

Scientific program of the conference

Conference venue: *Hotel Sorea Máj****, Liptovský Ján, Conference room, 1st floor

Sunday, 16 October 2016

14:00 – 20:00 Registration – hotel foyer, ground floor

18:00 – 21:00 *Dinner*

Monday, 17 October 2016

08:00 – 18:00 Registration

09:30 – 09:45 Welcome address

Commemorative lectures

09:45 – 10:15 CL1 **Karol Flórián:** Professor Mikuláš Matherny and his Košice Spectroscopy School: History and Scientific Milestones

10:15 – 10:30 CL2 **Hubertus Nickel:** In Memory of Prof. Dr. Mikuláš Matherny

10:30 – 10:45 CL3 **Eduard Plško:** Memory of Prof. Dr. Matherny

Invited lectures

Chairperson: **Hubertus Nickel**

10:45 – 11:15 IL1 **Bohumil Dočekal,** Zbyněk Večeřa, Pavel Mikuška, Pavel Šurýn, Michaela Dufka, Pavel Coufalík: Analysis of Mice Organs and Blood from Inhalation Experiments with Selected Metal Oxides Nanoparticles

11:15 – 11:45 IL2 **Gyula Záray:** Determination of Pharmaceutical Residues in Waste, Surface and Drinking Water by GC-MS/MS

12:00 – 13:30 *Lunch*

Session – Spectroscopy and spectrometry

Chairperson: **Viera Vojteková**

13:30 – 14:00 IL3 **Jiří Dědina,** Jan Kratzer, Marek Talába, Adam Obrusník, Pavel Dvořák: Recent Advances in Hydride Generation for Atomic Absorption Spectrometry: Atomizer Optimization by Two-Photon Absorption Laser-Induced Fluorescence

14:00 – 14:20 OL1 **Stanislava Matějková,** Luisa Šerá, Martin Loula, Jan Mengr: Inductively Coupled Plasma Optical Emission Spectroscopy with Electrothermal Vaporisation: An Effective Tool for Direct Multielemental Analysis of Biological Samples

14:20 – 14:40	OL2	Ingrid Hagarová: Separation and Preconcentration of Ultratrace Elements by using New Modes of Cloud Point Extraction: Utilizable in Connection with Spectrometric Methods
14:40 – 14:50	FL1	ANALYTIKA s.r.o. Daniela Weissarová, Vladimír Patera: Laboratory reference materials supplied by Analytika s.r.o.

14:50 – 15:10 *Coffee break*

Session – Atomic spectrometry

Chairperson: **Karol Flórián**

15:10 – 15:40	IL4	Ernest Beinrohr, Lubomir Machyňák, František Čacho: Determination of Trace Concentrations of Chlorine and Fluorine by Continuum Source High Resolution Graphite Furnace Atomic Absorption Spectrometry
15:40 – 16:00	OL3	Jan Kratzer, Petr Novák, Pavla Zuryňková, Ondřej Duben, Michal Albrecht, Milan Svoboda, Jiří Dědina: Dielectric Barrier Discharge Plasma Atomizers of Volatile Compounds in Atomic Absorption Spectrometry: Applications, Mechanisms and Future Perspectives
16:00 – 16:20	OL4	Manfred Sager: Sample Preparation for Determination of High Iodine Levels by ICP-OES
16:20 – 16:40	OL5	György Heltai, Karol Flórián, Remeteiová Dagmar, Márk Horváth, Éva Széles, Gábor Halász, Ilona Fekete: Application and Development Sequential Extraction Procedures for Fractionation of Heavy Metal Content of Soils, Sediments, and Gravitation Dusts
16:40 – 16:50	FL2	PRAGOLAB s.r.o. Róbert Cibula: Using of Extra Techniques in connection with ICP/MS.
17:00	<i>Slovak spectroscopic society general assembly</i>	
18:00	<i>Dinner</i>	
19:00 – 21:00	<i>Welcome party</i>	

Tuesday, 18 October 2016

Session – Other spectroscopic methods, instrumentation, and methodology

Chairperson: **Marcel Miglierini**

09:00 – 09:30	IL5	Adriana Lančok: Temperature Degradation of Vivianite as Related to Historic Paintings
09:30 – 09:50	OL6	Lukáš Pašteka, Marcel Miglierini: Study of Stainless steel LC200N by Mössbauer Spectrometry

09:50 – 10:10	OL7	Ivana Bonková , Marcel Miglierini, Marek Bujdoš: Mössbauer Spectrometry Applied to Biological Samples
10:10 – 10:20	FL3	Messer Tatragas s.r.o. Michael Hanish : Calibration Gases – Reference Materials acc. To ISO Guide 34 and ISO/IEC 17025

10:20 – 10:40 *Coffee break*

Session – Other spectroscopic methods, instrumentation, and methodology

Chairperson: **Adriana Lančok**

10:40 – 11:00	OL8	Marcel Miglierini : Hyperfine Interactions of Disordered Alloys Probed by Nuclear Resonances
11:00 – 11:20	OL9	Milan Štefánik , Martin Cesnek, Marcel Miglierini: Neutron Activation Analysis of Steel Samples at the VR-1 Training Reactor and NG-2 Cyclotron-Based Neutron Generator
11:20 – 11:50	IL6	Jozef Sitek , Dominika Holková, Július Dekan: Radiation Influence on Nanocrystalline Alloys
12:00 – 13:30		<i>Lunch</i>

Session – Molecular spectroscopy

Chairperson: **Přemysl Lubal**

13:30 – 14:00	IL7	Pavel Matějka , Martin Král, Alžběta Kokaislová, Marcela Dendisová, Marie Švecová, Adéla Jenišťová, Jiří Janoušek: From Surface-Enhanced Vibrational Spectroscopy to Vibrational Nanoscopy
14:00 – 14:20	OL10	Adriana Štuncová , Nikolay Kotov, Alexander Zhigunov, Vladimír Raus, Jiří Dybal: The Effect of Water on Structural Transitions of 1-Butyl-3-methylimidazolium Chloride as Investigated by Vibrational Spectroscopy and WAXS
14:20 – 14:40	OL11	Markéta Pazderková, Petr Maloň, Václav Profant, Vladimír Baumruk, Lucie Bednárová : Chiroptical Properties of the Antimicrobial Peptide <i>Lasiocepsin</i> and of its Analogs
14:40 – 15:00	OL12	Veronika Sutrová , Ivana Šloufová, Martin Kalbáč, Ewa Pavlova, Martina Nevoralová, Blanka Vlčková: Enhanced Raman Spectra of Ag-ethanethiolate and Graphene from Graphene/Ag-NPs-ethanethiol Hybrids: Interplay between Surface- and Graphene-Enhanced Raman Scattering
15:00 – 15:10	FL4	Merck s.r.o. Zuzana Antalová : Certified Reference Materials CertiPUR® Merck
15:10 – 15:30		<i>Coffee break</i>

Session – Molecular spectroscopy; Spectroscopy and spectrometry

Chairperson: ***Pavel Matějka***

15:30 – 15:50	OL13	Alžběta Jebavá, Lenka Řezáčová, Přemysl Lubal , Karel Novotný: Synthesis and Analytical Applications of CdTe-QD's Nanoparticles
15:50 – 16:10	OL14	Branislav Hruška , Tadeáš Gavenda, Darina Tokarčíková, Andrea Černá, Mária Chromčíková, Marek Liška: Interpretation of Raman Spectra Depth Profile of Weathered Glass Surface by Advanced Statistical Methods
16:10 – 16:30	OL15	Lucia Kořenková , Martin Urík: Application of FTIR Spectroscopy in Soil Water Repellency Assessment
16:30 – 16:40	FL5	SHIMADZU SLOVAKIA, o.z. Johan Leinders , Uwe Oppermann, Jan Knoop: ICPMS-2030: Peace of Mind for Users and Lab Managers
17:00 – 18:00	Putting up of posters	
18:00	<i>Dinner</i>	
19:00 – 21:00	Poster session	

Wednesday, 19 October 2016

Session – Spectroscopy and spectrometry; Mass spectrometry

Chairperson: ***Bohumil Dočekal***

08:30 – 09:00	IL8	Viktor Kanický , Karel Novotný, Markéta Holá, Michaela Vašinová Galiová, Tomáš Vaculovič, Aleš Hrdlička: Recent Developments in Laser Assisted Plasma Spectrometry
09:00 – 09:20	OL16	Henrieta Šoltýsová , Jarmila Nováková, Augustín Majchrák: Determination of Some Elements in Samples of Emissions by ICP-MS
09:20 – 09:40	OL17	Viera Vojteková , Daniel Kupka, Daniela Sabolová: Multi-element Analysis in Complicated Sample Matrices Utilizing Single-set Experimental Conditions of ORC-ICP-QMS
09:40 – 10:00	OL18	Pavel Pořízka , Tomáš Zikmund, Markéta Tesařová, David Prochazka, Jan Novotný, Jozef Kaiser: Utilization of Computed Tomography and Laser Spectroscopy for 3D High Resolution Mapping
10:00 – 10:10	FL6	AMEDIS s.r.o. Fabrizio Jakubec : PQ MS technological progress
10:10 – 10:30	<i>Coffee break</i>	

Session – Atomic spectrometry; Spectroscopy and spectrometry

Chairperson: ***Viktor Kanický***

10:30 – 11:00	IL9	Ewa Bulska: On the Use of Non-Routine Analytical Approaches for Understanding Chemical Speciation in Environmental Samples
11:00 – 11:20	OL19	Michal Hlodák, Martin Urík, Peter Matúš: Evaluation of Mercury Immobilisation and Transformation Processes in the Soil – Plant – Microscopic Filamentous Fungi System Using CV AAS Method
11:20 – 11:40	OL20	Michaela Hložková, Michaela Vašinová Galiová, Renáta Čopjaková, Jindřich Kynický, Viktor Kanický: Application of Laser Ablation Sampling for the Multielemental Analysis of Dinosaur Skeletal Remains: a Diagenetic Study
11:40 – 11:50	FL7	CHROMSPEC-SLOVAKIA s.r.o.
12:00 – 13:30	<i>Lunch</i>	
13:30 – 18:00	<i>Excursion</i>	
20:00	<i>Conference dinner</i>	

Thursday, 20 October 2016

Session – Spectroscopy and spectrometry

Chairperson: ***Gyula Záray***

08:30 – 08:50	OL21	Hana Dočekalová: Prediction of Bioavailability of Metals in Aquatic Systems: Comparison between Diffusive Gradient in Thin Films Technique and Living Organism
08:50 – 09:10	OL22	Eva Duborská, Jana Kubová: Analytical Methods for Iodine Determination in Environmental Samples
09:10 – 09:30	OL23	Martin Urík, Marek Bujdoš, Katarína Boriová, Marcel Miglierini: Application of Spectroscopic Methods for Evaluation of Toxic Metals and Metalloids Mobility in Defined Multicomponent Systems During Static Cultivation of Common Fungal Strains
09:30 – 09:50	OL24	Martin Šebesta, Martin Urík, Marek Kolenčík, Peter Matúš, Gabriela Kratošová, Ivo Vávra, Andrej Vojtko, Eva Majková: Characterizing ZnO Nanoparticles and their Interaction with Humic Acids
09:50 – 10:20	IL10	Viliam Krivan: Analysis of High Purity Advanced Materials: the Present-Day Importance of Wet-Chemical and Direct Solid Sampling Spectrometric Methods
10:20 – 10:40	<i>Coffee break</i>	

Session – Spectroscopy and spectrometry; Other spectroscopic methods, instrumentation, and methodology

Chairperson: ***Daniela Mackových***

10:40 – 11:00	OL25	Michal Rečlo , Erkan Yilmaz, Mustafa Soylak, Vasil Andruch, Yaroslav Bazel: Switchable Hydrophilicity Solvent Based Microextraction of Nickel Prior to Determination by Flame Atomic Absorption Spectrometry
11:00 – 11:20	OL26	Marek Bujdoš, Hana Vojtková, Marek Kolenčík , Martin Urík: The Leaching of Zn, Pb, and Cu from Polymetallic Ore using Heterotrophic Bacteria such as <i>Pseudomonas</i> , <i>Rhodococcus</i> and <i>Cupriavidus</i> Compare to Fungal Strain <i>Aspergillus niger</i>
11:20 – 11:40	OL27	Filip Polák : Fungal Accumulation of Selected Metals from Mining Waste
11:40 – 12:00	OL28	Martin Pavlačka , Karel Ventura, Kateřina Kortánková, Jiří Bláha, Michal Zástěra, Roman Mázl, Petra Bajerová: Analysis of Stimulants Using Differential Mobility Spectrometry
12:00 – 12:20	OL29	Jozef Bednarčík : Experimental Possibilities at the High-Resolution Powder Diffraction Beamline P02.1
12:20 – 12:30	Closing ceremony	• Evaluation of the competition: “The best student lecture presentation“
12:30	Lunch	



Registration desk will be for you in disposal during all the conference. Here will be also information place for you.

POSTER SESSION

Conference venue: *Hotel Sorea Máj****, Liptovský Ján, Conference room, 1st floor

Tuesday, 18 October 2016, 19:00 – 21:00

Members of evaluation committee: E. Beinrohr, A. Lančok, H. Nickel, G. Záray

- PP1 **Andrea Černá**, Branislav Hruška, Darina Tokarčíková, Mária Chromčíková, Marek Liška: AFM and Raman Study of Heavy Weathered Surface of Barium Crystal Glass
- PP2 **Marianna Dorková**, Dagmar Remeteiová, Silvia Ružičková, Vladislava Mičková: Utilization of MW – Assisted Digestion and HR CS AAS for Evaluation of Heavy Metals Pollution in Sedimentary Ecosystems
- PP3 **Miroslav Fišera**, Jiří Mlček, Pavel Budinský, Helena Velichová, Lenka Fišerová: Determination of Selenium Species by ICP-MS Method in Biological Samples
- PP4 **Ingrid Hagarová**: Simplex Method for Optimization of Cloud Point Extraction: Utilizable for Determination of Ultratrace Elements by Using Spectrometric Methods
- PP5 Silvia Ružičková, Mariana Dorková, Dagmar Remeteiová, Vladislava Mičková, **Gabriela Holéczyová**: Determination of Heavy Metals in the Soil by High-Resolution Continuum Source Flame Atomic Absorption Spectrometry (HR-CS FAAS).
- PP6 **Petr Chrást**, Michaela Vašinová Galiová, Viktor Kanický: Inductively Coupled Plasma Mass Spectrometry in the Analysis of Geological Materials
- PP7 **Adéla Jenišťová**, Jaroslava Šmolíková, Martin Flegel, Pavel Matějka: Vibrational Spectroscopic Study of Interactions Between Skin and Peptides Based on the Argireline Structure
- PP8 **Antonín Kaňa**, Jiřina Száková, Oto Mestek: Effect of Dietary Selenium Intake on Inter-Element Interactions in Rat Livers
- PP9 **Ľubomír Machyňák**, Martin Němeček, František Čacho, Ernest Beinrohr: High-Resolution Continuum Source Electrothermal Absorption Spectrometry of SrF and InCl Molecules
- PP10 **Irena Matulková**, Ivana Šloufová, Jana Vejpravová, Tim Verhagen, Ivan Němec, Blanka Vlčková, Veronika Sutrová, Miroslav Šlouf, Martin Kalbáč: Raman Spectroscopy Study of Thermal Effects in Graphene on Au Nanoislands
- PP11 **Vladislava Mičková**, Silvia Ružičková, Marianna Dorková, Dagmar Remeteiová: Temperature Influence on Electrothermal Vaporization Process of Heavy Metals in Different Matrices by Use of ETV-ICP-OES Method
- PP12 **Martin Němeček**, Ľubomír Machyňák, Ernest Beinrohr, František Čacho: Application of High-Resolution Continuum Source Molecular Absorption for the Determination of Nitrate
- PP13 **Eliška Nováková**, Václav Červený, Petr Rychlovský: Determination of Se in Dietary Supplements by Photochemical Volatile Species Generation Atomic Absorption Spectrometry
- PP14 **Markéta Prusková**, Ivana Šloufová, Jiří Vohlídal, Blanka Vlčková, Miroslav Šlouf: SERS Study of Self-Assembled 2D Nanocomposites of Ag and Au Nanoparticles with Terpyridine and its Derivatives

- PP15 **Dagmar Remeteiová**, Marianna Dorková, Silvia Ružičková, Vladislava Mičková: Evaluation of Heavy Metals Impact from Various Types of Sediments to their Ecosystem by fractionation extractions and High-Resolution Continuum Source Flame Atomic Absorption Spectrometry
- PP16 **Tina Resslerová**, Jakub Hraníček: Determination of Tellurium in Flavoured Mineral Waters by Electrochemical HG-AFS
- PP17 **Silvia Ružičková**, Dagmar Remeteiová, Mariana Dorková, Vladislava Mičková: Optimization of Microwave-Assisted Decomposition for Heavy Metals Determination in Lichens
- PP18 **Daniela Sabolová**, Viera Vojteková, Daniel Kupka: Inductively Coupled Plasma Mass Spectrometry in Trace Analysis of Sulphur
- PP19 **Milan Svoboda**, Jan Kratzer, Věra Šindelářová, Marek Straka, Jakub Hraníček, Antje Michels, Joachim Franzke, Jiří Dědina: Novel Designs of Dielectric Barrier Discharge Atomizers of Volatile Compounds for AAS and AFS
- PP20 Charles S. Huber, Mária. G. R. Vale, Morgana B. Dessuy, **Milan Svoboda**, Jiří Dědina: Arsenic Speciation in Baby Food by HG-CT-AAS
- PP21 **Lucie Šimoníková**, Lubomír Prokeš, Vlastimil Kubáň, Viktor Kanický: Elemental Analysis of Wine by Inductively Coupled Plasma Optical Emission Spectroscopy
- PP22 Barbora Svatošová, **Michaela Vašinová Galiová**, Jitka Míková, Lubomír Prokeš, Hélène Tabouret, Christophe Pécheyran, Viktor Kanický: Analysis of Antarctic Otoliths by Laser Ablation Inductively Coupled Plasma Mass Spectrometry
- PP23 **Éva Cseperke Vizsolyi**, Imre Varga, Győző G. Láng, József Varga, Gyula Záray: Case Study of Groundwater Remediation
- PP24 **Viera Vojteková**, Anna Ballóková, Daniela Sabolová, Daniel Kupka: Optimization of Analytical Method for Determination of the Trace Phosphorus Contents by Using ORC-ICP-QMS
- PP25 **Jiřina Vontorová**, Václav Dobiáš, Petr Mohyla: Utilization of GDOES for the Study of Friction Layers Formed on the Surface of Brake Discs During the Friction Process