XIXth Slovak – Czech Spectroscopic Conference

PROGRAMME

OCTOBER 12 – 16, 2008
ČASTÁ - PAPIERNIČKA
SLOVAKIA

PROGRAMME

Sunday, October 12, 2008

12.00-21.00 Registration

12.00-22.00 Installation of posters

12.30-14.00 Lunch

16.00-16.30 Opening ceremony

Chairperson: J. Kubová

16.30-17.00 **M. Matherny** Atmospheric dustiness of residential agglomeration and his element analysis

17.00-17.30 **E. Plško** Contribution of statistical methods to the evaluation of spectroanalytical results

17.30-18.00 **J. Toman** Brief insight into the history of plasma spectroscopy in the Czech and Slovak Republics

18.00-18.30 **M. Vobecký** Induced radioactivity – analytical property of activation analysis

18.30-20.00 Dinner

20.00-22.00 Get together and Welcome party

Monday, October 13, 2008

07.30-08.30 Breakfast

08.30-18.00 Registration

Chairperson: B. Dočekal

08.30-09.00 **T. Kántor** A possible new reagent in sample preparation methods – Reduction of excess nitric acid content in sample solutions by formic acid addition for use in dissolution based atomic spectrometry methods

09.00-09.20 **G. Knapp** Microwave induced combustion – a powerful sample preparation technique

09.20-09.40 **I. Hagarová** Cloud point extraction as a tool for separation and preconcentration in metal analysis: Theory and applications

09.40-10.00 **L. Macháčková** Comparison of the preconcentration procedures for element determination in waters using atomic spectrometry techniques

10.00-10.20 **F. Čacho** Electrochemical preconcentration technique for atomic spectrometry

10.20-10.50 Coffee break

Chairperson: V. Otruba

10.50-11.20 **V. Kriváň** Trace analysis of solid materials with atomic spectrometry methods: Dramatic performance improvement by direct solid sampling

11.20-11.40 **P. Török** Direct determination of selected elements in CRMs of food-stuffs by ET AAS

11.40-12.00 **U. Oppermann** The easy way for solving interferences in ICP-OES

12.00-12.20 **P. Kolečkář** ICP spectrometers and their application in the tribotechnical analysis

12.20-12.40 **M. Kröppl** Validation of ICP-OES for the determination of metals in ashes from biomass incinerators

12.40-13.00 **D. Mackových** Determination of mass concentration of sulphur dioxide from stacionary source emissions by atomic emission spectrometry with inductively coupled plasma

13.00-14.00 Lunch

Chairperson: P. Veis

14.00-14.30 **D. Günther** Laser ablation inductively coupled plasma mass spectrometry – a mature technique for direct solid analysis

14.30-14.50 **V. Kanický** Selected applications of laser ablation inductively coupled plasma spectrometry in the analysis of powdered and compact samples

14.50-15.10 **J. Čáslavský** Application of mass spectrometry on spherical ion trap for the identification of cluster boron compounds

15.10-15.30 **Š. Bova** Mass spectrometry of analogs isopropyl metylfluor-phosponate and dimetyl - N,N - phosporamidates

15.30-15.50 **A. Ramsza** Some applications of ultrasonic NOVA-1 nebulizer

15.50-16.20 Coffee break

Chairperson: V. Kanický

16.20-16.50 **J. Havliš** Laser ablation process as the key point of GLIM

16.50-17.10 **P. Veis** High sensitivity spectroscopy using cavity ring-down spectroscopy and laser induced breakdown spectroscopy for trace detection

17.10-17.30 **E. Reszke** Studies in generation of toroidal plasmas

17.30-17.50 **R. Borisov** Derivatization of silsesquioxanes for structure elucidation by MALDI-ToF mass spectrometry

17.50-18.00 **L. Babej** Addressing application challenges in AA, ICP-OES and ICP-MS

18.00-18.10 **A. Povolný** HORIBA JOBIN YVON spectrometers

18.10-19.30 Dinner

19.30-22.00 Poster session with beer tasting

Tuesday, October 14, 2008

07.30-08.30 Breakfast

08.30-18.00 Registration

Chairperson: J. Majzlan

08.30-09.00 **T. Liptaj** New trends in NMR

09.00-09.20 **J. Sitek** Half a century of Mössbauer spectroscopy

09.20-09.40 **M. Miglierini** Nuclear resonance with synchrotron radiation

09.40-10.00 **Š. Krnáč** New trends in the gamma ray spectrometry – whole spectrum processing

10.00-10.30 Coffee break

Chairperson: P. Matějka

10.30-11.00 **Š. Urban** High resolution microwave spectroscopy: Rotational spectra of free radicals with resolved fine and hyperfine structures

11.00-11.20 **F. Billes** Vibrational spectroscopic study on 2-[2-(4-dipropylamino-phenyl)-vinyl]-1,3,3,-trimethyl-3H-indolium chloride

11.20-11.40 **I. Němec** Vibrational spectroscopy of hydrogen bonded materials for nonlinear optics

11.40-12.00 **M. Varga** Diamond-like carbon thin films: A Raman spectroscopy study

12.00-12.10 **A. Gába** Raman spectroscopy and new developments in combined analytical methodes: Combined Raman and FTIR, TERS-tip enhanced AFM-Raman spectroscopy

12.10-13.30 Lunch

Chairperson: F. Billes

13.30-14.00 **L. Nasdala** Spectroscopic studies of radiation damage in minerals

14.00-14.20 **P. Matějka** FT Raman and infrared spectra of coniferous needles: What effects can be elucidated?

14.20-14.40 **J. Majzlan** The local environment of Sb and As on the surfaces of iron oxide minerals: An EXAFS study

14.40-15.00 **R. Krickl** Effects of external alpha-irradiation on sheet silicates

15.00-15.30 Coffee break

Chairperson: M. Miglierini

15.30-16.00 **D. Velič** 4D structural dynamics – time resolved laser spectroscopy and spatial mass spectrometry

16.00-16.20 **P. Buček** Spectroscopic study of non-canonical DNA structures using advanced chemometrics methods

16.20-16.40 **E. Svätý** Application of standardless XRF analysis in Třinecké železárny

16.40-17.00 **D. Alexandrakis** Detection and identification of bacteria in an isolated system with near-infrared spectroscopy and multivariate analysis

17.00-17.10 **B. Bohunický** Smart spectroscopic solutions

17.10-17.20 **V. Helán** What supplies 2 THETA?

17.20-18.40 Dinner

19.00-23.00 Wine tasting in the Fugger Family Wine Cellar in Častá

Wednesday, October 15, 2008

07.30-08.30 Breakfast

08.30-12.30 Registration

Chairperson: G. Heltai

08.30-09.00 **E. Bulska** On the use of spectroscopy for the speciation analysis towards designing the functional food

09.00-09.20 **R. Koplík** Speciation of trace elements in digested cereals

09.20-09.40 **J. Machát** GC-ICP-MS technique for speciation of organotin compounds

09.40-10.00 **M. Juříček** Measurement of inorganic mercury and methylmercury in fish tissues, seafood and fish feed by HPLC/ICP-MS

10.00-10.10 **P. Krňák** Varian 820-MS – New approaches to ICP-MS technique

10.10-10.40 Coffee break

Chairperson: O. Mestek

10.40-11.10 **H. Dočekalová** In situ trace metal speciation in aquatic systems, waste-water analysis

11.10-11.30 **G. Heltai** Various fractionation procedures in study of heavy metal's mobility in the environment: Hungarian-Slovak comparative studies

11.30-11.50 **D. Remeteiová** Study of mobility of chosen elements in soils contaminated by pollutants of metallurgical industry

11.50-12.10 **V. Vojteková** The new possibilities of the alternative extraction types of environmental samples

12.10-12.30 **R. Rusnák** Comparison of single-step and BCR sequential extraction procedures of gravitation dust sediment samples

12.30-13.30 Lunch

13.45-18.30 Excursion to the Castle Červený Kameň and Falcon yard ASTUR

20.00-24.00 Conference dinner (banquet) with prizes giving

Thursday, October 16, 2008

08.00-09.00 Breakfast

Chairperson: G. Knapp

09.00-09.30 **E. Beinrohr** Trace analysis: AAS and/or electrochemistry?

09.30-09.50 **B. Dočekal** New observations in collection of hydride forming elements within miniature electrothermal devices

09.50-10.10 **J. Kratzer** In-atomizer preconcentration of hydride forming elements with AAS detection – method optimization and routine applications

10.10-10.30 **K. Elsherif** Simultaneous determination of Al, Be, Cr, and V using multi-element graphite furnace atomic absorption spectrometer (SIMAA 6000)

10.30-10.50 **H. Šoltýsová** Determination of hydrogen sulfide in emissions by AAS

10.50-11.00 **J. Vojtek** contrAA 700 – High-resolution continuum source atomic absorption spectrometer for flame, hydride and graphite furnace – A new dimensions in AAS

11.00-11.20 **V. Helán** Economy of analytical methods

11.20-11.50 Closing ceremony

11.50-13.30 Lunch

POSTER SESSION

Monday, October 13, 2008, 19.30 – 22.00

Chairpersons: M. Matherny, E. Plško, J. Toman, M. Vobecký

P-01 V. Anan'ev Band shapes of the electronic spectrum of anisotropic center in uniaxial crystal

P-02 A. A. Asweisi A new cross-shaped graphite furnace for atomic absorption spectrometry

P-03 A. A. Asweisi Installation of new T-Shaped graphite furnace in horizontal and vertical positions for atomic absorption spectrometry

P-04 N. R. Bader Optimization of quantitative AAS analysis of zinc (II) in drinking water after pre-concentration using C18 SPE columns and Schiff bases as chelation agents

P-05 Y. Bazeľ Spectrophotemetric determination of adenosine triphospate using ion associate of Astra Phloxine FF with molybdophosphate

P-06 Y. Bazeľ Spectrophotometric determination of some NSAIDs

P-07 F. Billes Spectroscopic study on fatty acid-bacterium interactions

P-08 J. Blašková Sono-extractive isolation of the potentially mobile element portions of environmental samples

P-09 L. Brulík Bioavailable fraction of trace metals in rivers of South Moravia

P-10 M. Bujdoš Atomic absorption spectrometry with photochemical vapor generation – recent developments

P-11 R. Červenka Determination of methylmercury in fish muscle by GC-AFS

P-12 S. Dermiş Spectrophotometric determination of montelukast sodium in tablets

P-13 P. Diviš Study of possible alternatives to Spheron-Thiol resin gels in diffusive gradients in thin films technique

P-14 N. Erk Quantitative analysis methods of the pharmaceutical preparations containing risperidone

P-15 N. Fasurová Synchronous fluorescence and energy dispersive spectra of soil humic substances

P-16 D. Galusková Determination of Si and Al in corrosion medium of sodium chloride solution by inductively coupled plasma atomic emission spectrometry

P-17 M. Gregor Pigments of La Tène painted ceramics from Bratislava's oppidum: X-ray diffraction and Raman spectroscopic study

P-18 I. Hagarová Determination of ultratrace antimony by electrothermal atomic absorption spectrometry with direct TiO_2-slurry sampling

P-19 K.Z. Haufa Spectroscopic and DFT studies of temperature and water content effects on the structure of 1-amino-2-propanol, 3-amino-1-propanol and aminoethanol in the liquid phase

P-20 I. Chovancová Determination of metals in biofuel

P-21 J. Jampílek Application of NIR for characterization of polymorph purity and API-excipient cocrystals

P-22 J. Komínková Fractionation of trace elements species in wheat

P-23 M. Konečná Contribution to the determination of elements using a high-resolution continuum source flame atomic absorption spectrometer

P-24 V. Korunová Problems encountered with the mercury and methylmercury hair analysis

P-25 J. Kraxner Determination of Si, Al, Ca, Mg and B in glass samples by inductively coupled plasma atomic emission spectrometry

P-26 A. Krejčová o-TOF ICP MS analysis of rare earth elements, uranium and thorium in the elbe river samples

P-27 V. Kubíček Influence of solvents on fluorescence spectra of benzimidazoles

P-28 J. Kubová Use of optimized BCR three-step sequential and dilute HCl single extraction protocols for the prediction of soil-plant metal transfer processes

P-29 J. Kuta Speciation of selenoamino acids in Se-enriched green algae by HPLC-ICP-MS

P-30 J. Laštincová Analysis of Cd in must and wine

P-31 M. Lešková Synthesis, properties and analytical application of new styryl dye 2-[(E)-2-(4-dipropylaminophenyl)-1-ethenyl]-1, 3, 3-trimethyl-3H-indolium chloride

P-32 P. Lubal Spectroscopic study of protonation of oligonucleotides containing adenine and cytosine

P-33 L. Macháčková Preconcentration of Cd from aqueous solutions using biological substrates for AAS determination

P-34 B. Macharáčková Content of arsenic in the fish muscle from intensive breedings

P-35 A. Manová Determination of arsenic in groundwaters by GFAAS

P-36 P. Matúš Quantitative assessment of biosorption, bioaccumulation and biovolatilization of labile aluminium and thallium species by fungal biomass using atomic spectrometry

P-37 P. Matúš Utilization of five different methods for the assessment of aluminium phytoavailable and/or phytotoxic fractions in acid soils

P-38 J. Medveď Separation/preconcentration procedure for thallium species determination in waters by ETAAS

P-39 O. Mestek Fractionation of trace elements species in rye seedlings

P-40 D. Miholová Proficiency tests and quality assurance in a trace element laboratory

P-41 W. Misiuk Spectroscopic study on trazodone / β – cyclodextrin inclusion interactions

P-42 Z. Mládková Effect of soil moisture content on the metal concentration measured by diffusive gradients in thin films technique (DGT)

P-43 A. Mohadesi Simultaneous determination of trace amounts of mercury and copper by derivative spectrophotometric H-point standard addition method after their separation and preconcentration on modified natural clinoptilolite zeolite

P-44 P. Pekárková Luminescence properties Eu(III) coordination polymers with bis(diphenylphosphino)alkane dioxides

P-45 O. Peš Capillary electrophoresis laser ablation inductively coupled plasma mass spectrometry for elemental speciation

P-46 J. Polák Immobilized metal affinity chromatography as a tool for the isolation of trace elements

P-47 Ľ. Pospíšilová Characterization of soil humic substances by UV-VIS and SFS spectroscopy

P-48 Z. Poulová The comparison of metal content in sediment and sludge after acid extraction by vapor recovery device and in microwave oven

P-49 **M. Pouzar** Novel approaches in the analysis of plant material

P-50 **J. Sikola** The new vacuum FT-IR spectrometer: Design advances and research application

P-51 **J. Šrámková** Elimination of chloride interference onto Ag and Tl determination in ETAAS using different chemical modifiers: Application to the analysis of aqua regia extracts from environmental samples

P-52 **M. Šucmanová** Determination of metal content in fine airborne particles

P-53 **M. Svoboda** Cryogenic trapping for arsenic speciation analysis by hydride generation – atomic absorption spectrometry

P-54 **J. Száková** Effect of soil sample treatment on an evaluation of trace element (Cu, Fe, Mn, Zn) mobility in soils

P-55 **L. Sztefková** Exploitation of OES ICP in laboratories of steel industry

P-56 **P. Török** Optimization of the instrumental and working conditions for determination of Zn, Pb, As and Sb in certified reference materials of soils by solid sampling – ET AAS

P-57 **J. Varga** Rotational dependence of the methyl bromide dipole moment

P-58 **J. Varga** Fine and hyperfine structures in rotational spectra of the FCO_2• radical

P-59 **J. Varga** Fine (and hyperfine) structures in rotational spectra of the FSO_2• radical

P-60 **V. Vojteková** The Z GF AAS with modulated magnetic field in the environmental analysis

P-61 **J. Zemek** Electron transport in poly[methyl(phenyl)silylene]