Kurděj ov
2024

msms Mössbauer Spectroscopy in Materials Science 2024

CONFERENCE BOOKLET

MAY 27–31, 2024

MUNI SCI

Palacký University Olomouc

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The 18th Czech-Slovak Spectroscopic Conference (18th CSSC) is the scientific meeting with international participation to share recent developments, exchange ideas, explore new directions and initiate a possible collaboration in the **analytical spectrometry** area. Leading scientists and researchers will be invited to present their most up-to-date results at this conference, to exchange exciting ideas and experiences as well as look into future development. The aim of this scientific event is **to bring together experts** from universities, academia, official centers, various laboratories, and industry, to summarize the current progress in various areas of spectroscopy/spectrometry and the trends in the applications such as chemical, environmental, geological, biological, food, pharmaceutical and industrial materials and to stimulate contacts and mutual exchange of experiences and ideas.

The microsymposium entitled **"Recent progress in vibrational spectroscopy - Celebrating 50 years of SERS and the 65th anniversary of A. Smekal death"** is the inherent part of the Conference programme as a parallel session. Invited as well as short lectures in the Microsymposium will cover a wide range of topics targeted on recent progress in Raman and infrared spectroscopy and their applications. A particular attention will be given to special methods of Raman spectroscopy, namely resonance Raman scattering (RRS) and surface-enhanced/resonance/Raman scattering (SERS and SERRS) as well as to time-resolved IR and Raman spectroscopy. Moreover, the development and application of advanced techniques of vibrational spectroscopis imaging/mapping both in micro- and nanoscale will be covered. Furthermore, application of IR and Raman spectroscopy in various branches of chemistry, material science, geology, gemmology, art conservation, environmental science, food processing, biology and medicine will be an inherent part of the Microsymposium scope.

The upcoming year of this conference with a long tradition differs from the previous ones by a greater emphasis on analytical spectrometry applied in **the geological sciences**. Many scientists with a geological background are engaged in laboratory analysis and research of geological materials. These geologists are experts not only in their parent field, but also bring new knowledge in the methodology of analytical chemistry, namely spectrometry. Contributions to the conference program in the field of analysis of geological materials are therefore very much in demand, as well as participants - geologists, who are warmly welcome to this conference.

A series of specialized colloquia entitled **"Mössbauer Spectroscopy in Materials Science (MSMS)"** was initiated in the Central Europe. They have been almost regularly organized since 1994 alternatively in Slovakia and Czech Republic with a two-year periodicity. Firstly, MSMS colloquium represents an important forum for researchers in materials science who share their results on understanding the solid-state matter employing Mössbauer spectroscopy. Secondly, the conference organizers invite several scientists well distinguished in Mössbauer spectroscopy worldwide to give both tutorial lectures and lectures of broad perspective to convey the knowledge to young generation (researcher beginners, PhD students, etc.). Thirdly, cutting-edge works are presented stimulating future studies and research orientation in the field of Mössbauer spectroscopy.

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MAP OF THE VENUE

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PRVNÍ RAMANOVY SPEKTROMETRY S REÁLNĚ POTLAČENOU FLUORESCENCÍ

Ramanova spektroskopie je velmi silný nástroj každé moderní laboratoře. Je to rychlá, spolehlivá, jednoduchá a relativně levná analytická metoda, která nevyžaduje hluboké znalosti ani složitou přípravu vzorku. Během několika desítek vteřin poskytuje detailní informace o chemickém složení vzorku, jeho krystalické struktuře i fyzikálních vlastnostech. Je možné s ní měřit mikroskopické vzorky i rozměrné objekty, a Ramanova spektra lze měřit dokonce i přes řadu obalových materiálů. Na problémy ovšem naráží v případě fluorescence, která může některá měření zkomplikovat, nebo i zcela znemožnit, což je časté např. u vzorků biologického původu či barevných materiálů. Existuje řada způsobů, jak s fluorescencí bojovat, z nichž každý má své výhody i nevýhody. Společnost **Timegate** však jako první na světě nabízí integrovaný systém s jedinečným řešením **reálného potlačení fluorescence**, a tak je s jejími spektrometry možné měřit i vzorky, jejichž analýza s běžnými spektrometry nebyla možná.

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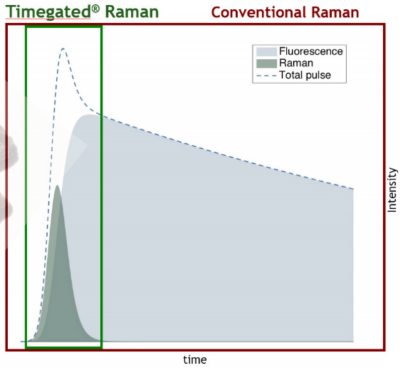
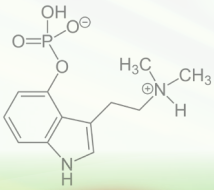
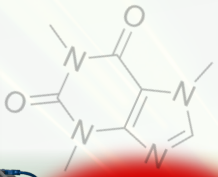
Své uplatnění tak nachází v geovědách, biofarmaceutickém a forenzním výzkumu, ve farmacii, výzkumu katalýzy a mnohých dalších oborech.



Princip technologie Timegated pro reálné potlačení fluorescence





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CZECH–SLOVAK SPECTROSCOPIC CONFERENCE 2024 & msms Mössbauer Spectroscopy in Materials Science 2024

Conference programme

Monday
27 May

15:00-18:00	Registration
18:00-21:00	Welcome party

Tuesday
28 May

	Registration/opening	8:15-9:00
Chair: Kanický	**Beinrohr**	9:00-9:45
	Vyshnikin	9:45-10:15
	Coffee break	10:15-11:00

CSSC lectures will be in Vinař, MSMS in Kasáada and Microsymposium in Adina

Lecture hall - Vinař

Chair: Časlavský

11:00-11:30	Brecker
11:30-11:50	Zini
11:50-12:10	Fiala
12:10-12:30	Havránek
12:30-12:50	Mehwish

Lecture hall - Kaskáda

Chair: Machala

11:00-11:30	Greneche
11:30-11:50	Kuzmann
11:50-12:10	Dubiel
12:10-12:30	Kořenek
12:30-12:50	Košovský

Hotel restaurant

12:50-14:30	Lunch

Lecture hall - Vinař

Chair: Urík

14:30-15:00	Košek
15:00-15:20	Matoušek
15:20-15:40	Holá
15:40-16:00	Sobek
16:00-16:20	Dobeš

Lecture hall - Kaskáda

Chair: Oshtrakh

14:30-15:00	Garcia
15:00-15:20	Pechoušek
15:20-15:40	Skoumal
15:40-16:00	Vondrášek

16:30-16:50	Group photo shoot
17:00-19:00	Poster session
19:00-21:00	Dinner

CZECH–SLOVAK SPECTROSCOPIC CONFERENCE 2024 & msms Mössbauer Spectroscopy in Materials Science 2024

Conference programme

Monday **27** May

15:00-18:00	Registration
18:00-21:00	Welcome party

Lecture hall – Vinař

Tuesday **28** May

Chair: Kanický

8:15-9:00	Registration/opening	
9:00-9:45	● Beinrohr	Trace analysis of metals and nonmetals by line and continuum source aas coupled online with electrochemical preconcentration techniques
9:45-10:15	Vyshnikin	In-vessel headspace liquid-phase microextraction
10:15-11:00	Coffee break	

Chair: Čáslavský

11:00-11:30	Brecker	Complexation between Aconitine and Various Flavonoides as Possible Concept for Detoxification: A Spectroscopic View on the Complex Formation
11:30-11:50	Zini	Timegated Raman -True fluorescence suppression
11:50-12:10	Fiala	NMR spectroscopy of nucleic acids in living mammalian cells
12:10-12:30	Havránek	Preparation and characterization of porous silver films by ion sputtering followed by ion irradiation
12:30-12:50	Mehwish	Finding conditions for Monometallic and Bimetallic Platinum-containing nanoclusters' formation
12:50-14:30	Lunch	

Chair: Urík

14:30-15:00	Košek	A decad of portable Raman spectrometers in mineralogical studies
15:00-15:20	Matoušek	Nové technologie v Ramanově spektrometrii: Zobrazování pomocí liniového laseru a High Throughput Virtual Slit
15:20-15:40	Holá	LA-ICP-MS: A key to detailed imaging of trace elements in geological samples
15:40-16:00	Sobek	Spectroscopical approach for studying biological shielding concrete
16:00-16:20	Dobeš	Lead isotopic analysis: Back to basics, potential of current analytical techniques & visions for future improvements

16:30-16:50	Group photo shoot
17:00-19:00	Poster session
19:00-21:00	Dinner

Conference programme

Monday **27** May

15:00-18:00	Registration
18:00-21:00	Welcome party

Lecture hall – Kaskáda

Tuesday **28** May

Chair: Machala

11:00-11:30	Greneche	Local Structural and Magnetic properties of Fe containing nanoarchitectures
11:30-11:50	Kuzmann	Mössbauer AND XRD observation of the effect of swift heavy ion irradiation in nano-maghemite
11:50-12:10	Dubiel	Microscopic phenomena in Fe-Cr alloys
12:10-12:30	Kořenek	Structure analysis of Surface-manufactured CL20ES samples prepared by slm
12:30-12:50	Košovský	Precipitation of ODS steels after long-term annealing
12:50-14:30	Lunch	

Chair: Oshtrakh

14:30-15:00	Garcia	Adsorption of some metal contaminants in water using akageneite nanoparticles: spectroscopic and kinetic studies
15:00-15:20	Pechoušek	Mössbauer, XRD and SEM/EDX spectroscopic study of DC magnetron sputtered AISI 304 stainless steel films
15:20-15:40	Skoumal	Enhancing Mössbauer Spectroscopy for Efficient Quality Control in Metallurgical Industries
15:40-16:00	Vondrášek	Fast ^{57}Fe Mössbauer austenitemeter

16:30-16:50	Group photo shoot
17:00-19:00	Poster session
19:00-21:00	Dinner

CZECH–SLOVAK SPECTROSCOPIC CONFERENCE 2024 & msms Mössbauer Spectroscopy in Materials Science 2024

Conference programme

Wednesday

29 May

8:15-9:00	**Bulska** ●	Chair: Kratzer
9:00-9:30	Cialla-May	
9:30-10:00	Deckert	
10:00-10:45	Coffee break	

Lecture hall - Vinař

Chair: Kaňa

10:45-11:15	Musil
11:15-11:35	Hájková
11:35-11:55	Cyprichová
11:55-12:15	Kratzer
12:15-12:35	Figueroa

Lecture hall - Adina

Chair: Cialla-May

10:45-11:15	Procházka
11:15-11:45	Dendisová
11:45-12:15	Vlčková
12:15-12:35	Palounek

Lecture hall - Kaskáda

Chair: Schünemann

10:45-11:15	Dubiel
11:15-11:35	Yaroslavtsev
11:35-11:55	Kubuki
11:55-12:15	Grey
11:55-12:35	Klencsár

Hotel restaurant

12:35-14:00	Lunch

Lecture hall - Vinař

Chair: Holá

14:00-14:30	Limbeck
14:30-14:50	Marek
14:50-15:10	Hrdlička
15:10-15:30	Bosáková
15:30-15:50	Krempl
15:50-16:30	Coffee break

Chair: Šebesta

16:30-17:00	Kaňa
17:00-17:20	Zvěřina
17:20-17:40	Matoušek

Lecture hall - Adina

Chair: Lendl

14:00-14:30	Kloz
14:30-15:00	Šišková
15:00-15:30	Kočišová
15:30-16:00	Mojzeš

Chair: Deckert

16:30-17:00	Kalbáčová
17:00-17:30	Němec
17:30-18:00	Kalbáč

Lecture hall - Kaskáda

Chair: Homonnay

14:00-14:30	Barrero
14:30-14:50	Goneková
14:50-15:10	Lančok
15:10-15:30	Oshtrakh
15:30-15:50	Németh

Chair: Dubiel

16:30-17:00	Homonnay
17:00-17:20	Procházka
17:20-17:40	Heger
17:40-18:00	Koutný
18:00-18:20	Lisníková

19:30-??	Conference dinner

CZECH–SLOVAK SPECTROSCOPIC CONFERENCE 2024 & msms Mössbauer Spectroscopy in Materials Science 2024

Conference programme
Lecture hall – Vinař

Wednesday **29** May

		Chair: Kratzer	
8:15-9:00	●	**Bulska**	From Isotope Fractionation to Chemical Speciation of Biologically Relevant Substances
9:00-9:30		**Cialla-May**	Surface enhanced Raman spectroscopy in bioanalytics
9:30-10:00		**Deckert**	Tip-Enhanced Raman Scattering - old stories and new developments
10:00-10:45		Coffee break	
		Chair: Kaňa	
10:45-11:15		**Musil**	Recent advances in photochemical vapor generation of several technology-critical elements
11:15-11:35		**Hájková**	Analytika s.r.o., Czech manufacturer of ref. materials for labs
11:35-11:55		**Cyprichová**	Application of six-step sequential extraction for determination of zinc fractions in paddy soils
11:55-12:15		**Kratzer**	Laser induced fluorescence: A reliable tool for diagnostics and development of hydride atomizers
12:15-12:35		**Figueroa**	Plasma assisted vapor generation of platinum group elements
12:35-14:00		Lunch	
		Chair: Holá	
14:00-14:30		**Limbeck**	Spatially resolved material analysis using a combined LA-ICP-MS and LIBS procedure
14:30-14:50		**Marek**	Analysis of metals by atomic spectrometry
14:50-15:10		**Hrdlička**	Laser-induced breakdown spectroscopy in analysis of algae
15:10-15:30		**Bosáková**	Acoustic/optical emission spectroscopic hyphenated data from laser-induced plasmas. From the concept to the scene
15:30-15:50		**Krempl**	Imaging of uranium ores by laser induced breakdown spectroscopy (LIBS)
15:50-16:30		Coffee break	
		Chair: Šebesta	
16:30-17:00		**Kaňa**	Exploring the environmental role of arsenic speciation in macrofungi
17:20-17:40		**Zvěřina**	Simultaneous determination of Pb, Al, and Fe in the analysis of Antarctic terrestrial flora using HR-CS GF-AAS
17:40-18:00		**Matoušek**	Speciation of Arsenic, antimony, Germanium and Tellurium in drinking water reservoirs over the seasons of the year

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19:30-?? **Conference dinner**

CZECH–SLOVAK SPECTROSCOPIC CONFERENCE 2024 & msms Mössbauer Spectroscopy in Materials Science 2024

Conference programme
Lecture hall – Kaskáda

Wednesday **29** May

Chair: Schünemann

10:45-11:15	Dubiel	Mössbauer spectroscopic insight into effect of magnetism on lattice vibrations
11:15-11:35	Yaroslavtsev	New nuclear resonance beamline ID14 at ESRF
11:35-11:55	Kubukl	Developmentof tin oxide particles distributed phosphovanadate glass as a cathode for secondary battery with high performances
11:55-12:15	Grey	119-Sn Mössbauer spectrometry used in the study of Tin-containing metallic glasses
12:15-12:35	Klencsár	Mössbauer study of Platinum-decorated iron oxide powders developed for gas sensing applications
12:35-14:00	Lunch	

Chair: Homonnay

14:00-14:30	Barrero	Mössbauer Studies of β-Hematin Crystals: Bridging Gaps in Malaria Research
14:30-14:50	Goneková	Mössbauer Spectroscopy Analysis of Fungal-Induced structural changes in Ochres
14:50-15:10	Lančok	Bio- and chemical applications of Mössbauer spectroscopy
15:10-15:30	Oshtrakh	How many iron compounds are in pharmaceuticals containing ferrous bysglycinate chelate? Study using Mössbauer spectroscopy
15:30-15:50	Németh	Is there something really new in the field of materials analysis? Spoiler: Yes, there is
15:50-16:30	Coffee break	

Chair: Dubiel

16:30-17:00	Homonnay	Mössbauer analysis of the goethite and hematite content of paleosols and goethite nodules from the Carpathian basin region
17:00-17:20	Procházka	Quantitative analysis in Mössbauer spectroscopy
17:20-17:40	Heger	Electrodeposition of ^{57}Fe iron thin films on piezofilms for Mössbauer gamma optics
17:40-18:00	Koutný	Comparison of scintillation and semiconductor detectors in mössbauer spectroscopy
18:00-18:20	Lisníková	Controlling the properties of Nanosized $CoFe_2O_4$ Prepared with the hydrothermal synthesis

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19:30-?? **Conference dinner**

Conference programme
Lecture hall – Adina

Wednesday
29 May

Chair: Cialla-May

10:45-11:15	Procházka	50 years of surface-enhanced raman spectroscopy: From fundamentals to innovative applications
11:15-11:45	Dendisová	Exploring the Synergy of Electrochemistry and Surface-Enhanced Raman Scattering (EC-SERS) for Advanced Surface Analysis
11:45-12:15	Vlčková	The role of adsorption sites on Ag nanoparticle surfaces in SERS spectroscopy and plasmon catalysis
12:15-12:35	Palounek	Interferometric scattering microscopy revealing hotspot dynamics during fluctuations in single molecule Raman spectroscopy
12:35-14:00	Lunch	

Chair: Lendl

14:00-14:30	Kloz	Femtosecond stimulated Raman spectroscopy in deciphering switching mechanism of biological photoreceptors
14:30-15:00	Šišková	Noble metal nanostructures used in spectroscopies
15:00-15:30	Kočišová	Droplet deposition Raman spectroscopy techniques and their applications
15:30-16:00	Mojzeš	Raman microscopy of cells and tissues: From crystalline inclusions to viral factories
16:00-16:30	Coffee break	

Chair: Deckert

16:30-17:00	Kalbáčová	Cryomagnetic spectroscopies on van der waals materials using chiral light
17:00-17:30	Němec	Combined vibrational spectroscopic and structural study of molecular NLO materials
17:30-18:00	Kalbáč	Application of Raman spectroscopy in the studies of 2D materials

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19:30-?? **Conference dinner**

CZECH–SLOVAK SPECTROSCOPIC CONFERENCE 2024 & msms Mössbauer Spectroscopy in Materials Science 2024

Conference programme

Thursday
30 May

8:30-9:15	**Kanický** ●	Chair: Němec
9:15-9:45	Lendl	
9:45-10:05	Kuižová	
10:05-10:25	Kopal	
10:25-11:00	Coffee break	

Lecture hall - Vinař

Chair: Vaculovič

11:00-11:30	Preisler
11:30-11:50	Humplík
11:50-12:10	Biskupič
12:10-12:30	Bahelková

Lecture hall - Adina

Chair: Němec+Vlčková

11:00-11:30	Profant
11:30-12:00	Kapitán
12:00-12:20	Jílek
12:20-12:30	Closing

Lecture hall - Kaskáda

Chair: Greneche

11:00-11:30	Schünemann
11:30-11:50	Jakubowska
11:50-12:10	Mašláň

Hotel restaurant

12:30-13:30 Lunch

14:00-18:30 Trips and excursions
19:00-21:00 Dinner
21:00-21:15 Ceremony awards

CZECH–SLOVAK SPECTROSCOPIC CONFERENCE 2024 & msms Mössbauer Spectroscopy in Materials Science 2024

Conference programme
Lecture hall – Vinař

Thursday **30** May

Chair: Němec

8:30-9:15	● Kanický	Czech and Slovak spectroscopy interactions - history and future
9:15-9:45	Lendl	Laser-Based MID-IR Absorption and Dispersion Spectroscopy of Liquids
9:45-10:05	Kuižová	Thermotropic phase transition of dehydrated phospholipids monitored by drop coating deposition Raman (DCDR) spectroscopy
10:05-10:25	Kopal	Exploring Conformational Changes via Surface-Enhanced Raman Spectroscopy Assisted by Interferometric Scattering Microscopy
10:25-11:00	Coffee break	

Chair: Vaculovič

11:00-11:30	Preisler	Nanoparticle Counting by Laser-AssiSted Mass Spectrometry
11:30-11:50	Humplík	Arsen, selen, titan.... singlequadem se nedoměříš
11:50-12:10	Biskupič	Nanoparticles as a new tool to diagnose ischemic stroke
12:10-12:30	Bahelková	Cadmium accumulation in organ tissues after inhalation of cadmium-based nanoparticles
12:30-13:30	Lunch	

14:00-18:30	Trips and excursions
19:00-21:00	Dinner
21:00-21:15	Ceremony awards

Lecture hall – Kaskáda

Thursday **30** May

Chair: Greneche

11:00-11:30	Schünemann	A little journey from single domain particles to single molecule magnets
11:30-11:50	Jakubowska	Mössbauer studies of three Antarctic meteorites
11:50-12:10	Mašláň	Air scintillation detector for conversion electron Mössbauer spectroscopy
12:30-13:30	Lunch	

Conference programme
Lecture hall – Adina

Thursday **30** May

Chair: Němec + Vlčková

11:00-11:30	**Profant**	From Light to Insight: Exploring Biomolecular Structures via Raman Optical Activity
11:30-12:00	**Kapitán**	Raman optical activity as an important spectroscopic tool in the study of the structure and interactions of chiral molecules - celebrating 50 years of discovery
12:00-12:20	**Jílek**	Exploring Mononucleotide G-quadruplexes through Vibrational and Chiroptical Spectroscopy
12:20-12:30	**Closing**	
12:30-13:30	**Lunch**	
14:00-18:30	**Trips and excursions**	
19:00-21:00	**Dinner**	
21:00-21:15	**Ceremony awards**	

CZECH–SLOVAK SPECTROSCOPIC CONFERENCE 2024

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Mössbauer Spectroscopy in Materials Science 2024

Conference programme

Friday
31 May

8:30-9:15	**Hof** ●	Chair: Vlčková
9:15-9:45	Mariychuk	
9:45-10:05	Lubal	
10:05-10:25	Táborský	
10:25-11:00	Coffee break	

Lecture hall - Vinař

Chair: Kanický

11:00-11:30	Čáslavský
11:30-11:50	Šebesta
11:50-12:10	Vaculovič
12:10-12:45	The End

Lecture hall - Adina

Chair: Miglierini

11:00-11:30	Krehula
11:30-11:50	Kubuki
11:50-12:10	Miglierini

Hotel restaurant

12:30-13:30	Lunch

14:00 Departure

CZECH–SLOVAK SPECTROSCOPIC CONFERENCE 2024 & msms Mössbauer Spectroscopy in Materials Science 2024

Conference programme
Lecture hall – Vinař

Friday **31** May

Chair: Vlčková

8:30-9:15	● Hof	Are hydration and dynamics factors influencing the activity of enzymes? Insights by combining two fluorescence techniques with MD simulations
9:15-9:45	Mariychuk	Plasmonic metal nanoparticles with a response in the near-infrared region
9:45-10:05	Lubal	Application of sensor arrays for determination of equilibrium constants
10:05-10:25	Táborský	Enhancement of Luminescence Signal by Deuterated Water – Analytical applications
10:25-11:00	Coffee break	

Chair: Kanický

11:00-11:30	Čáslavský	Evaluation of charring influence on the carbon, nitrogen and oxygen stable isotope ratios in archaeobotanical remains
11:30-11:50	Šebesta	Interaction of zinc oxide nanoparticles with Slovak soils and their soil colloids
11:50-12:10	Vaculovič	LA-ICP-MS: an interesting tool for the determination of specific proteins
12:10-12:45	The End	
12:45-14:00	Lunch	
14:00	Departure	

Lecture hall – Kaskáda

Friday **31** May

Chair: Miglierini

11:00-11:30	Krehula	Investigations of doped iron oxide nanoparticles by Mössbauer spectroscopy and other techniques
11:30-11:50	Kubuki	The relationship between structure and photocatalytic effect of lanthanide-substituted goethite nanoparticles
11:50-12:10	Miglierini	History of MSMS
12:45-14:00	Lunch	
14:00	Departure	

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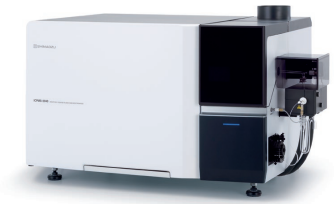

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Conference programme
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P1	**P. Matúš**	EVALUATION OF KINETIC AND THERMODYNAMIC MODELS FOR METHYLENE BLUE ADSORPTION ONTO SAWDUST OF SPRUCE
P2	**N. Vlčková**	APPLICATION OF AN ATMOSPHERIC PRESSURE GLOW DISCHARGE-LIKE (APGD) BASED HYDRIDE ATOMIZER TO DETERMINATION OF As AND Se BY AAS
P3	**S. Kakalejčíková**	A NOVEL VORTEX–ASSISTED LIQUID–LIQUID MICROEXTRACTION BASED ON DEEP EUTECTIC SOLVENT FOR THE SEPARATION, PRECONCENTRATION AND DETERMINATION OF RHODAMINE B IN WATER SAMPLES
P4	**Y. Bazel**	A GREEN ULTRASENSITIVE FLUORESCENCE DETERMINATION OF ANIONIC SURFACTANTS WITH THE USE OF VORTEX-ASSISTED LIQUID-LIQUID MICROEXTRACTION
P5	**A. Hadbavníková**	UV-PHOTOCHEMICAL VAPOUR GENERATION OF SILVER: STUDY OF CONDITIONS
P6	**M. Svoboda**	ATOMIZATION OF HYDRIDE-FORMING ELEMENTS IN ATMOSPHERIC PRESSURE DISCHARGES
P7	**V. Vilím**	COUPLING OF MINIATURIZED UV-PHOTOCHEMICAL VAPOR GENERATION REACTOR WITH SEQUENTIAL INJECTION ANALYSIS
P8	**K. Novotný**	PLASMA SPECTROSCOPY IN LASER ABLATION SYNTHESIS OF NANOPARTICLES
P9	**S. Zaruba**	ASSESMENT OF MEPS FOR INORGANIC ANIONS DETERMINATION
P10	**L. Urbánová**	INVESTIGATION OF SELENITE SORPTION ONTO MAGNETITE NANOPOWDER USING FLAME ATOMIC ABSORPTION SPECTROMETRY
P11	**S. Vyhnáleková**	STUDY OF MICROBIAL INDUCED STRUCTURAL TRANSFORMATION OF MAGNETITE BY MÖSSBAUER SPECTROMETRY
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P13	**M. Fišera**	LEGISLATIVE AND SAFETY LIMITS OF TOXIC ELEMENTS IN FOOD
P14	**E. Duborská**	IODINE DETERMINATION IN CARROT BY ICP-MS
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P16	**B. Voleková**	THE USE OF THE RAMAN SPECTROSCOPY AND XRF SPECTROMETRY IN THE ENVIRONMENT OF THE NATURAL HISTORY MUSEUM.
P17	**V. Krajanová**	RAMAN AND EXAFS SPECTROSCOPY OF SYNTHETIC AND NATURAL COPPER OXALATE
P18	**J. Klaisnerová**	SPECTROSCOPIC APPROACHES FOR ANALYSES OF IRRADIATED CONCRETE IN HOT CELLS
P19	**K. Bilavčáková**	HIGH RESOLUTION SINGLE CELL LA-ICP-MS 2D IMAGING
P20	**M. Král**	NANO-FTIR SPECTROSCOPY OF SURFACE CONFLUENT POLYDOPAMINE FILMS – WHAT IS THE ROLE OF DEPOSITION TIME AND SUBSTRATE MATERIAL?
P21	**E. Švábenská**	MÖSSBAUER AND MAGNETIC STUDIES ON NANOCRYSTALLINE FENI PARTICLES PREPARED BY THERMAL REDUCTION

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P25	**T. Kmejč**	MÖSSBAUER SPECTROSCOPY STUDY OF POTENTIALLY MULTIFERROIC $BaHoFeO_4$
P26	**J. Kohout**	MULTIFERROIC $BaErFeO_4$: MÖSSBAUER SPECTROSCOPY STUDY
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Conference programme
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