of Krakow Old Town – guided walk

Wednesday, 13th February

Meeting place: Auditorium Maximum UJ, Krupnicza 33, 8:00

Get to know Krakow with us! All participants of the Conference are invited to a walk through the streets of the Old Krakow. Our guides will show you around the Wawel Cathedral and after we will follow the Kings' Road towards one of the biggest market squares in Europe – the Main Market Square. The guided walk will give you the opportunity to familiarize yourselves with the history of the famous monuments: the medieval cloth hall – Sukiennice, St. Mary's Basilica with the traditional bugle call sounded every hour from the tower, and the oldest buildings of the university district including Collegium Maius Jagiellonian University.

Krakow and the surroundings (Pieskowa Skała) – only for registered accompanying person

Thursday, 14th February

Meeting place: Auditorium Maximum UJ, Krupnicza 33, 8.50

We will visit the Ojców National Park located in the vicinity of Krakow (30 km). Amongst beautiful scenery of limestone rocks and forest lies a medieval castle of Pieskowa Skała overlooking a famous rock formation called Herkules's Club. On our way back to Krakow there will be an opportunity to see a unique shrine on water and have a dinner in a traditional restaurant. Upon return to Krakow we will get familiar with the monuments and the history of the Jewish District and the tour will conclude in the Oscar Schindler's Factory Museum.

Hot plasma party (Zalesie, 15 km from Krakow) – optional

Tuesday, 12th February

Meeting place: Auditorium Maximum UJ, Krupnicza 33, 18:45

You are most welcome to join us at the unforgettable HOT PLASMA PARTY which will take place outside Krakow in 'Folwark Zalesie' Inn – an old farm surrounded by forests, fields and meadows, where you can enjoy a beautiful panorama of the Beskid and the Tatra mountains. The participants will be transported to this magic rural place by bus along a scenic route leading through the Wieliczkie Foothills. The guests will be welcomed by a folk band playing traditional music and serving the local liqueur, and the group will give a short performance afterwards. Later on, the participants will have an occasion to taste exquisite traditional Polish cuisine including white borsch with egg, grilled meat and many others served with diverse types of salads and a wide variety of drinks.

This very special event, scheduled for the last night of the Carnival 2013, will be accompanied by a band playing folk and traditional dance music.

Conference Gala Dinner (Wieliczka Salt Mine) – optional

Thursday, 14th February

Meeting place: Auditorium Maximum UJ, Krupnicza 33, 18:45

You are cordially invited to the Conference Gala Dinner in the captivating interior of the Wieliczka Salt Mine, one of the most valuable monuments of Polish material and spiritual culture visited each year by more than one million tourists from all over the world. It is a world class monument with more than 700 years of history, featured on the UNESCO's World Cultural and Natural Heritage List. Dazzling decor of the underground excavations makes the Wieliczka Salt Mine an ideal venue for a banquet with the served dishes cooked on site, in the underground kitchens, and prepared from local top-quality products.

The dinner will take place in the Warszawa Chamber – formed after salt mining, localised ca. 150 m under ground. The participants will be transported from Krakow to Wieliczka by bus. The guests will be welcomed by a salt mine kobold Skarbek and will also receive souvenirs. Miner's orchestra will be performing before the dinner followed by dance music will be performed after the dinner. With respect to the venue and occasion all participants are kindly requested to wear semi-formal evening dress.

time	Sunday	Monday		Tuesday			
	Opening of the conference	Fundamentals and instrumentation		Stable isotope analysis & HR ICP MS			
8 ³⁰ -8 ⁴⁵		Honorary lecture AH		Honorary lecture BH			
8 ⁴⁵ -9 ⁰⁰							
9 ⁰⁰ -9 ¹⁵							
9 ¹⁵ -9 ³⁰		Plenary lecture AP		Plenary lecture BP			
9 ³⁰ -9 ⁴⁵							
9 ⁴⁵ -10 ⁰⁰		Keynote lecture AK-1		Keynote lecture BK-1			
10 ⁰⁰ -10 ¹⁵							
10 ¹⁵ -10 ³⁰		Coffee break		Coffee break			
10 ³⁰ -10 ⁴⁵							
10 ⁴⁵ -11 ⁰⁰		Emerging scientist lecture AE		Emerging scientist lecture BE			
11 ⁰⁰ -11 ¹⁵							
11 ¹⁵ -11 ³⁰							
11 ³⁰ -11 ⁴⁵		Keynote lecture AK-2		Keynote lecture BK-2			
11 ⁴⁵ -12 ⁰⁰							
12 ⁰⁵ -12 ²⁰			A-a01	A-b01	B-a01	B-b01	
12 ²⁰ -12 ³⁵	A-a02		A-b02	B-a02	B-b02		
12 ³⁵ -12 ⁵⁰	A-a03		A-b03	B-a03	B-b03		
12 ⁵⁰ -13 ⁰⁵	A-a04		A-b04	B-a04	B-b04		
13 ⁰⁵ -13 ¹⁵	Lunch		Lunch				
13 ¹⁵ -13 ³⁰							
13 ³⁰ -13 ⁴⁵							
13 ⁴⁵ -14 ⁰⁰							
14 ⁰⁰ -14 ¹⁵							
14 ¹⁵ -14 ³⁰	Short courses session	A-a05	A-b05	Poster session (section: F, G, H) and exhibition			
14 ³⁰ -14 ⁴⁵		A-a06	A-b06				
14 ⁴⁵ -15 ⁰⁰		A-a07	A-b07				
15 ⁰⁰ -15 ¹⁵		A-a08	A-b08				
15 ¹⁵ -15 ³⁰		A-a09	A-b09				
15 ³⁰ -15 ⁴⁵		Coffee break		B-a05	B-b05		
15 ⁴⁵ -16 ⁰⁰		A-a10	A-b10	B-a06	B-b06		
16 ⁰⁰ -16 ¹⁵		A-a11	A-b11	B-a07	B-b07		
16 ¹⁵ -16 ³⁰		A-a12	A-b12	B-a08	B-b08		
16 ³⁰ -16 ⁴⁵		A-a13	A-b13	B-a09	B-b09		
16 ⁴⁵ -17 ⁰⁰	Opening session	A-a14	A-b14				
17 ⁰⁰ -17 ¹⁵		A-a15	A-b15				
17 ¹⁵ -17 ³⁰		Opening of the exhibition and social mixer				Hot plasma party in Zalesie	
17 ³⁰ -17 ⁴⁵							
17 ⁴⁵ -18 ⁰⁰							
18 ⁰⁰ -18 ¹⁵							
18 ¹⁵ -18 ³⁰							
18 ³⁰ -18 ⁴⁵							
18 ⁴⁵ -19 ⁰⁰							
19 ⁰⁰ -19 ¹⁵							
19 ¹⁵ -19 ³⁰	Welcome reception						
19 ³⁰							

Wednesday	Thursday		Friday		time	
Glow discharge	Elemental speciation		Laser ablation			
Sightseeing of Krakow old town	Honorary lecture DH		Honorary lecture EH		8 ³⁰ -8 ⁴⁵	
					8 ⁴⁵ -9 ⁰⁰	
					9 ⁰⁰ -9 ¹⁵	
	Plenary lecture DP		Plenary lecture EP		9 ¹⁵ -9 ³⁰	
					9 ³⁰ -9 ⁴⁵	
					9 ⁴⁵ -10 ⁰⁰	
	Keynote lecture DK-1		Keynote lecture EK-1		10 ⁰⁰ -10 ¹⁵	
					10 ¹⁵ -10 ³⁰	
	Coffee break		Coffee break		10 ³⁰ -10 ⁴⁵	
					10 ⁴⁵ -11 ⁰⁰	
	Emerging scientist lecture DE		Emerging scientist lecture EE		11 ⁰⁰ -11 ¹⁵	
Coffee break					11 ¹⁵ -11 ³⁰	
	Keynote lecture DK-2		Keynote lecture EK-2		11 ³⁰ -11 ⁴⁵	
					11 ⁴⁵ -12 ⁰⁰	
Honorary lecture CH	D-a01	D-b01	E-a01	E-b01	12 ⁰⁵ -12 ²⁰	
	D-a02	D-b02	E-a02	E-b02	12 ²⁰ -12 ³⁵	
Keynote lecture CK-1	D-a03	D-b03	E-a03	E-b03	12 ³⁵ -12 ⁵⁰	
	D-a04	D-b04	E-a04	E-b04	12 ⁵⁰ -13 ⁰⁵	
Lunch	Lunch		Lunch		13 ⁰⁵ -13 ¹⁵	
					13 ¹⁵ -13 ³⁰	
					13 ³⁰ -13 ⁴⁵	
					13 ⁴⁵ -14 ⁰⁰	
					14 ⁰⁰ -14 ¹⁵	
				14 ¹⁵ -14 ³⁰		
Poster session (section: I, J, K, L) and exhibition	Poster session (section: M) and exhibition		E-a05	E-b05	14 ³⁰ -14 ⁴⁵	
			E-a06	E-b06	14 ⁴⁵ -15 ⁰⁰	
			E-a07	E-b07	15 ⁰⁰ -15 ¹⁵	
			E-a08	E-b08	15 ¹⁵ -15 ³⁰	
			E-a09	E-b09	15 ³⁰ -15 ⁴⁵	
				15 ⁴⁵ -16 ⁰⁰		
Plenary lecture CP	D-a05	D-b05	E-a11	E-b11	16 ⁰⁰ -16 ¹⁵	
	D-a06	D-b06	E-a12	E-b12	16 ¹⁵ -16 ³⁰	
	D-a07	D-b07	Closing ceremony		16 ³⁰ -16 ⁴⁵	
Keynote lecture CK-1	D-a08	D-b08			16 ⁴⁵ -17 ⁰⁰	
	D-a09	D-b09			17 ⁰⁰ -17 ¹⁵	
C-a01	C-a05	D-a10			D-b10	17 ¹⁵ -17 ³⁰
C-a02	C-b02	D-a11				17 ³⁰ -17 ⁴⁵
C-a03	C-b03					17 ⁴⁵ -18 ⁰⁰
						18 ⁰⁰ -18 ¹⁵
						18 ¹⁵ -18 ³⁰
Vendors' event	Gala dinner in Wieliczka Salt Mine				18 ³⁰ -18 ⁴⁵	
					18 ⁴⁵ -19 ⁰⁰	
					19 ⁰⁰ -19 ¹⁵	
					19 ¹⁵ -19 ³⁰	
				19 ³⁰		

Sunday, 10th February 2013

13:00 – 20:00	REGISTRATION	<i>Hall, Level 0</i>
14:00 – 16:30	SHORT COURSES SESSION	
17:00 – 19:30	OPENING SESSION	<i>Room A & B</i>
19:30	WELCOME RECEPTION	<i>Hall, Level 0</i>

Monday, 11th February 2013

Section A: FUNDAMENTALS AND INSTRUMENTATION

8:30 – 10:30	SESSION A1	<i>Room A</i>
10:30 – 11:00	Coffee break	<i>Level -1</i>
11:00 – 12:00	SESSION A2	<i>Room A</i>
12:05 – 13:05	PARALLEL SESSIONS	A3-a <i>Room A</i> A3-b <i>Room B</i>
13:05 – 14:30	Lunch	<i>Level -1</i>
14:30 – 15:45	PARALLEL SESSIONS	A4-a <i>Room A</i> A4-b <i>Room B</i>
15:45 – 16:15	Coffee break	<i>Level -1</i>
16:15 – 17:45	PARALLEL SESSIONS	A4-a <i>Room A</i> A4-b <i>Room B</i>
18:00	OPENING OF THE EXHIBITION AND SOCIAL MIXER	<i>Level -1</i>

Tuesday, 12th February 2013

Section B: STABLE ISOTOPE ANALYSIS & HR ICP MS

8:30 – 10:30	SESSION B1	<i>Room A</i>
10:30 – 11:00	Coffee break	<i>Level -1</i>
11:00 – 12:00	SESSION B2	<i>Room A</i>
12:05 – 13:05	PARALLEL SESSIONS	B3-a <i>Room A</i> B3-b <i>Room B</i>

13:05 – 14:30	Lunch	<i>Level -I</i>
14:30 – 16:00	POSTER SESSION (section: F, G, H) AND EXHIBITION	<i>Level -I</i>
16:00 – 17:15	PARALLEL SESSIONS	B4-a <i>Room A</i> B4-b <i>Room B</i>
18:45	HOT PLASMA PARTY IN ZALESIE – optional fee	

Wednesday, 13th February 2013

Section C: GLOW DISCHARGES

8:30 – 11:15	SIGHTISEEING OF KRAKOW OLD TOWN	
11:15 – 11:45	Coffee break	<i>Level -I</i>
11:45 – 13:00	SESSION C1	<i>Room A</i>
13:05 – 14:30	Lunch	<i>Level -I</i>
14:30 – 16:00	POSTER SESSION (section: I, J, K, L) AND EXHIBITION	<i>Level -I</i>
11:45 – 13:00	SESSION C2	<i>Room A</i>
17:20 – 18:05	PARALLEL SESSIONS	C3-a <i>Room A</i> C3-b <i>Room B</i>
18:30	VENDORS' EVENT	

Thursday, 14th February 2013

Section D: ELEMENTAL SPECIATION

8:30 – 10:30	SESSION D1	<i>Room A</i>
10:30 – 11:00	Coffee break	<i>Level -I</i>
11:00 – 12:00	SESSION D2	<i>Room A</i>
12:05 – 13:05	PARALLEL SESSIONS	D3-a <i>Room A</i> D3-b <i>Room B</i>
13:05 – 14:30	Lunch	<i>Level -I</i>

14:30 – 16:00 POSTER SESSION
(section: M) *Level -1*
AND EXHIBITION

16:00 – 17:45 PARALLEL SESSIONS D4-a *Room A* D4-b *Room B*

18:45 GALA DINNER IN WIELICZKA SALT MINE – optional fee

Friday, 15th February 2013

Section E: LASER ABLATION

8:30 – 10:30 SESSION E1 *Room A*

10:30 – 11:00 Coffee break *Level -1*

11:00 – 12:00 SESSION E2 *Room A*

12:05 – 13:05 PARALLEL SESSIONS E3-a *Room A* E3-b *Room B*

13:05 – 14:30 Lunch *Level -1*

14:30 – 16:30 PARALLEL SESSIONS E4-a *Room A* E4-b *Room B*

16:30 – 16:45 CLOSING CEREMONY

13:00 – 20:00 REGISTRATION *Hall, Level 0*

14:00 – 16:30 SHORT COURSES SESSION

14:00 SC-1 *Introduction to ICP-MS*
Robert Samuel Houk
Room A, Level 0

14:00 SC-2 *Isotopic analysis via ICP-mass spectrometry: what, how and why*
Frank Vanhaecke
Room B, Level 0

14:00 SC-3 *Quality in analytical sciences*
Ewa Bulska
Room C, Level 0

14:00 SC-4 *From speciation analysis to metallomics*
Maria Montes-Bayón
Room D, Level 0

14:00 SC-5 *Laser ablation ICP MS*
Detlef Günther
Room E, Level 2

17:00 – 19:30 OPENING SESSION *Room A & B*

17:00 *Opening ceremony*
Joanna Szpunar, Paweł Kościelniak

18:00 *Winter Conference on Plasma Spectrochemistry: The background*
Ramon Barnes

18:30 *Plasma Award laudation*
Klaus Heumann

18:45 *Lecture of the Plasma Award laureate*
Norbert Jakubowski

19:30 WELCOME RECEPTION *Hall, Level 0*

FUNDAMENTALS AND INSTRUMENTATION

8:30 – 10:30 SESSION A1 Room A

Chair: Joseph Caruso

- 8:30 AH *Historical development and recent advances in ICP mass spectrometry*
Robert S. Houk
- 9:15 AP *Novel models and methods for plasma spectrochemistry*
Gary Hieftje, George Chan, Steven J. Ray, Andrew Schwartz, Yan Cheung
- 10:00 AK-1 *Development of high performance triple tube concentric nebulizer for plasma spectrometry*
Kazumi Inagaki, Shin-Ichiro Fujii, Shinichi Miyashita, Alexander S. Groombridge, Keisuke Nagasawa, Tetsuya Okahashi, Akiko Takatsu, Koichi Chiba

10:30 – 11:00 Coffee break Level -1

11:00 – 12:00 SESSION A2 Room A

Chair: José Broekaert

- 11:00 AE *Characterization and application of the thermal inkjet-based aerosol generator as an alternative tool for sample introduction in plasma spectrometry*
Nicolas H. Bings, Jan O. Orlandini v. Niessen, J. Niklas Schaper, Jan H. Petersen, Tobias J. Fiedler
- 11:30 AK-2 *Selecting plasma source based on multi-electrode systems*
Krzysztof Jankowski

12:05 – 13:05 PARALLEL SESSION A3-a Room A

Chair: Andreas Prange

- 12:05 A-a01 *Improvement of analytical performance of droplet direct injection ICP-TOFMS using desolvation system and high speed data acquisition*
Yuki Kaburaki, Tomokazu Kozuma, Akito Nomura, Takahiro Iwai, Hidekazu Miyahara, Akitoshi Okino
- 12:20 A-a02 *Organic solvent analysis using a ICP-QQQ-MS (MS/MS capable) inductively coupled plasma-mass spectrometer*
Glenn Woods
- 12:35 A-a03 *Single-particle analysis using ultra-fast quadrupole ICP-MS*
Hamid Badijei, Kaveh Kahen
- 12:50 A-a04 *Automatic sample pretreatment instrument for solid phase extraction of trace elements prior to the determination by ICP-MS*
Yanbei Zhu, Akiharu Hioki, Koichi Chiba

12:05 – 13:05 PARALLEL SESSION A3-b Room B

Chair: Wolfgang Buscher

- 12:05 A-b01 *Optimization of geometrical and operating parameters of an inductively coupled plasma mass spectrometer: a computational study*
Maryam Aghaei, Helmut Lindner, Annemie Bogaerts
- 12:20 A-b02 *Expanding the direct analysis capabilities of plasma-based ambient mass spectrometry sources*
Jacob T. Shelley, Carsten Engelhard
- 12:35 A-b03 *Technological progress in construction of rotating plasma sources*
Krzysztof Jankowski, Sławomir Piotrowski, Andrzej Ramsa,
Edward Reszke, Anna Tyburska-Staniewska
- 12:50 A-b04 *Dispersed particle extraction – a novel approach for analyte enrichment and matrix removal*
Winfried Nischkauer, Anastassiya Tchaikovsky, Rafael Janski,
Marie-Alexandra Néouze, Andreas Limbeck

13:05 – 14:30 Lunch Level -1

14:30 – 15:45 PARALLEL SESSION A4-a Room A

Chair: Joerg Bettmer

- 14:30 A-a05 *Detection of cancer markers using surface modified metal/dye-doped magnetic silica nanoparticles in ICP-MS*
Jungaa Ko, Heung Bin Lim
- 14:45 A-a06 *3D ion optics for ICP-MS*
Iouri Kalinitchenko
- 15:00 A-a07 *Combination of the inductively coupled plasma and distance-of-flight mass spectrometry: exploring a new chapter in atomic mass spectrometry*
Alexander Gundlach-Graham, Elise A. Dennis, Steven J. Ray, Christie G. Enke,
Charles J. Barinaga, David W. Koppenaal, Gary M. Hieftje
- 15:15 A-a08 *Determination of challenging elements in the context of marine environmental analysis: exploring the potential of ICP-MS-MS*
Daniel Proefröck, Andreas Prange
- 15:30 A-a09 *Novel methodological approaches for the accurate and rapid analysis of elemental impurities in pharmaceutical products according to USP 232/233*
Lisa Fischer, Barbara Zipfel, Gunda Kollensperger, Jessica Kovacs,
Cornel Venzago, Stephan Hann

14:30 – 15:45 PARALLEL SESSION A4-b Room B

Chair: Kazumi Inagaki

- 14:30 A-b05 *Investigation of corrosion product deposits on nuclear fuel rods by means of ICP-MS and electron microscopy*
Ines Günther-Leopold, Marlene Krois, Judith Kobler Waldis,
Hanspeter Linder, Sousan Abolhassani Dadras

- 14:45 A-b06 *Spectrometric techniques applied to the optimization and process control of a pilot plant for the recovery of rare earths from red mud*
Maria Ochsenkühn-Petropoulou, Lambrini Tsakanika,
 Theopisti Lymperopoulou, Leonidas Mendrinou, Rachel Argyropoulou,
 Klaus Ochsenkühn
- 15:00 A-b07 *Inorganic arsenic in seafood: Does the extraction method matter?*
Asta Heidrun Petursdottir, Helga Gunnlaugsdottir, Eva Krupp, Jörg Feldmann
- 15:15 A-b08 *Dissolution made easy for chromite ores, ferrochromes and chromium slags by peroxide fusions for ICP analyses*
 Janice Pitre, Melanie Bedard, John A. Anzelm, Anne-Catherine Breton, o
- 15:30 A-b09 *Dynamic extraction of soluble surface layers with on-line ICP-OES detection – a novel approach for determination of depth profiles*
Andreas Limbeck, Ghislain Rupp, Herbert Hutter, Juergen Fleig
- 15:45 – 16:15 Coffee break Level -1**
- 16:15 – 17:45 PARALLEL SESSION A5-a Room A**
Chair: Maria Ochsenkuhn-Petropoulou
- 16:15 A-a10 *Ultra-fast ICP-OES determinations of major, minor and trace elements in seawater using next generation sample introduction technology*
Glyn Russell, John Cauduro
- 16:30 A-a11 *Fast semi-quantitative and quantitative direct solids analysis using a fully simultaneous Mattauch-Herzog ICP-MS and transient signal acquisition*
Dirk Ardelet, Willi Barger, Aleksandra Polatajko, Oliver Primm,
 Maurice Reijnen
- 16:45 A-a12 *Determination of boron in high-temperature alloy steel using non-linear inter-element correction and microwave plasma – atomic emission spectrometry*
Terrance Hettipathirana
- 17:00 A-a13 *Background levels of metals in urine samples to assist with exposure assessments*
Jackie Morton, Elizabeth Leese, Emma Tan, John Cocker
- 17:15 A-a14 *Determination of trace-level amounts of lanthanides, thorium, plutonium and americium from uranium samples*
Judit Krajčák, Zsolt Varga, Adrian Nicholl, Maria Wallenius, Klaus Mayer
- 17:30 A-a15 *Determination of light elements in steel by optical emission spectroscopy*
Myriam Madani
- 16:15 – 17:45 PARALLEL SESSION A5-b Room B**
Chair: Daniel Proefrock
- 16:15 A-b10 *Microwave assisted high pressure flow digestion: New approaches to solve old problems*
Helmar Wiltzsche, Günter Knapp
- 16:30 A-b11 *Elemental impurity compliance strategy for a large volume parenteral manufacturer*
Michael Fricke, James Fletcher, Neelam Varshney, Martin Hughes

- 16:45 A-b12 *ICP-MS study of role of microelements in the blood of oncologic patients*
Olesia Kovalenko, Irina V. Boltina
- 17:00 A-b13 *Optimisation of operative conditions for the determination of silicon concentrations in in vitro and ex vivo biological matrices by DRC-ICP-MS*
Dagmar Koller, Sarah Ratcliffe, Ravin Jugdaohsingh, Jonathan Powell, Sylvaine Bruggraber
- 17:15 A-b14 *ICP-MS as monitoring tool to ensure the quality and safety of Norwegian marine fish*
Stig Valdersnes, Daniel Fliegel, Bente M. Nilsen, Sylvia Frantzen, Arne Duinker, Kåre Julshamn, Amund Maage
- 17:30 A-b15 *Combining highest sensitivity with selectivity for quadrupole ICP-MS*
René Chemnitzer, Peio Riss, Meike Hamester, Andrew Toms

18:00 **OPENING OF THE EXHIBITION** *Level -1*
AND SOCIAL MIXER

STABLE ISOTOPE ANALYSIS & HR ICP MS

B

section

8:30 – 10:30 SESSION B1 Room A

Chair: Gary Hieftje

8:30 BH *Isotope dilution mass spectrometry – an exhausting way from an exotic to a generally accepted method in elemental trace and elemental species determination*

Klaus G. Heumann

9:15 BP *High precision isotope ratio multiple collector ICP MS from planet formation to medicine*

Alex N. Halliday, Kathrin Abraham, Jane Barling, Nick Belshaw, Pierre Bonnard, Raphaëlle Escoube, Louise Gall, Fiona Larner

10:00 BK-1 *Unleashing the full power of ICP-MS by exploiting isotopic information*

Frank Vanhaecke, Maite Aramendia, Lieve Balcaen, Patrick Degryse, Veerle Devulder, Charo Florez, Lara Lobo, Martin Resano, Lana Van Heghe, Karen Van Hoecke

10:30 – 11:00 Coffee break Level -1

11:00 – 12:00 SESSION B2 Room A

Chair: Frank Vanhaecke

11:00 BE *The potential of isotopic research in analytical ecogeochemistry*

Thomas Prohaska, Johanna Irrgeher, Stefanie Kappel, Monika Horský, Daniel Kofler, Gregor Laaha, Friedrich Leisch, Andreas Zitek

11:30 BK-2 *Mass-independent fractionation occurring in MC-ICPMS: a common phenomenon? And its implication for accurate isotope amount ratio measurements*

Lu Yang

12:05 – 13:05 PARALLEL SESSION B3-a Room A

Chair: Peter Fodor

12:05 B-a01 *Accurate plutonium isotope analysis using SF-ICP-MS provided evidence for the release of plutonium from the Fukushima Daiichi nuclear power plant accident*

Jian Zheng, Keiko Tagami, Shigeo Uchida, Tatsuo Aono, Wenting Bu

12:20 B-a02 *Calibration of absolute $^{13}C/^{12}C$ isotope amount ratio measurements by MC-ICPMS using synthetic isotope mixtures*

Dmitriy Malinovskiy, Philip Dunn, Heidi Goenaga-Infante

12:35 B-a03 *Precise Hg isotopic composition measurements at ultra- trace level: double stage gold-trap / MC-ICP-MS coupling*
Sylvain Berail, Emmanuel Tessier, Zoyne Pedrero, Julien Barre, David Amouroux

12:50 B-a04 *Isotope ratio determinations: high sensitivity for highest precision*
Meike Hamester, René Chemnitzer, Andrew Toms

12:05 – 13:05 PARALLEL SESSION B3-b Room B

Chair: Michael Sperling

12:05 B-b01 *Isotope ratio mapping by means of LA-single collector-ICPMS: Zn tracer studies in thin sections of daphnia magna*
María Rosario Flórez, Maite Aramendia, Martín Resano, Lieve Balcaen, Frank Vanhaecke

12:20 B-b02 *Provenance studies on early gold of bronze ages using trace elements and isotope ratios*
Robert Lehmann

12:35 B-b03 *Initial experiments on monitoring two isotopes in single particle ICP-QMS*
Jörg Bettmer, Juris Meija

12:50 B-b04 *Fundamental ion beam study with respect to instrumental mass discrimination in multi-collector inductively coupled plasma mass spectrometry*
Niko Kivel, Ines Günther-Leopold, Frank Vanhaecke, Detlef Günther

13:05 – 14:30 Lunch Level -1

14:30 – 16:00 POSTER SESSION (section: F, G, H) AND EXHIBITION Level -1

16:00 – 17:15 PARALLEL SESSION B4-a Room A

Chair: Yang Lu

16:00 B-a05 *Sulphur metabolism studies with enriched stable isotopes using HPLC coupled to multicollector ICP-MS*
Oscar Galilea San Blas, Juan Manuel Marchante Gayon, J Ignacio Garcia Alonso

16:15 B-a06 *Transgenerational isotopic marking of carp *Cyprinus carpio*, l. using a $^{86}\text{Sr}/^{84}\text{Sr}$ double spike*
Andreas Zitek, Magdalena Cervicek, Johanna Irrgeher, Monika Horsky, Manfred Kletzl, Thomas Weismann, Thomas Prohaska

16:30 B-a07 *Assesment of iron isotopic composition as a parameter for iron status.*
Lana Van Heghe, Joris Delanghe, Frank Vanhaecke

16:45 B-a08 *Method development for the determination of PBDEs in water samples by IDA-GC-ICP-MS: a new approach to meet the requirements of the EU-WFD?*
Adriana Gonzalez-Gago, Daniel Proefrock, Andreas Prange

17:00 B-a09 *On the determination of trace elements in lead-bismuth eutectic by means of ICP-SFMS*
Tom Tindemans, Andrew Dobney, Dorine Wambeke, Frank Vanhaecke

16:00 – 17:15 PARALLEL SESSION B4-b Room B

Chair: Thomas Prohaska

- 16:00 B-b05 *Using enriched stable isotopes for traceability purposes: manufactured goods and living organisms*
Mariella Moldovan, Aida Reguera-Galan, Isabel Carames-Pasaron,
 Gonzalo Huelga-Suarez, J. Ignacio García Alonso
- 16:15 B-b06 *Determination of geographical origin of rice based on multi-element fingerprinting by high resolution inductively coupled plasma mass spectrometry (HR-ICP-MS)*
Pracha Cheajesadagul, Carine Arnaudguilhem, Juwadee Shiowatana,
 Atitaya Siripinyanond, Joanna Szpunar
- 16:30 B-b07 *Separation method for measurement of cadmium, lead and zinc in vegetal tissue samples by using isotopic dilution with ICP-SFMS*
Maria del Rocio Arvizu-Torres, Edith Valle-Moya, J. Velina Lara Manzano
- 16:45 B-b08 *Antimony isotopic analysis using multi-collector ICP-MS for provenancing Roman glass*
Lara Lobo Revilla, Patrick Degryse, Frank Vanhaecke
- 17:00 B-b09 *Highly accurate isotope composition measurements by a miniature laser ablation mass spectrometer designed for space research*
Andreas Riedo
- 18:45** **HOT PLASMA PARTY IN ZALESIE – optional fee**
 Meeting place: Auditorium Maximum UJ, Krupnicza 33

POSTER SESSION

FUNDAMENTALS AND INSTRUMENTATION



- FP-1 *Application of MS/MS reaction cell in the newly developed triple quadrupole ICP-MS (ICP-QQQ) for the determination of S, P, Si and Cl in the organic solvents*
Naoki Sugiyama
- FP-2 *Common analyte internal standardization (CAIS) as a tool for mass discrimination correction in multi-collector ICP-MS*
Lara Lobo, Veerle Devulder, Karen Van Hoecke, Patrick Degryse, Frank Vanhaecke
- FP-3 *Application of the damage-free multi-gas plasma jet to solution analysis*
Takahiro Iwai, Anastasia Albert, Kensuke Okumura, Hidekazu Miyahara,
Akitoshi Okino, Carsten Engelhard
- FP-4 *Mini collision cell for ICP-MS*
Iouri Kalinitchenko
- FP-5 *Numerical simulation of droplet-plasma interactions in an inductively coupled plasma*
 Sanaz Arabzadeh, Hamid Badiei, Kaveh Kahen, Javad Mostaghimi
- FP-6 *Strategy for optimizing low-temperature plasma ambient ionization for high-resolution mass spectrometry: design of experiments*
Anastasia Albert, Carsten Engelhard

- FP-7 *Low-temperature plasma ambient desorption/ionization high resolution mass spectrometry: fundamental study of the ionization characteristics compared to ESI and APCI*
Anastasia Albert, Carsten Engelhard
- FP-8 *Detection of nano-sized organic aerosols by time-of-flight mass spectrometry with soft plasma ionization source*
Yoko Nunome, Kenji Kodama, Hyunkook Park, Yasuaki Ueki, Ryo Yoshiie, Sang Chun Lee, Kuniyuki Kitagawa, Ichiro Naruse
- FP-9 *Novel approach to life science applications using triple quad ICP-MSMS (ICP-QQQ)*
Amir Liba
- FP-10 *Problems in the determination of selenium by ICP-MS in biological material*
Marcin Wieczorek, Maciej Stafiński, Stanisław Walas, Paweł Kościelniak
- FP-11 *Evaluation of the collision reaction interface (CRI) for analysis of soil treated with vinasse*
Silmara Bianchi, Joaquim Nóbrega, Ana Nogueira
- FP-12 *Low volume injection autosampler for ICP-MS*
David Clarke, Bill Spence, Peter Winship, Damon Green
- FP-13 *A specialized desolvating nebulizer and washout system for U-series dating with multicollector ICP-MS*
Fred G. Smith, Peter Winship, Bill Spence, Chad Paton
- FP-14 *Intelligent, fully automated auto-dilution for high throughput multielemental analysis by ICP-Q-MS*
Jianfeng Cui, Julian Wills, Lothar Rottmann, Dan Wiederin
- FP-15 *Spectral and spatio-temporal characterizations of an atmospheric DBD plasma jet*
Laura Chauvet, Cristina Muja, Bruno Caillier, Laurent Therese, Philippe Guillot
- FP-16 *Portable automated separation system for routine purification and/or pre-concentration of radionuclides based on column chromatography*
Mechthild Burow
- FP-17 *Ion Optics for ICP-MS*
Iouri Kalinitchenko, Andrew Gaal, Xuedong, Meike Hamester, Rene Scemnitzer, Andrew Toms

SAMPLE PREPARATION AND INTRODUCTION



- GP-1 *Introduction of a novel separation method for uranium and thorium by surface functionalized nanoparticles for uranium age determination*
Anastasiya Tchaikovsky, Andreas Limbeck
- GP-2 *Passive sampling as a tool for time-integrated analysis of metal and metal species in marine waters using ICP-MS-MS*
Jördis Petersen, Daniel Pröfrock, José A.C. Broekaert, Andreas Prange

- GP-3 *Determination of ^{90}Sr at ultratrace levels using an automated chromatographic system coupled to high resolution ICPMS*
 Laura Aldave de las Heras, Miguel Sandow, Daniel Serrano-Purroy, Stefaan Van Winckel, Grzegorz Olszewski, Bodgan Skwarzec, Patrick Klemens
- GP-4 *Batch and miniaturized column experiments as tools for the safety assessment of a clay based long term waste disposal site for high-level nuclear waste*
Jonas M. Sander, Christina Hein, Ralf Kautenburger, Horst P. Beck
- GP-5 *Metal mobility in clay – from batch experiments to miniaturised column experiments with compacted clay*
Ralf Kautenburger, Christina Möser, Jonas Sander, Horst P. Beck

APPLICATIONS OF PLASMA SPECTROMETRY



- HP-1 *Inductively coupled plasma mass spectrometry (ICP-MS) linked immunoassay using gold nanoparticles (AUNPS) as element tag for chloramphenicol detection*
Purim Jarujamrus, Runglawan Chawengkirttikul, Juwadee Shiwatana, Atitaya Siripinyanond
- HP-2 *As quantification in heavy distillates by ICP-MS*
Francesca Bazzano
- HP-3 *Ultra-trace analysis of gold and platinum group elements in geological samples using ICP-MS with mixed gases*
Steven Wilbur, Craig Jones
- HP-4 *Quantification of critical elements in ferro-chrome silicon/lead tetroxide based delay charge elements from millisecond electric detonators by inductively coupled plasma mass spectrometry*
Franky Puype
- HP-5 *Determination of Hg in environmental waters using the Bruker aurora M90 in high sensitivity mode*
Peio Riss, Lionel Lumet
- HP-6 *Using ICP-MS for research of hemodialysis procedure on state of blood in patients with Hepatitis C who are on replacement renal therapy*
Olesia Kovalenko, I.V. Boltina, E.O. Pisarev, M.Yu. Khil
- HP-7 *Direct analysis of Cr, Ni, Pb and V in ethanol fuel by microwave-induced plasma optical emission spectrometry*
 George L. Donati, Renata S. Amais, Daniela Shiavo, Joaquim A. Nóbrega, Shane Elliott
- HP-8 *Development of method for trace elements screening in newborn babies blood by inductively coupled plasma mass spectrometry*
Veronique Vacchina, Jean-Marc Perini
- HP-9 *Industrial and environmental applications of physicochemical nanometrology*
Mathieu Menta, Christine Glaeyzes, Damien Plaa, Jérôme Frayret

- HP-10 *Cognac analysis using the Agilent 4100 microwave plasma-atomic emission spectrometer*
Maud Costedoat, Yolande Abdelnour, Jean-Pierre Lener
- HP-11 *Characterisation of nanoparticles release from commercial products by A4F-ICP-MS*
Sara Totaro, Andrea Pigozzo, Laura Manodori, Riccardo Magarini, Enrico Sabbioni
- HP-12 *Urinary chromium and nickel in the UK surface engineering industry*
Carmin Chávez, Jorge Guzmán, Aracely Hernández, Laura Hinojosa, Laura Ferrer, Elizabeth Leese, Emma Tan, Matthew Coldwell, Chris Keen, John McAlinden,
Jackie Morton
- HP-13 *Investigation of saliva as an alternative to blood samples for the biological monitoring of inorganic lead*
Jackie Morton, Kate Jones, James Staff, Erica Guice, Thom McCormick
- HP-14 *Uranium measurement in urine with Agilent 7700x ICP-MS*
Sébastien Sannac
- HP-15 *ICP-MS – determination of chemical elements in different types of cork stoppers*
Sandra Gueifão, Inês Coelho, Isabel Castanheira
- HP-16 *Quantifying potassium in ultra high purity sodium salts by sector field ICP-MS*
Brad McKelvey
- HP-17 *ICP-MS technology – a perfect solution for environmental challenges*
Ewa Pruszkowski, Cynthia Bosnak, Stan Smith
- HP-18 *ICP-MS technology – clinical analysis made easy*
Ewa Pruszkowski
- HP-19 *Determination of trace rare earth elements in high purity rare earth compounds by ICP-QQQ (ICP-MS/MS)*
Kazumi Nakano, Yasuyuki Shikamori, Naoki Sugiyama
- HP-20 *Simultaneous determination of trace elements in high purity steel by triple quadrupole ICP-MSMS (ICP-QQQ)*
Yasuyuki Shikamori, Kazumi Nakano, Tetsuo Nishiyama, Naoki Sugiyama
- HP-21 *The determination of major and trace elements in milk using ICP-Q-MS*
Shona McSheehy Ducos, Julian D. Wills, Lothar Rottmann
- HP-22 *Determination of selected metals in clinical samples in connection with articular replacemen*
Martin Kuba, David Milde, Tomáš Pluháček, Jiří Gallo
- HP-23 *Removal of Titanium based interferences on Nickel, Copper and Zink on ICP-QQQ with MS/MS based reaction technology*
Peter Planitz
- HP-24 *ICP-MS detection of hemodialysis influence on trace elements content in whole blood*
M.G. Prodanchuk, Oleksii O. Makarov, E.O. Pisarev, B.S. Sheiman, E.G. Vasileva
- HP-25 *ICP-MS trace elements concentration study in whole blood of hemodialysis children with chronic renal failure*
M.G. Prodanchuk, Oleksii O. Makarov, E.O. Pisarev, B.S. Sheiman, E.G. Vasileva
- HP-26 *Determination of trace metallic impurities such as phosphorus and titanium in high purity silicon materials by ICP-MS/MS*
Junichi Takahashi, Noriyuki Yamada

- HP-27 *ICP-MS analysis of engineered nanoparticles – fundamental characterization and sample preparation strategies*
Anne-Lena Fabricius, Björn Meermann, Lars Düster
- HP-28 *The determination of titanium in human serum by ICP-MS using dynamic reaction cell technology*
David Price, Fadi Abou-Shakra
- HP-29 *Effect of storage temperature and packaging type on the trace metal analysis of wine*
Jenny Nelson, L. Helene Hopfer, Susan E. Ebeler
- HP-30 *Determination of selenium in bovine semen by ICP-MS using formic acid for sample preparation*
Silmara Bianchi, Clarice D.B. Amaral, Caroline S. Silva, Joaquim A. Nóbrega, Ana R.A. Nogueira
- HP-31 *Attenuation of interferences in collision/reaction cell inductively coupled plasma mass spectrometry, using helium and hydrogen as cell gases – application to multi-element analysis in mastic gum*
Nikolaos Rousis, Paul Nisianakis, Nikolaos S. Thomaidis
- HP-32 *Reduction of interferences in the determination of rare earth elements by an octopole collision/reaction cell inductively coupled plasma mass spectrometer – application to the analysis of chios mastic gum*
Nikolaos . Rousis, Paul Nisianakis, Nikolaos S. Thomaidis,
- HP-33 *Elemental analysis of semiconductor gases using a gas exchange device coupled to high sensitivity ICP-Q-MS*
Tomoko Vincent, Kohei Nishiguchi, Keisuke Utani, Julian D. Wills, Lothar Rottmann
- HP-34 *Investigations on the mechanism of manganese-induced injury of dopaminergic neurons*
Katharina Fernsebner, Bernhard Michalke
- HP-35 *Essential metals profile in hair and nails of patients with laryngeal cancer*
Agnieszka Przybyłowicz, Małgorzata Herman, Magdalena Golasik, Monika Seńczuk-Przybyłowska, Witold Szyfter, Wojciech Golusiński, Zbigniew Krejpcio, Wojciech Gawęcki, Maksymilian Kulza, Stanisław Walas, Ewa Florek, Wojciech Piekoszewski
- HP-36 *Variation of concentration of selected essential and toxic metals in saliva of people with periodontal disease*
Małgorzata Herman, Magdalena Golasik, Agnieszka Przybyłowicz, Anna Kurchańska-Flisykowska, Maksymilian Kulza, Paulina Chęsy, Marzena Wyganowska-Witkowska, Anna Woniak, Monika Seńczuk-Przybyłowska, Janina Stopa, Halina Mrowiec, Ewa Florek, Wojciech Piekoszewski
- HP-37 *Comparison of results for manganese obtained by GF AAS and ICP-MS methods in urine collected from patients addicted from ephedrone and healthy volunteers*
Małgorzata Herman, Joanna Warchoń, Joanna Miąsik, Ewa Gomółka, Wojciech Piekoszewski, Stanisław Walas
- HP-38 *Human hair analysis in relation to similar environmental and occupational exposure*
Małgorzata Iwona Szyrkowska, Aleksandra Pawlacyk, Jadwiga Albińska, Marta Marcinek, Tadeusz Paryczak

- HP-39 *The release of metal ions from silver-modified dental materials into artificial saliva medium*
Aleksandra Pawlaczyk, Małgorzata Iwona Szyrkowska, Krzysztof Sokołowski, Jerzy Sokołowski, Monika Łukomska-Szymańska, Tadeusz Paryjczak
- HP-40 *Analytical problems of determination of rare earth elements in natural waters*
Irena Wysocka, Irena Jaroń, Jarosław Kucharzyk
- HP-41 *Elemental analysis of human origin samples by ICP MS and HG AFS for medical diagnostics support*
Emilia Natalia Grygo, Halina Mrowiec, Stanisław Walas, Edyta Daniel, Anna Stochel-Gaudyn, Krzysztof Fryderek, Paweł Kościelniak
- HP-42 *Determination of ⁹⁹Tc in peat by FI-ICP MS with recovery evaluation on the base of ^{95m}Tc measurement*
Stanisław Walas, Krzysztof Kleszcz, Anna Tobiasz, Halina Mrowiec, Jerzy Wojciech Mietelski
- HP-43 *Triple quad ICP-MSMS: illuminating the challenges in clinical analyses*
Amir Liba, Pierre Dumas
- HP-44 *Trace metal determination in heavy and extra heavy crude oils by ICPMS: comparison of different methods for acid digestion*
Georgia Sanabria-Ortega, Christophe Pecheyran, Gernot Hudin, Edit Marosits, Olivier F.X. Donard
- HP-45 *Quantification of platinum group elements (Pt, Pd and Rh) in roadside soil with ICPMS*
Aleksander M. Schwan, T. Liebinger, Walter Goessler

GLOW DISCHARGE



- 8:30 – 11:15 SIGHTSEEING OF KRAKOW OLD TOWN**
Meeting place: Auditorium Maximum UJ, Krupnicza 33
- 11:15 – 11:45 Coffee break Level -1**
- 11:45 – 13:00 SESSION C1 Room A**
Chair: Ryszard Łobiński
- 11:45 CH *The story of the Journal of Analytical Atomic Spectrometry, JAAS, the chronicle of plasma spectrometry*
Les Ebdon
- 12:35 CK-1 *No joke! Hookah smoke might make you choke*
Joseph Caruso, Ryan Saadawi, Julio Landero-Figueroa, Matthew Winfough, Traci Hanley
- 13:05 – 14:30 Lunch Level -1**
- 14:30 – 16:00 POSTER SESSION (section: I, J, K, L) AND EXHIBITION Level -1**
- 16:00 – 17:15 SESSION C2 Room A**
Chair: Freddy Adams
- 16:00 CP *Pulsed radiofrequency glow discharge time-of-flight-mass spectrometry for gas and solids direct speciation*
Alfredo Sanz-Medel, José Manuel Costa, Beatriz Fernández, Lara Lobo, Auristela Solá; Jorge Pisonero, Nerea Bordel, Rosario Pereiro
- 16:45 CK-2 *New developments concerning analytical glow discharges*
Volker Hoffmann
- 17:20 – 18:05 PARALLEL SESSION C3-a Room A**
Chair: Koichi Chiba
- 17:20 C-a01 *Atomic emission spectrometry with an atmospheric pressure helium DC glow discharge using various ways of sample introduction*
José Broekaert, Katharina Moß, Klaus-Georg Reinsberg
- 17:35 C-a02 *Depth-profile analysis of thermoelectric layers on Si wafers by pulsed r.f. glow discharge time-of-flight mass spectrometry*
Klaus-Georg Reinsberg, Christian Schumacher, Agnes Tempez, Kornelius Nielsch, José A.C. Broekaert

17:50 C-a03 *Characterization of a He atmospheric pressure glow discharge for ambient desorption/ionization mass spectrometry*
Jaime Orejas, Jorge Pisonero, Nerea Bordel, Kevin P. Pfeuffer, Steven J. Ray, Gary Hieftje, Alfredo Sanz-Medel

17:20 – 18:05 PARALLEL SESSION B3-b Room B

Chair: Alfredo Sanz-Medel

17:20 C-b01 *Development of a new discharge source with a 4-cm cathode size for plasma imaging*

Maxim Voronov, Volker Hoffmann, Tobias Steingrobe, Wolfgang Buscher, Carsten Engelhard, Steven Ray, Gary Hieftje

17:35 C-b02 *New insights in pulsed-RF-GD-OES: study of the spacial and temporal distributions of excited species and effect of an external magnetic field*
Nerea Bordel, Rebeca Valledor, Paola Vega, Thomas Nellis, Jorge Pisonero

17:50 C-b03 *Development and study of a plain cathode DC discharge source operated in pulse regime current controlled mode*

Olivér Bánhidí

18:30 VENDORS' EVENT

POSTER SESSION

GLOW DISCHARGE



section

IP-1 *Development of imaging detection techniques in glow discharge optical emission spectroscopy*

Tobias Steingrobe, Wolfgang Buscher, Carsten Engelhard, Maxim Voronov, Volker Hoffmann, Steven J. Ray, Gary M. Hieftje

IP-2 *Glow discharge as a tool for the preparation of samples for electron microscopic measurements*

Varvara Efimova, Volker Hoffmann

IP-3 *Quantitative depth profile analysis of amorphous silicon thin film solar cells by pulsed radiofrequency glow discharge optical emission spectrometry*

Pascal Sanchez, Beatriz Fernandez, Armando Menéndez, David Gomez, Rosario Pereiro, Alfredo Sanz-Medel

IP-4 *The evaluation of the analytical performance of atmospheric pressure microdischarge generated between microjet and a liquid cathode*

Piotr Jamróz, Krzysztof Gręda, Paweł Pohl, Wiesław Żyrnicki

IP-5 *The effect of the addition of non-ionic surfactants to the solution on the analytical performance of the miniaturized atmospheric pressure glow-discharge generated in contact with a liquid cathode*

Krzysztof Gręda, Piotr Jamróz, Paweł Pohl

- IP-6 *A new catalogue of glow discharge spectra – the current state*
Zdeněk Weiss, Edward Steers, Juliet Pickering, Volker Hoffmann
- IP-7 *Matrix effects in glow discharge emission spectroscopy caused by hydrogen*
Zdeněk Weiss
- IP-8 *Development of new ionization sources for DMA: comparative study of photoionization and APGD sources*
Marcos Bouza, Jaime Orejas, Silvia Lopez-Vidal, Eladio Montoya, Jorge Pisonero, Nerea Bordel, Rosario Pereiro, Alfredo Sanz-Medel
- IP-9 *Application of pulsed GD-TOFMS as a powerful screening tool for conductive polymers chemical identification*
Claudia González de Vega, Beatriz Fernández, Nerea Bordel, Rosario Pereiro, Alfredo Sanz-Medel
- IP-10 *Full survey chemical analysis of thin films with pulsed fast flow glow discharge mass spectrometry*
Joachim Hinrichs, Lothar Rottman, Karol Putyera

ATOMIC EMISSION SPECTROSCOPY



- JP-1 *Ultrasound focused extraction and element quantification in middle light petroleum distillates by ICP-AES and ICP-MS*
Francesca Bazzano, Monica Angela Anelli
- JP-2 *Silicon determination in diesel and biodiesel by microwave-induced plasma optical emission spectrometry*
Renata Amais, George Donati, Daniela Shiavo, Joaquim Nobrega, Shane Elliott
- JP-3 *Determination of palladium content in valacyclovir hydrochloride using inductively coupled plasma – optical emission spectrometer with AGM-1 (Auxiliary Gas Module)*
Dharmendra Vummitti
- JP-4 *Vegetable oil analysis for biodiesel production using the Agilent 4100 microwave plasma – atomic emission spectrometer*
Maud Costedoat, Yolande Abdelnour, Jean-Pierre Lener
- JP-5 *Comparative study of different methodologies of transient signal processing for determination of chromium by SPME-TD-plasma-OES*
Krzysztof Jankowski, Stanisław Kuś
- JP-6 *Properties of a KHz frequency nitrogen miniplasma for trace analysis by atomic spectroscopy*
Krzysztof Jankowski, Edward Reszke
- JP-7 *Application of ICP OES to the examination of postmortem material in a case of poisoning with an iodine compound*
Teresa Lech
- JP-8 *Mercury determination in biological materials by ICP OES in cases of metallic mercury intoxication*
Józefa Krystyna Sadlik

- JP-9 *Real-time RF power monitoring of process chamber by self-plasma optical emission spectroscopy*
Go Eun Kim, Seol Gwak
- JP-10 *Development of a tungsten boat furnace for the simultaneous determination of Ag, Bi, Pb, Te, and Zn in nickel super alloys using ICP-OES*
Paul Tirk, Helmar Wiltsche
- JP-11 *Determination of main metals and contaminating elements in various high performance passivates by microwave plasma atomic emission spectrometry*
Hans-Dieter Projahn, Josefina Hauk
- JP-12 *Analysis of liquid foodstuffs and beverages by means of dried-droplet laser ablation ICP-OES*
Winfried Nischkauer, Frank Vanhaecke, Johann Lohninger, Andreas Limbeck
- JP-13 *Matrix effect overcoming in ICP and DCP-ARC -atomic-emission environmental analysis*
Olga Shuvaeva
- JP-14 *Advances in liquid sample introduction in ICP-OES: a new efficient prototype for reduced sample consumption*
Nikolay Kovachev, Montserrat Hidalgo, Terrance Hettipathirana, Jean-Pierre Lener, Antonio Canals
- JP-15 *Determination of mercury in soils and sediments after preconcentration of mercury vapor by SPME followed by thermal desorption and OES detection*
Monika Truskolaska, Krzysztof Jankowski, Edward Reszke
- JP-16 *Investigation of usefulness of different elements potentially applied as internal standards in ICP-OES measurements*
Weronika Bureć-Drewniak, Jarosław Kucharzyk, Irena Jaroń
- JP-17 *Determination of selected elements in FAME by ICP OES technique using internal standard method performed in continuous flow system*
Marek Kozak, Joanna Kozak
- JP-18 *Application ICP OES and ICP MS spectrometry for plant quality evaluation*
Anna Tobiasz, Maria Filek, Halina Mrowiec, Apolonia Sieprawska, Stanisław Walas, Helina Hartikainen
- JP-19 *Determination of rare earth elements in electronic waste using ICP-OES spectrometry*
Uwe Oppermann, Jürgen Schram, Jan Knoop

LASER ABLATION AND ELEMENTAL IMAGING



- KP-1 *Imaging and quantification analysis of the elements in peanut seeds*
Yanbei Zhu, Akiharu Hioki, Koichi Chiba
- KP-2 *Elemental mapping using the simultaneous DP-LIBS and LA-ICP-OES setup*
Karel Novotný, Kateřina Štěpánková, Lucie Krajcarová, Aleš Hrdlička, Jozef Kaiser, Viktor Kanický

- KP-3 *Bioimaging techniques of metals by laser ablation inductively coupled plasma mass spectrometry for diagnosis of fibrotic liver disorders*
M-M. Pornwilard, Ralf Weiskirchen, Nikolaus Gassler, J. Sabine Becker
- KP-4 *Challenging the spatial resolution limits of high-resolution mapping in laser ablation-inductively coupled plasma-mass spectrometry using active 2-volume cells.*
Dhinesh Asogan, Damon Green, Stephen Shuttleworth, John Roy,
 Bill Spence, Peter Winship
- KP-5 *Bioimaging of rice tissue with the use of a laser ablation system coupled with to Agilent 7700x ICP-MS*
Sébastien Sannac
- KP-6 *Examination of writing inks by LIBS technique for forensic purpose*
Agnieszka Kula, Katarzyna Pasioneck, Renata Wietecha-Posłuszny, Małgorzata Król,
 Michał Woźniakiewicz, Paweł Kościelniak
- KP-7 *Development of a polymer binder and a pellet presser for the analysis of powdered solid samples by LA-ICP-MS*
Yanbei Zhu, Akiharu Hioki, Koichi Chiba
- KP-8 *Laser ablation ICP-MS study of prospective glass internal reference materials*
Monika Jarošova, David Milde, Petr Sulovský
- KP-9 *Analysis of human kidney stones: elemental association, identification of various constituents and quantitative analysis by LA-ICP-MS*
Michaela Vasinova Galiova
- KP-10 *Optimization and validation of a laser ablation inductively coupled plasma mass spectrometry method for determination of Cd, Cu, Pb and Zn in plants*
 Anetta Hanć, Danuta Barańkiewicz
- KP-11 *Development and application of metal-tagged antibodies for immuno-imaging by use of LA-ICP-MS*
Simone Hardt, Christian Scheler, Norbert Jakobowski, Larissa Waentig,
 Boris Neumann, Guido Sauter, Hartmut Schlueter, Michael Linscheid
- KP-12 *Elemental analyses of soils and sediments fused with lithium borate using isotope dilution laser ablation ICP-MS*
 Julien Malherbe, Fanny Claverie, Beatriz Fernandez, Aitor Alvarez, Rosario Pereiro,
 Alfredo Sanz-Medel, John L. Molloy
- KP-13 *Effects of helium flow geometry on elemental fractionation in laser ablation ICP-MS*
Jay Thompson, Leonid Danyushevsky, Mike Shelly, Sarah Gilbert
- KP-14 *A single software platform for LA-ICP-MS applications using a new high sensitivity ICP-Q-MS*
Julian Wills, Lothar Rottmann, Steve Shuttleworth
- KP-15 *Advances in development of non denaturing gel electrophoresis technique for uranium-protein complexes quantitative analysis by LA-ICP MS*
 Ming Xu, Sandrine Frelon, Olivier Simon, Ryszard Łobiński, Sandra Mounicou
- KP-16 *Utilization of laser ablation inductively coupled plasma mass spectrometry for elemental mapping biological tissues*
Tomas Vaculovic, Pavlina Sobrova, Jan Strnadel, Vratislav Horak,
 Lenka Vyslouzilova, Viktor Kanický, Rene Kizek, Vojtech Adam

- KP-17 *Aliasing effects in laser ablation ICP MS: sequential detection vs. low dispersion*
Urs Hartfelder, Bodo Hattendorf, Detlef Günther
- KP-18 *Advantages of high sensitivity ICP-MS coupled to laser ablation*
Andrew Toms, René Chemnitzer, Meike Hamester
- KP-19 *Silver nanoparticles toxicity studies by PAGE-LA-ICP-MS*
Maria S. Jimenez, Maria T. Gómez, Carmen Diez, Aurora Avellana, Lluís Arola, M. Josepa Salvadó, Cinta Bladé, Juan Ramón Castillo
- KP-20 *Study of elemental fractionation using 1030 nm and 257 nm high repetition rate FSLA/ICPMS*
Ariane Donard, Fanny Claverie, Fabien Pointurier, Christophe Pécheyran
- KP-21 *Development of fast quantitative analysis for biological samples using LA-ICP-MS technique*
Eva Kovacs-Szeles
- KP-22 *Elemental analysis by a miniature laser ablation/ionisation mass spectrometer, LMS*
Marek Tulej, Andreas Riedo, Maïke Neuland, Stefan Meyer, Peter Wurz
- KP-23 *Evaluation of $^{87}\text{Sr}/^{86}\text{Sr}$ isotopic ratios in fish scale hydroxyapatite by femtosecond laser ablation coupled to an MC-ICPMS*
Ariane Donard, Christophe Pécheyran, Sylvain Bérail, Marc Pouilly
- KP-24 *Laser ablation ICP-MS of cell lysates after silver nanoparticle treatment: Is quantification possible?*
Frank S. Bierkandt, Philipp Reichardt, Andrea Haase, Harald Jungnickel, Jutta Tentschert, Andreas Luch, Norbert Jakubowski
- KP-25 *Multivariate optimization of extraction parameters in single-drop microextraction followed by laser-induced breakdown spectrometry for trace elemental analysis of water samples*
Miguel Ángel Aguirre, Hristina Nikolova, Montserrat Hidalgo, Antonio Canals
- KP-26 *Particles produced by laser ablation for profiling titanium nitride coated silica*
Jin Sook Lee, Heung Bin. Lim
- KP-27 *Method development for a minimal invasive investigation of ancient copper alloys and formed corrosion layers using laser ablation inductively coupled plasma mass spectrometry*
Damian Walaszek, Adrian Wichser, Markus Faller, Marianne Senn, Laetitia Phillippe, Barbara Wagner, Ewa Bulska, Andrea Ulrich
- KP-28 *LA-ICP-MS and PIXE-PIGE studies of glass beads – new insight into the fingerprinting of museum objects*
Małgorzata Iwona Szyrkowska, Aleksandra Pawlaczyk, Stanisław Sypniewski, Geoffrey Grime, Michael Merchand, Melanie Bailey, Wojciech Chudziak, Małgorzata Markiewicz
- KP-29 *LA-ICP-TOF-MS investigations of papers*
Małgorzata Iwona Szyrkowska, Aleksandra Pawlaczyk, Katarzyna Palińska, Marcin Kunicki, Andrzej Parczewski
- KP-30 *Analysis of paper and gel inks by LA-ICP-MS and SEM techniques using chemometric approach*
Małgorzata Iwona Szyrkowska, Paulina Chęsy, Aleksandra Pawlaczyk, Marcin Kunicki, Andrzej Parczewski

- KP-31 *Application of LA-ICP-TOF-MS technique in forensic ink studies*
Małgorzata Iwona Szykowska, Aleksandra Pawlaczyk, Katarzyna Palińska,
Marcin Kunicki, Andrzej Parczewski
- KP-32 *Characterization and quantification of tio2 nano particles in sunscreen lotion using laser diffraction and ICP- OES spectrometry*
Uwe Oppermann, Jürgen Schram, Jan Knoop
- KP-33 *Diode laser thermal vaporization inductively coupled plasma mass spectrometry for analysis of biological microsamples*
Pavla Foltynová, Viktor Kanický, Jan Preisler
- KP-34 *Extracting oil inclusions by femtosecond laser ablation for GC-MS analysis*
Fanny Claverie, Sebastien Dreyfus, Robert Pottorf, Ngami Phan, Marlene Madincea,
Christophe Pecheyran
- KP-35 *Short-range remote LIBS through a shielding window for monitoring nuclear waste materials*
Daewoong Choi, Yongdeuk Gong, Yonghoon Lee, Bo-Young Han, Heesung Shin
- KP-36 *Utilization of laser-induced breakdown spectroscopy (LIBS) for fast online determination of elements of interest in minerals*
David Prochazka, Jan Novotný, Radomír Malina, Jindřich Kynický, Karel Novotný,
Petr Babula, Vojtech Adam, René Kizek, Jozef Kaiser
- KP-37 *High spatial resolution elemental mapping using fs-LA-ICP-MS and fs-LIBS*
Jhanis .J. Gonzalez, V. Zorba, D. Oropeza, X. Mao, R.E. Russo
- KP-38 *Development of the mobile stand-off laser-induced breakdown spectroscopy setup*
Jan Novotny, Michal Brada, Jozef Kaiser, Karel Novotný, Aleš Hrdlička, Radomír
Malina, David Prochazka, Michal Petrilak
- KP-39 *Analytical benefits of a rotating XY shutter and an infinitely variable aperture for laser ablation sampling*
Ciaran O'Connor, Katherine McLachlin, Rob Hutchinson
- KP-40 *Analysis of high-purity cu using high-sensitivity LA-ICP-MS*
K. Warnken, J.D. Wills, L. Rottman, Ciaran O'Connor, R. W. Hutchinson
- KP-41 *High throughput analysis of industrial grade nimonic alloys using LA-ICP-OES*
Katherine McLachlin, Jayme Curet, Rob Hutchinson, Ciaran O'Connor

ISOTOPIC ANALYSIS



- LP-1 *Lead isotope analysis: removal of ^{204}Hg isobaric interference from ^{204}Pb using a quadrupole ICP-MS equipped with MS/MS technology*
Glenn Woods
- LP-2 *Application of Sr isotope ratios for the determination of origin of prehistoric wood*
Monika Horsky, Johannes Tintner, Michael Grabner, Kerstin Kowarik,
Hans Reschreiter, Anton Kern, Thomas Prohaska

- LP-3 *Measuring $^{26}\text{Mg}/^{24}\text{Mg}$ and $^{44}\text{Ca}/^{40}\text{Ca}$ isotope ratios in environmental samples by Q-ICP-MS*
 Gregory Van Der Heijden, Benoît Pollier, Etienne Dambrine, Peio Riss, Arnaud Legout
- LP-4 *Strontium isotopic analysis of human skeletal tissue in a present-day forensic context*
Kris Latruwe, Patrick Degryse, Frank Vanhaecke
- LP-5 *Isotope dilution analysis for foraminiferal Mg/Ca paleothermometry*
Marco Roman, Patrizia Ferretti, Clara Turetta, Warren Cairns, Carlo Barbante
- LP-6 *Determination of $^{129}\text{I}/^{127}\text{I}$ in Fukushima soil samples by ICP-MS*
Takeshi Ohno, Yasuyuki Muramatsu, Chiaki Toyama, Hiroyuki Matsuzaki
- LP-7 *Determination of isotopic ratios of uranium ($^{235}\text{U}/^{238}\text{U}$) for the different origins in Barcelona's tap water distribution system in order to determine the source of a water leak*
Alfredo Diaz, Ricard Devesa, Jordi Martin-Alonso
- LP-8 *Alternative method for fast and precise Pb isotope ratio determination in crude oil, asphaltenes kerogen and sedimentary rocks by GC-MC-ICPMS*
Georgia Sanabria, Christophe Pêcheyran, Sylvain Berail, Olivier F.X. Donard
- LP-9 *Challenges for mass fraction measurements of $^{166\text{m}}\text{Ho}$ using ion-counting multi-collector ICP-MS and isotope dilution*
Geerke Floor, Florence Guéguen, Hélène Isnard, Christophe Quétel
- LP-10 *Isotope dilution mass spectrometry as a new strategy for quantitative elemental analysis of soils and sediments by pulsed glow discharge time of flight mass spectrometry*
Beatriz Fernandez, Aitor Alvarez, Julien Malherbe, Fanny Claverie, John L. Molloy, Rosario Pereiro, Alfredo Sanz-Medel
- LP-11 *Accurate quantification of mercury in marine samples by using isotope dilution high resolution inductively coupled plasma mass spectrometry*
Emiliya Vassileva
- LP-12 *Elimination of isobaric interferences in lead isotopic ratio determination of ancient gold samples using reaction cell mode for ICPMS*
Andrea Ulrich, Adrian Wichser, Glenn Woods, Uwe Nötzel
- LP-13 *Determination of Pu atom ratio in settling particles using isotope dilution HR-ICP-MS*
Masatoshi Yamada, Jian Zheng
- LP-14 *A comparative study of iron isotopic ratios in transgenic and non transgenic soybean by ICP-MS*
Silvana Oliveira, Amauri Menegário, Marco Aurélio Zezzi Arruda
- LP-15 *Bromine isotope analysis-a tool for investigating biogeochemical cycle of bromine-containing organic and inorganic compounds in the environment*
Faina Gelman, Anat Bersnstein, Elena Levin, Ludwik Halicz, Zeev Ronen

ELEMENTAL SPECIATION

8:30 – 10:30 SESSION D1 Room A

Chair: Norbert Jakubowski

- 8:30 DH *Fifty years of plasma analysis and imaging, personal recollections*
Freddy Adams
- 9:15 DP *Are we studying the important element species or only those we can measure?*
Jörg Feldmann, Eva M. Krupp, Andrea Raab, Dagmar S. Urgast
- 10:00 DK-1 *Field-flow fractionation with atomic spectrometric detection for characterization of engineered nanoparticles*
Atitaya Siripinyanond, Kanchana Songsilawat, Atitaya Samontha, Supharat Sangsawong, Wilaiwan Somchue, Pornwilard M-M, Panida Wimuktiwan, Jakarwan Yostawonkul, Ju-Wadee Shiowatana

10:30 – 11:00 Coffee break Level -1

11:00 – 12:00 SESSION D2 Room A

Chair: Gunda Koellensperger

- 11:00 DE *Association of ICP MS and high resolution ESI MS for speciation analysis: a powerful tool for developing novel analytical methods*
Laurent Ouerdane, Ryszard Łobiński
- 11:30 DK-2 *Size fractionated chemical analysis of engineered nanoparticles using plasma mass spectrometry*
Andrea Ulrich, Sabrina Losert, Nina Bendixen, Adrian Hess

12:05 – 13:05 PARALLEL SESSION D3-a Room A

Chair: Francesco Cubadda

- 12:05 D-a01 *Titanium monitoring in biological fluids of patients with metallic implants: from ions to nanoparticles*
Maria Montes-Bayón, Yoana Nuevo-Ordoñez, Juan Soto-Alvaredo, Joerg Bettmer, Elisa Blanco-González, Alfredo Sanz-Medel
- 12:20 D-a02 *Am I working with a nanomaterial? How to get the answer by single particle ICP-MS*
Francisco Laborda, Javier Jimenez-Lamana, Eduardo Bolea, Juan R. Castillo
- 12:35 D-a03 *Zinc speciation in the cereal endosperm*
Daniel Persson, Thomas Hesselhøj Hansen, Jan K. Schjoerring, Søren Husted

12:50 D-a04 *ICP-MS determination of metals/metalloids and analytical speciation of arsenic in a stream that receives drainages of abandoned silver mines in Guanajuato, central Mexico*
Katarzyna Wrobel, Yann Rene Ramos Arroyo, Irais Rodriguez Huerta, Eunice Yanez Barrientos, Alma Hortensia Serafin Munoz, Kazimierz Wrobel

12:05 – 13:05 PARALLEL SESSION D3-b Room B

Chair: José Luis Gómez-Ariza

12:05 D-b01 *Size-based element speciation of nanomaterials in food: the potential of combining asymmetric flow FFF with ICP-MS, light scattering and electron microscopy*

Heidi Goenaga Infante, Julien Heroult, Dorota Bartczak, Volker Nischwitz

12:20 D-b02 *Method development for toxicokinetics and tissue distribution of nano-TiO₂ by high resolution inductively coupled plasma mass spectrometry (HR-ICPMS)*
Petra Krystek, Willem den Otter, Henny Verharen, Esther Brandon, Wim de Jong

12:35 D-b03 *Characterization and stability studies of silver ion and silver nanoparticles. Bioconcentration by zebrafish larvae*

Ana López Serrano, Jon Sanz Landaluze, Riansares Muñoz-Olivas, Carmen Cámara

12:50 D-b04 *Chemistry of silver nanoparticles in burns healing: from in vitro to in vivo by ICP-MS*

Chiara Rigo, Warren Cairns, Letizia Ferroni, Barbara Zavan, Marco Roman, Carlo Barbante, Vincenzo Vindigni, Ivan Munivrana, Bruno Azzena

13:05 – 14:30 Lunch Level -1

14:30 – 16:00 POSTER SESSION (section: M) AND EXHIBITION Level -1

16:00 – 17:45 PARALLEL SESSION D4-a Room A

Chair: Maria Montes-Bayón

16:00 D-a05 *Determination of Ti from TiO₂ manufactured nanoparticles in biological materials by Q-ICP-MS: optimization and validation*

Yacine Nia, Sandrine Millour, Laurent Noël, Thierry Guerin

16:15 D-a06 *Metallomic and metabolomic study of antagonistic metal interactions in mice mus musculus under controlled exposure*

Miguel-Angel Garcia-Sevillano, Rocio Jara-Biedma, Tamara Garcia-Barrera, José Luis Gómez-Ariza

16:30 D-a07 *Determination of silver nanoparticles in foodstuff using AF4-UV-Vis/ICP-MS and TEM*

Karim Ramos, M. Milagros Gómez-Gómez, Lourdes Ramos, Carmen Cámara

16:45 D-a08 *Plasma-based instrumentation for ambient mass spectrometry and nanoparticle characterization*

Carsten Engelhard, Anastasia Albert, Britta Vortmann, Bastian Franze, Jacob T. Shelley, Ingo Streng

- 17:00 D-a09 *Comparison of different methods for investigation of metallic engineered nanoparticles*
Sabrina Gschwind, Harald Hagendorfer, Olga Borovinskaya, Detlef Günther
- 17:15 D-a10 *Development of LC-ICP-MS based immunoassays for targeted analysis of biological samples*
Daniela Kretschy, Gunda Koellensperger, Stephan Hann
- 17:30 D-a11 *Determination of selenomethionine in ambient waters*
 Kelly Lynn LeBlanc, Dirk Wallschläeger

16:00 – 17:30 PARALLEL SESSION D4-b Room B

Chair: Heidi Goenaga Infante

- 16:00 D-b05 *Future prospective of spectrochemical analysis in bioinorganic trace and speciation analysis: from macro to microanalytics*
Henryk Matusiewicz
- 16:15 D-b06 *SeMeSeCys metabolism in rats fed with ⁷⁷Se-enriched sauerkraut*
Maria Sánchez Martínez, Teresa Pérez Corona, Cristina Martín Villaluenga, Juana Frías, Concepción Vidal Valverde, Jesús Porres, Gloria Urbano, Carmen Cámara, Yolanda Madrid
- 16:30 D-b07 *Challenges in nanotoxicological studies of silicon and titanium dioxide using an analytical platform based on reaction cell ICP-MS as elemental detector*
 Federica Aureli, Angela Sorbo, Marilena D'Amato, Gabriele Moracci, Andrea Raggi, Anna Chiara Turco, Francesco Cubadda
- 16:45 D-b08 *Hyphenated techniques using plasma mass spectrometry to study the transport, distribution and metabolism of metallo drugs*
Michael Sperling, Christine Brauckmann, Miriam Schwarzer, Olga Reifschneider, Christoph A. Wehe, Uwe Karst
- 17:00 D-b09 *Quantitative determination of arsenic metabolite-protein interaction by elemental speciation analysis*
Gerrit Hermann, Petra Heffeter, Walter Berger, Stephan Hann, Gunda Koellensperger
- 17:15 D-b10 *The use of CCT mode with the iCAP Q ICP-MS: Sensitivity improvement by collisional focusing and effective reaction chemistry in challenging IC-ICP-MS based speciation applications*
Daniel Kutscher, Julian D. Wills, Lothar Rottmann

18:45 GALA DINNER IN WIELICZKA SALT MINE – optional fee

Meeting place: Auditorium Maximum UJ, Krupnicza 33

**SPECIATION ANALYSIS
METALLOMICS AND NANOPARTICLE ANALYSIS**



- MP-1 *Metallothiolomics – investigation of thiol peptide regulated metal homeostasis in algae by LC-ESI MS, LC-ICP MS and element imaging techniques*
Dirk Schaumlöffel, Marie-Pierre Isaure, Gerd-Joachim Krauss, Dirk Dobritsch
- MP-2 *Analysis of lanthanide labelled protein digests via RP-IP-nanoHPLC coupled to ICP-MS and MALDI-MS*
Angela Holste, Andreas Tholey, Dirk Schaumlöffel
- MP-3 *Silver nanoparticle characterization and stability assessment thereof in cell culture media by ICP-MS in single particle mode*
Bastian Franze, Ingo Streng, Christoph A. Wehe, Carsten Engelhard
- MP-4 *Study of arsenic species occurrence in Spanish daily food consumption*
Maria Pérez-Vizcaya, Macarena González-Fernandez, Tamara García-Barrera, José Luis Gómez-Ariza
- MP-5 *Combined techniques: LC-ICP MS and LC-ESI-LTQ Orbitrap MS as a powerful tool to investigate elements speciation in plants*
Paulina Flis, Laurent Ouerdane, Ryszard Łobiński
- MP-6 *Phytochelatin production in microalgae chlorella sorokiniana in response to metals*
Veronica Gómez-Jacinto, Tamara García-Barrera, Inés Garbayo-Nores, Carlos Vilchez-Lobato, José Luis Gómez-Ariza
- MP-7 *Characterization of metals bound to marine dissolved organic matter by size exclusion and anion exchange HPLC hyphenated with ICP-MS*
Antonio Moreda-Piñeiro, Pilar Bermejo-Barrera, Natalia García-Otero
- MP-8 *Water soluble halides speciation in atmospheric particulate matter by anion exchange HPLC-ICP-MS after pressurized hot water extraction*
Antonio Moreda-Piñeiro, Pilar Bermejo-Barrera, Jorge Moreda-Piñeiro, Elia Alonso-Rodríguez, Purificación López-Mahía, Soledad Muniategui-Lorenzo, Darío Prada-Rodríguez
- MP-9 *Speciation analysis of chromium in drinking water samples based on ion-pair reserved-phase HPLC-ICP-MS: full validation of the analytical method*
Barbara Pikošz, Magdalena Belter, Monika Marcinkowska, Danuta Barańkiewicz
- MP-10 *Species stability – speciation analysis of chromium: A case study of water samples from surroundings of Radom*
Barbara Pikošz, Monika Marcinkowska, Danuta Barańkiewicz
- MP-11 *Speciation analysis of sugar phosphates via anion exchange chromatography combined with ICP-DRC MS*
Chu Dinh Binh, Kristaps Klavins, Stephan Hann, Gunda Koellensperger
- MP-12 *Phosphorus-tagged metabolomics for analysis of phospholipids in Alzheimer's disease*
Raúl González-Dominguez, Tamara Garcia-Barrera, José Luis Gómez-Ariza

- MP-13 *Combination of metabolomics and metallomics in *P. clarkii* tissues to assess the pollution in Doñana National Park*
Amanda Gago-Tinoco, Raúl González-Domínguez, Tamara García-Barrera, Julian Blasco-Moreno, José Luis Gómez-Ariza
- MP-14 *Characterization of metallothioneins in mouse liver under cadmium exposure*
Rocio Jara-Biedma, Raúl González-Domínguez, Tamara García-Barrera, José Luis Gómez-Ariza
- MP-15 *Speciation analysis of mercury, tin and lead based on a novel microwave-induced plasma excitation source as detector in gas chromatography*
Wolfgang Buscher, Rasmus Janzen, Michael Sperling, Joerg Ehlbeck, Andre Bösel, Susanne Lischka, Christian Piechotta
- MP-16 *Mass spectrometry techniques (CE-ICP-MS, ESI-MS) in probing of ruthenium anticancer drug mechanism of action under conditions simulating human blood and cancer cytosol environments*
Magdalena Matczuk, Xifeng Lu, Katarzyna Pawlak, Svetlana Aleksenko, Lidia Foteeva, Andrei Timerbaev, Maciej Jarosz
- MP-17 *Size exclusion chromatography and size migration capillary electrophoresis coupled with ICP MS for separation of phytochelatin complexes*
Agata Miszczak, Magdalena Matczuk, Magdalena Roslon, Katarzyna Brama, Katarzyna Pawlak
- MP-18 *Speciation analysis of cobalt and manganese in various diet supplements*
Justyna Wojcieszek, Magdalena Matczuk, Lena Ruzik
- MP-19 *Metallomic and metabolomic study of laboratory mouse *mus musculus* under experiment exposure to evaluate arsenic/cadmium interactions*
Miguel-Ángel García-Sevillano, Tamara García-Barrera, José Luis Gómez-Ariza
- MP-20 *Speciation and metabolism of organotin compounds in zebrafish larvae*
Ana López-Serrano Oliver, Aline Rocha Borges, Mercedes Gallego-Gallegosa, Riansares Muñoz-Olivasa, Carmen Cámara
- MP-21 *Use of metallomics, metabolomics and redox proteomics in environmental metal pollution assessment using *mus spretus* mice from Doñana National Park as bioindicator*
Miguel Ángel García-Sevillano, Tamara García-Barrera, Francisco Navarro-Roldán, José Luis Gómez-Ariza
- MP-22 *Trace-level speciated analysis of chromium(III) and chromium(VI) using LC-ICP-MS*
Miao Jing, Juane Song, Zhi-xu Zhang, Yan Dong
- MP-23 *Automated multiple extraction procedure coupled on-line to ICP-OES for assessment of bio-accessible trace metal fractions in airborne particulate matter*
Victoria Mohr, Manuel Miró, Andreas Limbeck
- MP-24 *Natural reactions to naturally high selenium availability: complexity of Se-metabolites in lecythidaceae nuts*
Anikó Németh, Juan Francisco García-Reyes, Judit Kosáry, Mihály Dernovics
- MP-25 *Chromium speciation in feed samples*
Véronique Vacchina, Fabienne Seby

- MP-26 *Sec (DAD) ICP-MS for the metal-proteins interaction studies*
Warren R.L. Cairns, Sara Crotti, Carlo Barbante
- MP-27 *Anion exchange HPLC-ICP-MS for the speciation of bioavailable selenium from seafood*
Antonio Moreda-Piñeiro, Vanessa Romarís-Hortas, Raquel Domínguez-González, Pilar Bermejo-Barrera, Jorge Moreda-Piñeiro, Elia Alonso-Rodríguez, Puificación López-Mahía, Soledad Muniategui-Lorenzo, Darío Prada-Rodríguez
- MP-28 *Multielemental determination of arsenic(III), arsenic(V) and chromium(VI) in water by high performance liquid chromatography inductively coupled plasma mass spectrometry*
 Magdalena Belter, Danuta Barańkiewicz
- MP-29 *Study of arsenic speciation in raw wakame, cooked wakame and urine excreted after wakame seaweed ingestion*
Pilar Bermejo-Barrera, Cristina García-Sartal, María del Carmen Barciela-Alonso
- MP-30 *Metrological approach in species analysis*
Claudia Swart, Claudia Frank, Olaf Rienitz
- MP-31 *Indirect Se-metabolomics: complexity of influenced non-Se pathways*
József Lénárt, Attila Hegedűs, Júlia Györfi, Mihály Dernovics
- MP-32 *Quantification of iron containing blood proteins by means of LC/ICP-MS*
 Claudia Frank, Christine Brauckmann, Claudia Swart, Detlef Schiel
- MP-33 *Cr(VI) determination in soil solution by speciated isotope dilution ICP-MS*
Tea Zuliani, Janez Ščančar, Radmila Milačič
- MP-34 *Use of stable isotope-enriched selenite tracer to differentiate and determine native and spiked selenium behavior in soils*
Pamela Di Tullo, Maite Bueno, Yves Thiry, Florence Pannier
- MP-35 *The use of HPLC-ICP-MS and stable isotopes in the investigation of Cr speciation in tea infusions and bread samples*
 Breda Novotnik, Tea Zuliani, Janez Ščančar, Radmila Milačič
- MP-36 *Quantification of proteins with non-covalently bound metalloenzymes*
Julia Gleitzmann, Andrea Raab, Claudia Swart, Detlef Schiel, Jörg Feldmann
- MP-37 *Arsenic speciation in urine using micro liquid chromatography-ICP-MS for routine biological monitoring*
Elizabeth Leese, Jackie Morton, Vikki Carolan
- MP-38 *Relationship between diet and urinary arsenic species in two ethnic groups from Leicester, UK*
 Essam Talha, Elizabeth Leese, Jackie Morton, Richard Jenkins, Vikki Carolan, Parvez I. Haris
- MP-39 *Development of analytical strategy to study selenoprotein expression in human cell lines*
 Juliusz Bianga, Zahia Touat-Hamici, Sandra Mounicou, Stéphane Duhieu, Ryszard Łobiński, Joanna Szpunar, Laurent Chavatte

- MP-40 *Selenium metabolomics in yeast using bimodal (reversed-phase/hydrophilic ion interaction) liquid chromatography – ICP MS and electrospray hybrid quadrupole trap/orbital mass spectrometry*
Carine Arnaudguilhem, Katarzyna Bierla, Laurent Ouerdane, Hugues Preud'homme, Ryszard Łobiński
- MP-41 *RNA analysis utilizing size-exclusion chromatography hyphenated with ICP-MS*
Shin-Ichiro Fujii, Keisuke Nagasawa, Groombridge Alex, Kazumi Inagaki, Koichi Chiba, Akiko Takatsu
- MP-42 *In vitro nanotoxicity of silver nanoparticles: characterization of silver forms by AsFFFF–UV-Vis–ICPMS*
 Javier Jimenez-Lamana, Francisco Laborda, Eduardo Bolea, Lluís Arola, M. Josepa Salvado, Cinta Blade, Juan R. Castillo
- MP-43 *Nanoparticle characterisation using FFF-ICP-Q-MS and FFF-SP-ICP-Q-MS*
Shona McSheehy Ducos, Christoph Johann, Ulrich Roesch, Daniel Kutscher, Lothar Rottmann
- MP-44 *Comparison of GC-MS and GC-ICP-MS for the determination of PBDEs in marine samples from a food safety monitoring program*
 Helge Hove, Stig Valdersnes, Daniel Fliegel
- MP-45 *Determination of the brominated flame retardant HBCD by RP-HPLC-ICP-MS and its application to environmental monitoring*
 Veronika Sele, Stig Valdersnes, Daniel Fliegel
- MP-46 *Hericium erinaceus: a mushroom with yeast-like Se-metabolism*
Orsolya Egressy-Molnár, József Lénárt, Júlia Gyórfi, Mihály Dernovics
- MP-47 *Vanadium speciation in soil and slag leachates by anion exchange HPLC-ICP-MS after EDTA complexation: the importance of sample preparation*
 Marilena D'Amato, Maja Larsson, Federica Aureli, Andrea Raggi, Jon Petter Gustafsson, Francesco Cubadda
- MP-48 *Off-line MALDI and ICP MS detection of a single record of metallothionein separation*
Iva Tomalová, Ondřej Polanský, Pavla Foltynová, Radka Millionová, Jan Preisler
- MP-49 *On-line quantification strategies combined with AF4/SF-ICP-MS for speciation analysis of ENMs*
Björn Meermann, Anne-Lena Fabricius, Frank Vanhaecke, Lars Düster
- MP-50 *Pilot study about nanoparticles in mouthwashes regarding to size and elemental composition*
Petra Krystek, Patrick Bauerlein, Pascal Kooij, Markus J. Spallek
- MP-51 *Sn speciation in oyster's organs: use of stable isotopic tracers to track metabolic pathways*
Zoïne Pedrero, Romain Bridou, Sylvain Bouchet, Hugues Bijoux, Monica Fernandez, Sandra Mounicou, Mathilde Monperus, Patrice Gonzalez, David Amouroux
- MP-52 *2D-UPLC (heart cutting / comprehensive) in real time and spectral accuracy improvement for speciation of complex samples by ICPMS : an original mass spectrometry strategy*
Hugues Preud'homme, Ryszard Łobiński

- MP-53 *Investigations on organotin compounds reactivity using enriched isotopic tracers in polluted coastal sediments from the eastern Adriatic, Croatia*
Martina Furdek, Joana Cavalheiro, Mathilde Monperrus, Maité Bueno, Emmanuel Tessier, Nevenka Mikac
- MP-54 *Novel strategy for the accurate quantification and identification of chromium species in food supplements*
John Entwisle, Volker Nischwitz, Heidi Goenaga-Infante
- MP-55 *Elemental labeling and isotope dilution analysis for the quantification of the peptide hepcidin-25 in serum samples by HPLC-ICP-MS*
Tobias Konz, María Montes-Bayón, Alfredo Sanz-Medel
- MP-56 *Using AsFLFFF-ICP-MS and XAS for the study of colloidal arsenic speciation in mine soils*
Miguel Ángel Gómez-González, Francisco Laborda, Eduardo Bolea, Susana Serrano, Peggy A. O'day, Fernando Garrido, Juan R. Castillo
- MP-57 *Mass spectrometry based methodologies for studying the DNA binding properties of new cytostatic ruthenium complexes*
Elisa Blanco-González, Mario Corte, María Montes-Bayón, Elena Lastra, M. Pilar Gamasa
- MP-58 *Study of absorption/bioavailability and distribution of ⁵⁷Fe from supplemented ⁵⁷Fe-lactoferrin formula milk by IPD-ICP-MS*
Sonia Fernández-Menéndez, María Luisa Fernández-Sánchez, Belén Fernández Colomer, Jose López-Sastre, Alfredo Sanz-Medel
- MP-59 *Speciation of metal complexes in soil and plant related samples with elemental and molecular mass spectrometry*
Yvonne Schindlegger, Walter D.C. Schenkeveld, Stephan M. Kraemer, Eva Oburger, Barbara Gruber, Markus Puschenreiter, Angela Sessitsch, Gunda Kollensperger, Stephan Hann
- MP-60 *Gold as an activity-based probe to address the active thioredoxin reductase concentration in cell culture by HPLC-ICP-MS*
Juan Gómez-Espina, María Montes-Bayón, Elisa Blanco-González, Alfredo Sanz-Medel
- MP-61 *New strategies for the measurement of global DNA methylation in cisplatin sensitive and resistant cell lines using ICP-MS*
Tamara Iglesias González, María Montes-Bayón, Luisa María Sierra Zapico, Elisa Blanco González
- MP-62 *Glutathione peroxidase levels in biological fluids: a potential biomarker for glaucoma*
Raquel González De Vega, María Luisa Fernández Sánchez, Héctor González Iglesias, Miguel Coca, Alfredo Sanz-Medel
- MP-63 *An isotope dilution strategy for the quantification of platinum-gg adducts in cancer lung cells exposed to carboplatin*
Susana Cuello, Julien Heroult, Christian Dietrich, Volker Nischwitz, Heidi Goenaga-Infante
- MP-64 *Evaluation of new pre-concentration techniques for organotin compounds analysis in water samples*
Joana Cavalheiro, David Amouroux, Hugues Preud'homme, Mathilde Monperrus

- MP-65 *Quantification of the major arsenolipids in certified algal reference material NMIJ CRM 7405 (Hijiki)*
Kevin Francesconi, Josef Ehgartner, Georg Raber
- MP-66 *Development of an easy-to-use analytical method for the determination of inorganic arsenic in food of animal origin*
Angela Sorbo, Francesco Cubadda, Federica Aureli, Marilena D'Amato, Andrea Raggi, Anna Chiara Turco, Laura Ciaralli
- MP-67 *Novel SMPS-ICPMS coupling allows simultaneous analysis of size distribution and elemental composition of airborne nanoparticles*
Adrian Hess, Christian Ludwig, Andrea Ulrich
- MP-68 *In-vitro studies with gold nanoparticles monitored by HPLC-ICP-MS*
Juan Soto Alvarado, Carlos Lopez Chavez, Cristina Sanchez Gonzalez, Juan Llopis Gonzalez, Maria Montes-Bayón, Joerg Bettmer
- MP-69 *The role of ICP-MS and ESI-MS in production of intact protein standards for quantitative proteomics*
Anna Konopka, Martin E. Boehm, Dominic Winter, Wolf D. Lehmann
- MP-70 *Flow field-flow fractionation coupled with inductively coupled plasma mass spectrometry (FLFFF-ICP-MS) for study of Pt(II) and hen egg white protein binding*
Atitaya Samontha, Wilaiwan Somchue, Juwadee Shiowatana, Atitaya Siripinyanond

LASER ABLATION



8:30 – 10:30 SESSION E1 Room A

Chair: Joerg Feldmann

8:30 EH *A 45-year journey in ICP-AES: from academic research to industrial problem solving*

Jean-Michel Mermet

9:15 EP *Fundamentals and applications in laser ablation-inductively coupled plasma mass spectrometry*

Detlef Günther

10:00 EK-1 *Laser plasma spectrochemistry: LIBS and LAMIS*

Rick Russo, Xianglei Mao, Jhanis Gonzalez, Vassilia Zorba, Inhee Choi, Jong Yoo

10:30 – 11:00 Coffee break Level -1

11:00 – 12:00 SESSION E2 Room A

Chair: Detlef Günther

11:00 EE *Analysis and thickness determination of ultra-thin layers by two complementary techniques: LA-ICP-MS and RF-GD-TOFMS*

Jorge Pisonero, Bodo Hattendorf, Cristina Gonzalez, Nicole Tibbetts, Katharine Dovidenko, Denise Anderson, Dustin Ellis, Detlef Günther, Alfredo Sanz-Medel, Nerea Bordel

11:30 EK-2 *Calibration strategies for laser ablation inductively coupled plasma mass spectrometry – possibilities and limitations*

Ewa Bulska, Barbara Wagner

12:05 – 13:05 PARALLEL SESSION E3-a Room A

Chair: Barry Sharp

12:05 E-a01 *Development and applications of laser-assisted plasma spectrometry techniques*

Viktor Kanicky

12:20 E-a02 *High-resolution elemental bio-imaging of Ca, Mn, Fe, Co, Cu and Zn employing LA-ICP-MS and hydrogen reaction gas*

Jessica Lear, Dominic Hare, David Bishop, Fred Fryer, Paul Adlard, David Finkelstein, Philip Doble

12:35 E-a03 *Laser ablation ICP MS for direct elemental and isotopic analysis of dried urine spots*

Martin Resano, Maite Aramendia, Luis Rello, Sylvain Bérail, Christophe Pécheyran, Frank Vanhaecke

12:50 E-a04 *Multiplexed quantification of selected plant proteins using lanthanide labelled antibodies and LA-ICP-MS*
Thomas de Bang, Pai Pedas, Poul Erik Jensen, Søren Husted

12:05 – 13:05 PARALLEL SESSION E3-b Room B

Chair: Christophe Peycheran

12:05 E-b01 *Development and application of new metal-based diagnosis methods*
Larissa Waentig, Simone Hardt, Sandra Techritz, Norbert Jakubowski,
Peter H. Roos

12:20 E-b02 *New strategy for the quantitative analysis of solid materials by on-line isotope dilution laser ablation ICP-MS*
Beatriz Fernandez, Pablo Rodriguez-Gonzalez, J. Ignacio Garcia-Alonso,
Rosario Pereiro, Alfredo Sanz-Medel, Julien Malherbe,
Julio Rodriguez-Fernandez

12:35 E-b03 *Red stoneware analysis towards authentication of the real historic objects by SEM-EDS and LA-ICP MS*
Barbara Wagner, Karolina Malinowska, Mikolaj Donten, Irma Fuks, Barbara Szelegejd

12:50 E-b04 *Cassiterite fingerprinting by LA-ICP-MS*
Hans-Eike Gäbler, Sönke Rehder, Andreas Bahr, Frank Melcher,
Simon Goldmann

13:05 – 14:30 Lunch Level -1

14:30 – 16:30 PARALLEL SESSION E4-a Room A

Chair: Martin Resano

14:30 E-a05 *New laser desorption sample introduction techniques for inductively coupled plasma mass spectrometry*
Jan Preisler, Pavla Foltynová, Tomáš Vaculovič, Viktor Kanický

14:45 E-a06 *Investigation of sulphur isotope fractionation and signal smoothing during the analysis of sulphides by LA-ICP-MS*
Sarah Gilbert, Leonid Danyushevsky, Ross Large, Sebastien Meffre,
David Death

15:00 E-a07 *Effects of small amount of N₂ on the drift in relative sensitivities in laser ablation ICP-MS for geological and biological applications*
Leonid Danyushevsky, Mike Shelley, Jay Thompson, Sarah Gilbert

15:15 E-a08 *Use of Zr xerogel for elemental analysis of crude oil by LIBS*
Mauro Martinez, Manuel Caetano, Jose Chirinos, Vincent Piscitelli,
Brice Bouyssiere, Ryszard Łobiński

15:30 E-a09 *Better imaging analysis by LA-ICP-MS – an analyst's toolkit*
Rob Hutchinson, Katherine McLachlin, Ciaran O'Connor

15:45 E-a10 *Use of the jet interface for improved performance of laser ablation with sector-field ICP-MS*
Torsten Lindemann, Julian Wills, Lothar Rottmann, Stephen Shuttleworth

- 16:00 E-a11 *Results from the Elemental Analysis Working Group (EAWG): Improving forensic glass comparison analysis using LA-ICP-MS*
Jose Almirall, Stefan Becker, Marc Duecking, Tatiana Trejos, Peter Weis
- 16:15 E-a12 *Effect of laser wavelength and pulse width on laser produced aerosols: Implications to fs-LA-ICP-MS*
Prasoon Diwakar, Nicole LaHaye, Sivanandan Harilal, Ahmed Hassanein

14:30 – 16:30 PARALLEL SESSION E4-b Room B

Chair: Ewa Bulska

- 14:30 E-b05 *A high speed interface for coupling laser ablation to ICP-MS*
Barry Sharp, David Douglas, Amy Managh, Helen Reid
- 14:45 E-b06 *Evaluation of internal standards for quantitative tissue imaging*
Daniel A. Frick, Charlotte Giesen, Teresa Hemmerle, Dario Neri, Bernd Bodenmiller, Detlef Günther
- 15:00 E-b07 *Measuring calcium concentrations of fluid inclusions by microthermometry and LA-ICP-MS*
Markus Waelle, Tobias U. Schlegel, Christoph A. Heinrich
- 15:15 E-b08 *LA-ICPMS²: laser ablation sampling with combined ICP-Q-MS and MC-ICP-MS detection for simultaneous trace elemental and isotope ratio analyses*
Julian Wills, Nicholas Lloyd, Lothar Rottmann, Claudia Bouman, Steve Shuttleworth
- 15:30 E-b09 *Quantitative analysis of phosphorylated proteins by LA-ICP-MS*
Frank Bierkandt, Norbert Jakubowski, Peter Roos, Michael Linscheid
- 15:45 E-b10 *Laser-induced breakdown spectroscopy for investigational purposes in the pharmaceutical industry*
Lydia Breckenridge
- 16:00 E-b11 *TruLine™ – a novel, high-performance sample cell for laser ablation*
Katherine McLachlin, Ciaran O'Connor, Rob Hutchinson
- 16:15 E-b12 *Sr isotope ratios in calcium-rich matrices by (LA)-MC-ICPMS: an ongoing challenge*
Johanna Irrgeher, Patrick Galler, Andreas Zitek, Maria Teschler-Nicola, Thomas Prohaska

16:30 – 16:45 CLOSING CEREMONY