

SUNDAY – JUNE 18, 2006

17:00 - 19:00 : **Registration and Get-together reception**

MONDAY – JUNE 19, 2006 - MORNING

8:45 - 9:30 : **Welcome and Opening** Adenauer

Adenauer

Session 1 : Interaction of X rays with matter9:30 - 10:00 (INV-1) : **Invited lecture:****Paul INDELICATO****X-ray standards: from X-ray tubes to highly-charged ions**10:00 - 10:20 (O1-1) : **Double K-shell photoionization of magnesium and aluminium***J.-Cl. Dousse, M. Berset, W. Cao, K. Fennane, J. Szlachetko, M. Szlachetko and J. Hozowska*10:20 - 10:40 (O1-2) : **Broadening of diffraction profile caused by surface stress gradient and its study by Fourier analysis***J.T. Assis, V.I. Monin, S.A. Philippov and S.M. Iglesias*10:40 - 11:00 : **COFFEE BREAK**11:00 - 11:20 (O1-3) : **The energies and relative intensities of L and M lines in the low-energy range***Ralf Terborg and Dieter Weirauch*11:20 - 11:40 (O1-4) : **Double 1s photoionization of Ca and V beyond maximum***J. Hozowska, J.-Cl. Dousse, M. Berset, W. Cao, K. Fennane, M. Kavic, J. Szlachetko and M. Szlachetko*11:40 - 12:00 (O1-5) : **A study of K X-ray satellites, hyper-satellites and KMM RAE structures of the elements 19 = Z = 25***B. Seetharami Reddy, S. S. Raju, M.V.R. Murti and L. S. Mombasawala*12:00 - 12:20 (O1-6) : **Studies of the L fluorescence lines of transition metals employing a soft X-ray wavelength-dispersive grating spectrometer***M. Mueller, R. Fliegau, B. Beckhoff, B. Kanngießer, J. Weser, P. Honicke and G. Ulm*

Honorat

Session 2 : Microbeam XRS techniques9:30 - 10:00 (INV-2) : **Invited lecture:****Eric STEEL**10:00 - 10:20 (O2-1) : **Conceptual choices for micro XRF spectrometers***Petra Hegeman*10:20 - 10:40 (O2-2) : **Characterization of microspot excitation for quantification in X-ray fluorescence analysis with X-ray tubes***T. Wolff, O. Hahn, W. Malzer, U. Waldschläger and B. Kanngießer*10:40 - 11:00 : **COFFEE BREAK**11:00 - 11:20 (O2-3) : **Investigation of XV century frescoes by means of SEM and microanalysis***S. Bruni, M. Gagliardi, G. Maino and D. Biagi Maino*11:20 - 11:40 (O2-4) : **Development of confocal 3D micro XRF spectrometer with Cr-Mo dual excitation***Kazuhiko Nakano, Xunliang Ding and Kouichi Tsuji*11:40 - 12:00 (O2-5) : **Determination of layer thicknesses of fuel cells by 3D micro X-ray fluorescence spectroscopy***Birgit Kanngießer, Ioanna Mantouvalou, Yvonne Höhn, Lars Lühl and Wolfgang Malzer*12:00 - 12:20 (O2-6) : **Micro-XRF excitation in an electron microscope***Michael Haschke, Tim Elam and Frank Egger*

MONDAY – JUNE 19, 2006 – AFTERNOON

Adenauer

Session 3 : Applications of XRS in Archaeometry

- 14:00 - 14:30 (INV-3) : **Invited lecture:**
Philippe WALTER
New trends on X-ray analysis of painting materials
- 14:30 - 14:50 (O3-1) : **The use of a European coinage alloy to compare the detection limits of portable XRF systems. A feasibility study**
R. Cesareo, M. Ferretti, G. E. Gigante, G. Guida, P. Moiola, S. Ridolfi and C Roldán Garcia
- 14:50 - 15:10 (O3-2) : **SY-XRF study of silverpoint drawings of Hans Baldung Grien from the Karlsruher Skizzenbuch and the corresponding silver stylus (16th c.)**
I. Reiche, A. Berger, A. Duval, H. Guicharnaud, S. Merchel, M. Radtke, D. Schäfer and R. Simon
- 15:10 - 15:30 (O3-3) : **In site EDXRF archaeometric measurements of the golden globe on the top of San Peter dome in Rome**
Giovanni Ettore Gigante and Stefano Ridolfi
- 15:30 - 15:50 : COFFEE BREAK
- 15:50 - 16:10 (O3-4) : **The gilded bronze panels of the "Porta del Paradiso" by Lorenzo Ghiberti: Non destructive analyses using portable XRF**
Marco Ferretti and Salvatore Siano
- 16:10 - 16:30 (O3-5) : **Chemical and phase characterisation of ceramic pigments**
M.F. Gazulla, M.P. Gómez, A. Barba and M. Orduña
- 16:30 - 16:50 (O3-6) : **Obsidian provenance determination by using the beam stability controlled BSC-XRF spectrometer: The case of Milena (Sicily)**
F.P.Romano, G. Pappalardo, L.Pappalardo, V. La Rosa and O. Palio

16:50 - 18:00 : **POSTER SESSION A (1,2,3,4)**

Honorat

Session 4 : Applications of XRS in Earth and Environmental Science

- 14:00 - 14:30 (INV-4) : **Invited lecture:**
Max WILKE
Determination of oxidation state and speciation in geologically relevant systems using XANES
- 14:30 - 14:50 (O4-1) : **In situ monitoring of microbial metabolism in diamond-anvil cell by X-Ray spectroscopy**
A.Picard, P. Oger, I. Daniel, A. Simionovici, I. Letard, J.-L. Hazemann and O. Proux
- 14:50 - 15:10 (O4-2) : **Combined micro-XRF/XRD studies of inclusions in diamonds from Juina and Kankan**
B. Vekemans, F. Brenker, L. Vincze, W. De Nolf, A. Szymanski, C. Vollmer and K. Janssens
- 15:10 - 15:30 (O4-3) : **High pressure - high temperature in-situ X-ray diffraction investigation of equation of state and rheology of serpentines, a material of geophysical importance**
Nadege Hilairret, Bruno Reynard, Isabelle Daniel, Sylvain Petitgirard and Yanbin Wang
- 15:30 - 15:50 : COFFEE BREAK
- 15:50 - 16:10 (O4-4) : **Microcharacterization and identification of tire debris of airplanes**
J. Osán, V. Groma, E. Sterfaniak, A. Worobiec, S. Török, M. Kalocsainé Rasztoczky, S. Kugler and R. Van Grieken
- 16:10 - 16:30 (O4-5) : **Characterization of elemental contents in PM2.5 particles originating from a modern waste incineration plant by EDXRF analysis**
I. Joy Kwame Aboh, D. Henrikson, J. Laursen, M. Lundin, N. Pind, E. Selin Lindgren and T. Wahnström
- 16:30 - 16:50 (O4-6) : **Speciation of heavy metals by combined micro-XRF, -XANES and -XRD in polluted soil from the industrial site of Val Basento, Basilicata, Italy**
R. Terzano, M. Spagnuolo, P. Ruggierro, B. Vekemans, W. De Nolf, K. Janssens, S. Fiore and G. Falkenberg

16:50 - 18:00 : **POSTER SESSION A (1,2,3,4)**

TUESDAY – JUNE 20, 2006 - MORNING

Adenauer

Session 5 : XRS Instrumentation at Synchrotron Facilities8:30 - 9:00 (INV-5) : *Invited lecture* :**Carlos PEREZ****Currently Research Activities in Environmental and Surface Science using Micro-XRF and Grazing-exit XRF Spectroscopy at the XRF beamline of the LNLS**9:00 - 9:20 (O5-1) : **Developments in data treatment of combined micro-XRF/XRD experiments***W. De Nolf, K. Janssens, B. Vekemans, L. Vincze, F. Brenker, R. Terzano and G. Falkenberg*9:20 - 9:40 (O5-2) : **Non-destructive characterization of electrochemically deposited cobalt and copper tetrathiosulphophthalocyanine on gold electrodes by means of synchrotron X-ray microfluorescence and X-ray absorption spectroscopy***K. Peeters, K. De Wael, A. Adriaens and L. Vincze*9:40 - 10:00 (O5-3) : **Micro X-ray fluorescence spectroscopy at the endstation of the new μ Spot beamline at BESSY***W. Malzer, B. Kanngießer, H. Riesemeier, M. Radtke, G. Weseloh and A. Erko*10:00 - 10:20 (O5-4) : **Synchrotron microXRF analysis of inorganic distributions in hair***Ivan Kempson, William Skinner, Paul Kirkbride, Dermot Henry and Ronald Martin*

10:20 - 10:40 : COFFEE BREAK

Session 7 : Data processing10:40 - 11:00 (O7-1) : **The Monte Carlo - Library Least-Squares (MCLS) approach for the inverse XRF analysis problem***Robin P. Gardner, Fusheng Li and Weijun Guo*11:00 - 11:20 (O7-2) : **A multiplatform X-ray fluorescence analysis toolkit***V.A. Solé, E. Papillon, M. Cotte, P. Walter, I. Letard, R. Toucoulu and J. Susini*11:20 - 11:40 (O7-3) : **X-ray Fit - Windows based program for energy dispersive X-ray fluorescent analysis***E. Nikolova, R. Valcheva and K Stoev*11:40 - 12:00 (O7-4) : **Evaluation of MCNP5 and EGS4 for the simulation of in-vivo strontium XRF measurements***Mariangela Zamburlini, Soo-Hyun Byun, Ana Pejovic-Milic, William Prestwich and David Chettle*

Honorat

Session 6 / I : X-ray absorption spectroscopy8:30 - 9:00 (INV-6) : *Invited lecture*:**John J. REHR****Theory and Applications of X-ray Absorption Spectra**9:00 - 9:20 (O6-1) : **XAS analysis on mesoporous vanadium oxide thin films by sol-gel***Alessandro Cremonesi, Gianluca Calestani, Giovanni Antonioli, Danilo Bersani and Pier Paolo Lottici*9:20 - 9:40 (O6-2) : **Investigation of copper pigments using X-ray absorption spectroscopy***Oliver Hahn, Hartmut Kutzke and Max Wilke*9:40 - 10:00 (O6-3) : **XANES study of contamination and decontamination of copper in different soils by sorption and de-sorption***Arvind Agarwal and R.K. Srivastava*10:00 - 10:20 (O6-4) : **Characterization of Cl-containing phases formed on archaeological artefacts using micro XAS***Solenn Reguer, François Mirambet, Philippe Dillmann, Pierre Lagarde and Delphine Neff*

10:20 - 10:40 : COFFEE BREAK

Session 6 / II : X-ray absorption spectroscopy**Chair :**10:40 - 11:00 (O6-5) : **Micro-XRF imaging and micro-XANES analysis of arsenic hyperaccumulator fern (*Pteris vittata* L.) by using synchrotron radiation***Hokura, T. Kashiwabara, R. Onuma, I. Nakai, N. Kitajima, Y. Terada, H. Saito and T. Abe*11:00 - 11:20 (O6-6) : **X-ray spectra, electron structure and valence state of the new ternary intermetallic compounds: theory and experiment***I.D. Shcherba, M.D. Koterlyn, V.M. Antonov, B.M. Jatcyk, I. Kravczenko, L.O. Dobrjans'ka and L.P. Salamacha*11:20 - 11:40 (O6-7) : **XANES analysis of Fe valence in iron gall inks***Iztok Arcon, Jana Kolar, Alojz Kodre, Darko Hanžel and Matija Strlic*11:40 - 12:00 (O6-8) : **Chromium speciation within BOF steel slag and under leaching conditions: A multi-techniques approach (micro-XRF, micro-XANES, XAS)***P. Chaurand, J. Rose, O. Proux, J.-L. Hazemann, M. Salome, J. Susini, J. Domas and J.-Y. Bottero*

TUESDAY – JUNE 20, 2006 – AFTERNOON

Adenauer

Session 8 : Applications of XRS in Life Science

14:00 - 14:20 (O8-1) : **In vivo determination of Pb in bone using L-shell excitation**

P. Wobrauschek, N. Cernohlawek, C. Strelt and N. Zöger

14:20 - 14:40 (O8-2) : **Trace elements accumulation in Middle Age human bones**

M. L. Carvalho and A. F. Marques

14:40 - 15:00 (O8-3) : **Inflammatory cells and pin lesions as primary factors in the development of prostate cancer**

Agnieszka Banas, Krzysztof Banas, Grzegorz Dyduch, Gerald Falkenberg and Wojciech M. Kwiatek

15:00 - 15:20 (O8-4) : **Diffraction enhanced imaging and X-ray fluorescence microtomography to analyse biological samples**

H. Rocha, G. Pereira, M. Anjos, P. Faria, C.s Pérez, G. Kellermann, I. Mazzaro, C. Giles and R. Lopes

15:20 - 15:40 : COFFEE BREAK

15:40 - 16:00 (O8-5) : **Characterization of breast tissue using energy-dispersive X-ray diffraction computed tomography**

Silvia Pani, Louise Jones, Jennifer Griffiths, Gary Royle, Robert Speller and Julie Horrocks

16:00 - 16:20 (O8-6) : **Trace elements analysis in normal and pathological human tissues using synchrotron X-ray fluorescence**

Aline. S. S. Saddock, Regina C. Barroso, Marcelino J. Anjos and Ricardo T. Lopes

16:20 - 16:40 (O8-7) : **Research of trace element content in human myocardium by SRXRF**

Valentina Trunova, Galina Okuneva, Valentina Zvereva and Alexandr Chernyavskii

16:45 - 17:45 : **EXSA MEETING**

17:45 - 19:00 : **POSTER SESSION B (5,6,7,8,9)**

Honorat

Session 9 : Applications of XRS in Materials Science and Industry – Nanotechnology

14:00 - 14:20 (O9-1) : **Contributions of SyXRF to the certification of reference material**

M. Radtke, H. Riesemeier, A. Berger, W. Pritzkow, K. Ecker and W. Görner

14:20 - 14:40 (O9-2) : **Energy dispersive X-ray diffraction as a means to identify illicit materials: A preliminary optimization study**

Emily Cook, Julie Horrocks, Ruby Fong, David Wilkinson and Robert Speller

14:40 - 15:00 (O9-3) : **XRF for U, Pu, Np and Am measurements**

Said Abousahl, Ray Gunnink, Pavol Ragan and Herbert Ottmar

15:00 - 15:20 (O9-4) : **Direct determination of precious metals in automotive catalysts using high-energy polarized beam XRF**

Katleen Van Meel, Anne Smekens, Marc Behets, Paul Kazandjian and René Van Grieken

15:20 - 15:40 : COFFEE BREAK

15:40 - 16:00 (O9-5) : **Total reflection XAFS and in plane X-ray diffraction analyses of manganese oxide nanosheets**

Izumi Nakai, Katsutoshi Fukuda, Yasuo Ebina and Takayoshi Sasaki

16:00 - 16:20 (O9-6) : **Ultrasoft X-ray reflection and emission spectroscopic analysis of Al₂O₃/Si structure synthesized by ALD method**

E. O. Filatova, E. Yu. Taracheva, A. A. Sokolov, S.V. Bukin, A. S. Shulakov, P. Jonnard and J.-M. André

16:20 - 16:40 (O9-7) : **Standard and two-wavelength X-ray reflectometry for investigation of nano-size layers**

S. A. Aprelov, V. M. Senkov, N. N. Gerasimenko, A. G. Touriyanski and I. V. Pirshin

16:45 - 17:45 : **EXSA MEETING**

17:45 - 19:00 : **POSTER SESSION B (5,6,7,8,9)**

WEDNESDAY – JUNE 21, 2006 – MORNING

Adenauer amphitheatre

Session 10 : TXRF and related techniques

8:30 - 9:00 (INV-10) : *Invited lecture:***Christina STRELI****Synchrotron radiation induced TXRF**9:00 - 9:20 (O10-1) : **Total reflection X-ray analysis of bromate***Nikolaos Kallithrakas-Kontos, Vasilios Hatzistavros, Pavlos Koulouridakis and Ioanna Aretaki*9:20 - 9:40 (O10-2) : **X-ray resonant Raman scattering below the Si-K absorption edge***J. Szlachetko, R. Barret, M. Berset, J.-Cl. Dousse, K. Fennane, M. Szlachetko, J. Hoszowska, A. Kubala-Kukus and M. Pajek*9:40 - 10:00 (O10-3) : **Analysis of wine samples by means of total reflection X-ray fluorescence (TXRF) analysis***Hagen Stosnach*

10:00 - 10:20 : COFFEE BREAK

10:20 - 10:40 (O10-4) : **Total reflection X-ray fluorescence in metallomics: Partial characterization of metalcarboxipeptidase produced by *Tripanosoma cruzi****Gabriela Niemirowicz, Juan J. Cazzulo, Graciela Custo and Cristina Vázquez*10:40 - 11:00 (O10-5) : **Speciation of nitrogen compounds in nanoscopic fine aerosol samples using TXRF-NEXAFS***János Osan, Szabina Török, Burkhard Beckhoff, Jan Weser and Roger Fuoco*11:00 - 11:20 (O10-6) : **Recent progress in low power TXRF-spectrometer technique***Ulrich Waldschlaeger*

Honorat amphitheatre

Session 11 : New instruments

8:30 - 9:00 (INV-11) : *Invited lecture:***A.G. KARYDAS****X-ray spectrometric methods towards an integrated, in situ analytical characterization of cultural heritage materials/artifacts. An overview**9:00 - 9:20 (O11-1) : **Combined μ -XRF/ μ -Raman vs. μ -XRD for pigment identification in illuminated manuscripts and paint multilayer samples***Koen Janssens, Wout De Nolf, Bart Vekemans and Geert Van Der Snickt*9:20 - 9:40 (O11-2) : **Portable XRF analyzer with improved beam collimation for investigation of small electronic components and objects of art***Stanislaw Piorek*9:40 - 10:00 (O11-3) : **The experimental model of the tunable source of monochromatic X-rays and possibility of its application for different types of X-ray analysis***V. Baryshevsky, K. Batrakov, I. Feranchuk, A. Gurinovich, A. Grubich, A. Lobko, A. Rouba, B. Tarnopolsky, P. Safronov, V. Stolyarsky and A. Ulyanenkov*

10:00 - 10:20 : COFFEE BREAK

10:20 - 10:40 (O11-4) : **Calculation of X-Ray spectra emitted from a microfocus X-ray tube with X-ray optics***Mathias Procop, Vasile-Dan Hodoroaba, Aniouar Bjeoumikhov and Vladimir Arkadiev*10:40 - 11:00 (O11-5) : **Enhancing depth sensitivity in confocal XRF analysis and applications in mineralogy***Rolf Simon, Usanee Kerdpin, Frank Friedrich, Werner Faubel, Peter Weidler and Rolf Nüesch*11:00 - 11:20 (O11-6) : **Analysis of Zn-Fe alloy coatings by using measurements under two take-off angles***Yoshiyuki Kataoka, Hisayuki Kohno, Eiichi Furusawa and Michael Mantler*

THURSDAY – JUNE 22, 2006 - MORNING

Adenauer

Session 12 : Quantitation

8:30 - 9:00 (INV-12) : *Invited lecture:*

Bruno VREBOS

Quantitative XRF analysis of trace levels in geological materials

9:00 - 9:20 (O12-1) : **Effects of angles variability quantitative ED-XRF analysis**

Mario Milazzo, Antonio Maloni and Letizia Bonizzoni

9:20 - 9:40 (O12-2) **Enhancement of X-ray fluorescence of light elements by photoelectron secondary excitation**

B. Beckhoff, M. Gerlach, M. Kolbe, M. Müller, G. Ulm, A.G. Karydas, Ch. Zarkadas, T. Geralis, K. Kousouris, N. Kawahara, T. Yamada and M. Mantler

9:40 - 10:00 (O12-3) : **Extensions to the Sherman equation to handle finite volume effects in fundamental parameter methods**

Peter Brouwer

10:00 - 10:20 : COFFEE BREAK

10:20 - 10:40 (O12-4) : **Directly from the EDX spectrum to concentrations - A new approach for a universal calibration concept**

Kai Behrens, Arnd Bühler and Dominique Porta

10:40 - 11:00 (O12-5) : **Reference-free XRF quantification employing L-lines of heavy elements**

Michael Kolbe and Burkhard Beckhoff

11:00 - 11:20 (O12-6) : **Experimental measurements of target thickness**

A. Amokrane, S. Ourabah and M. Abdesselam

11:20 - 11:40 (O12-7) : **Density profile unfolding from Compton scattering measurements in reflection geometry**

Jorge E. Fernandez, Marco Badiali, Alessandro Guidetti and Viviana Scot

Honorat

Session 13 : X-Rays Optics

9:00 - 9:20 (O13-1) : **X-ray spectroscopy with double reflections in single crystals**

Benjamin S. Fraenkel

9:20 - 9:40 (O13-2) : **Multilayer interfacial mirrors as components for soft-X-ray WDS monochromators and tunable radiation sources**

Jean-Michel André, Philippe Jonnard and Rabah Benbalagh

9:40 - 10:00 (O13-3) : **Novel grazing incidence X-ray optics**

R. Hudec, L. Pina, L. Sveda, V. Semencova, A. Inneman, M. Skulinova, M. Mika, R. Kacerovsky and J. Sik

10:00 - 10:20 : COFFEE BREAK

10:20 - 10:40 (O13-4) : **Nanometer multilayers as monochromators for X-ray spectrometry**

Maik Menzel, Stefan Braun, Andreas Leson and Franz Schäfers

10:40 - 11:00 (O13-5) : **Shaped capillary X-ray lenses for μ XRF and μ EXAFS measurements**

A. Bjeoumikhov, N. Langhoff, M. Erko, S. Bjeoumikhova, A. Erko, I. Snigireva and A. Snigirev

11:00 - 11:20 (O13-6) : **Characterization of strongly focussing polycapillary half-lens**

Gerald Falkenberg, Koen Janssens, Viviana Scot, Karin Rickers, Ning Gao and David Gibson

11:20 - 11:40 (O13-7) : **Features of passage and focusing of X-ray beams in polycapillary nanostructures**

Muradin Kumakhov

THURSDAY – JUNE 22, 2006 - AFTERNOON

Adenauer

Session 14 : X-Rays Detectors

- 14:00 - 14:30 (INV-14) : **Invited lecture :**
Joaquim DOS SANTOS
Gas detector for X-ray spectrometry
- 14:30 - 14:50 (O14-1) : **Silicon drift detectors refined on energy resolution, count rate performance and radiation entrance window**
H. Soltau, P. Lechner, A. Liebl, A. Niculae, R. Eckhard, G. Lutz, L. Strüder, C. Fiorini and A. Longoni
- 14:50 - 15:10 (O14-2) : **Improvements in silicon drift detectors**
O. Boslau, T. Eggert, P. Goldstrass, J. Kemmer, A. Pahlke, F. Wiest and M. Mikhailov
- 15:10 - 15:30 (O14-3) : **Fabrication of array detectors with one hundred superconducting-tunnel-junctions and Ta X-ray absorbers**
Masahiro Ukibe, Akihiro Kushino, Yiner Chen and Masataka Ohkubo
- 15:30 - 15:50 (O14-4) : **Detector driven performance in EDPXRF**
Joachim Heckel
- 15:50 - 16:10 (O14-5) : **Metallic magnetic calorimeters for high resolution spectroscopy**
A. Fleischmann, L. Gastaldo, H. Rotzinger, M. Linck, A. Burck, D. Haug, C. Enss, E. Leblanc and M. Loidl
- 16:10 - 16:30 : COFFEE BREAK
- 16:30 - 18:00 : **POSTER SESSION C**
(10,11,12,13,14,15,16)

Honorat

Session 15 : X-Rays Imaging

- 14:00 - 14:30 (INV-15) : **Invited lecture :**
Gyula FAIGEL
Ten years of X-ray holography
- 14:30 - 14:50 (O15-1) : **Fluorescence tomography at the ESRF beamline ID22: Recent advances and future developments**
Pierre Bleuet, Priscillia Soudant and Alexandre Simionovici
- 14:50 - 15:10 (O15-2) : **Investigation on lecce stone porosity by means of micro and nano X-ray tomography**
Simone Bugani, Mara Camaiti, Luciano Morselli, Koen Janssens and Elke Van de Castele
- 15:10 - 15:30 (O15-3) : **Phase-contrast enhanced X-ray tomography of malaria transmitting mosquitoes**
D. Wegrzynek, E. Chinea-Cano, A. Markowicz, S. Bamford, B. Knols, M. Helinski, P. Wobrauschek, C. Streli, N. Zoeger, R. Simon, T. Weitkamp and C. Frieh
- 15:30 - 15:50 (O15-4) : **μ XANES spectroscopy applied to the study of original iron gall ink corroded manuscripts**
Cédric Burgaud, Wout De Nolf, Koen Janssens, Véronique Rouchon and Bart Vekemens
- 15:50 - 16:10 (O15-5) : **3D Micro XRS - Validation of a three-dimensional model of the sensitivity for quantification**
Ioanna Mantouvalou, Yvonne Höhn, Wolfgang Malzer and Birgit Kanngießner
- 16:10 - 16:30 : COFFEE BREAK
- 16:30 - 18:00 : **POSTER SESSION C**
(10,11,12,13,14,15,16)

FRIDAY – JUNE 23, 2006 - MORNING

Adenauer

Session 16 : WDXRS9:00 - 9:30 (INV-16) : *Invited lecture:***Kouichi TSUJI****Grazing exit and micro wavelength dispersive X-ray spectrometry**9:30 - 9:50 (O16-1) : **High-resolution wavelength-dispersive spectrometer***Wolfgang Caliebe, Pavel Machek, Ulf Brueggmann and Edmund Welter*9:50 - 10:10 (O16-2) : **The WDS analysis at high spectral resolution: Application to the study of Mo/Si multilayers***Phillippe Jonnard, H el ene Maury and Jean-Michel Andr e*10:10 - 10:30 (O16-3) : **Railway induced particulate emissions - A one year survey in Zurich, Switzerland***C. N. Zwicky, P. Lienemann, R. Gehrig, M. Hill, A. Ulrich, A. Wichser and A. Maccagnan*

10:30 - 10:50 : COFFEE BREAK

10:50 - 11:10 (O16-4) : **The wavelength dispersive synchrotron microprobe used for material analysis at ISASLine***Alex Von Bohlen*11:10 - 11:30 (O16-5) : **High resolution study of X-ray resonant Raman scattering around the L₃ edge of Xe***Matja z Kavcic, Matja z  itnik, Klemen Bucar, Andrej Mihelic, Jure Kokalj and Jakub Szlachetko*11:30 - 11:50 (O16-6) : **Applications and uses of X-ray fluorescence for a cleaner safer and healthier environment***Marc Dupayrat, Didier Bonvin and Ravi Yellepeddi*12:00 - 12:30 : **CLOSING SESSION** Adenauer

Honorat

Session 17 : Pierre Chevallier honorary session9:00 - 9:30 : *Invited lecture:***Pierre CHEVALLIER**

POSTERS SESSIONS

MONDAY JUNE 19, 16:50 - 18:00 POSTER SESSION A (1,2,3,4)

Session 1 : Interaction of X rays with matter

- P1-1 **Study of angular, intensity and energy distribution of 279 keV gamma rays Compton scattered from K-shell electrons**
Bhajan Singh, Gurdeep Singh, B.S. Sandhu and B.S. Ghuman
- P1-2 **Chemical effects in the K X-ray emission spectra of sulfur**
Matjaž Kavcic, Jean-Claude Dousse, Jakub Szlachetko and Wei Cao
- P1-3 **Experimental determination of X-ray resonant Raman scattering cross-sections for several elements and compounds**
Héctor Jorge Sánchez, María Cecilia Valentinuzzi, José Abraham and Carlos Pérez
- P1-4 **Shapes of the K X-ray spectra of heavy atoms predicted on the basis of the MCDF calculations**
Maja Lewandowska-Robak and Marek Polasik
- P1-5 **Ionization equilibrium in multicharged ion plasma with fast electrons**
Vasily Zakharov and Vladimir Novikov
- P1-6 **A theoretical study of the X ray spectra emitted by chlorine ions in ECRIS plasmas**
J.P. Santos

Session 2 : Microbeam XRS techniques

- P2-1 **Comparison of back-foil SXRF and EPMA for the elemental characterization of thin coatings**
E. S. Valamontes and J. C. Statharas
- P2-2 **Depth Sensitive Investigation of Persian Tiles with 3D Micro X-ray Fluorescence Spectroscopy**
Y. Höhn, I. Mantouvalou, W. Malzer, B. Kanngießer, S. Röhrs, I. Reiche and F. Voigt
- P2-3 **Thickness determination of nano-layers - Challenges for coatings thickness analyses**
Wolfgang Klöck
- P2-4 **μ -XRF and μ -XANES at calcification fronts of human articular cartilage**
N. Zoeger, P. Wobrauschek, C. Strelli, C. Jokubonis, G. Pepponi, G. Falkenberg, R. Simon, P. Roschger and A. Tampieri
- P2-5 **Lime in the air: aerosol particles in the colombo region, south Brazil**
D M Braga, A F L Godoi, Y Makarovska, S Potgieter-Vermaak, B Alföldy, S Torok, R Van Grieken, R H. M. Godoi

Session 3 : Applications of XRS in Archaeometry

- P3-1 **Bronze Age adobe bricks from Tureng Tepe (eastern Iran) : Mineralogical and geo-chemical characterisation**
Liliana Panei, Gilberto Rinaldi and Maurizio Tosi
- P3-2 **In situ analysis of Neolithic black and red rock art pigments from Saltadora caves (Spain) by portable EDXRF spectrometry**
C. Roldán, S. Murcia-Mascarós, J. Ferrero, V. Villaverde, R. Martínez, P. Guillem and E. López
- P3-3 **Some considerations on XRF use in museum measurements – The case of medieval silver coins**
B. Constantinescu
- P3-4 **Application of local X-ray Fluorescent analysis for paints element composition definition in paintings**
Alexander Scherbakov, A. Sineychuk and E. Lubavskaya

- P3-5 **Non destructive semiquantitative analysis of Renaissance pictorial multilayers based on EDXRF analysis and reflectance spectroscopy**
L. Bonizzoni, A. Galli, G. Poldi and M. Milazzo
- P3-6 **Sulfur analysis on stone monuments by a field portable EDXRF system**
Maurizio Diana, Nazareno Gabrielli and Stefano Ridolfi
- P3-7 **The equestrian statue of Bartolomeo Colleoni: Diagnostic analysis by means of a portable EDXRF system**
Stefano Ridolfi, Roberto Cesareo and Maurizio Marabelli
- P3-8 **Non-destructive investigation of old graphics paper with the use of X-Art M analyzer**
S.V.Rimskaya-Korsakova, S.V.Sirro and A.S.Serebryakov
- P3-9 **Authentification of postal pieces by X-ray fluorescence analysis with spatial resolution**
Héctor Jorge Sánchez and María Cecilia Valentinuzzi
- P3-10 **XRF investigation of pigments in wall paintings by Parmigianino**
Gianni Antonioli, Danilo Bersani and Pierpaolo Lottici
- P3-11 **X-rays techniques for the study of laser cleaning of bronze and copper coins**
D. Aiello, A. Buccolieri, G. Buccolieri, A. Cassiano, A. Castellano, L. Sandra Leo, A. Lorusso, G. Nassisi, V. Nassisi, R. Rucco and L. Torrisi
- P3-12 **3D-micro-XRF/XANES, mobile XRF and micro-PIXE of persian tiles of the Qajar period (2nd half of the 19th c.)**
I. Reiche, S. Röhrs, F. Voigt, Y. Höhn, I. Mantouvalou, W. Malzer and B. Kanngießer
- P3-13 **Quantitative elemental analysis of Della Robbia's glazes with a portable XRF spectrometer and its comparison to PIXE methods**
A. Gianoncelli, J. Castaing, A. Bouquillon, A. Polvorinos and P. Walter
- P3-14 **Measurement of gold leaf thickness by attenuation or self-attenuation of X-rays**
Roberto Cesareo, Stefano Ridolfi, Marina Donativi and Stefano Quarta
- P3-15 **Analysis of Illyrian terracotta figurines of Aphrodite and other ceramic objects using EDXRF spectrometry**
Nikolla Civici
- P3-16 **X-ray fluorescence analysis of pigments used for the painting "San Felice in trono" by Lorenzo Lotto**
F. Adducci, A. Buccolieri, G. Buccolieri, A. Castellano, R. Cesareo, L. Sandra Leo, F. Vona and F. Lofano
- P3-17 **Extracting information of an work of art: "The horse of Grenadier"**
Alba Obrutsky, Graciela Custo, Ana María Maury and Cristina Vázquez
- P3-18 **Suitability of the Niton-XLP analyser for in-situ PXRF analysis of panel paintings**
G. Van Der Snickt, O. Schalm, K. Janssens, W. De Nolf, B. Vekemans, L. Klaassen, Y. Deckers, P. Huvenne, P. Eyskens and O. Kerker
- P3-19 **XRF applied to archeological samples**
Adolfo Esposito, Giorgio Cappuccio, Federica Gonnella, Astrik Gorghinian and Alessandro Jaia
- P3-20 **XRF applications in archaeometry: Analysis of Marajoara pubic covers and pigments from sarcophagus cartonage of an Egyptian mummy**
C. Calza, M.J. Anjos, M.I. M.S. Bueno, S. Mendonça de Souza, T. A. Lima and R. Tadeu Lopes
- P3-21 **Synthesis and characterization of organic-inorganic composites : From "Maya Blue" to modern hybrids**
E. Dooryphee, P. Martinetto, P. Strobel, C. Dejoie, M. Sanchez del Rio and F. Porcher
- P3-22 **The suitability of XRF analysis for the classification of archaeological ceramics, as compared to INAA**
R. Padilla Alvarez, P. Van Espen and P. P. Godo Torres

- P3-23 **In situ XRF study of the XV c. mural paintings in the Town Hall of Gdansk**
Aleksandra Kaminska, Mirosław Sawczak, Marco Ferretti and Gerard Sliwinski
- P3-24 **XRF and microPIXE study of calcite samples from the Paleolithic rock art cave Arcy-sur-Cure (Yonne, France, 24000-28000 BP)**
E. Sansot, D. Baffier, E. Chalmin, L. Charlet, M. Menu, G. Oriol, F. d'Orlyé and I. Reiche
- P3-25 **μ-PIXE/PIGE analysis of effects of diagenesis and consolidation treatments on trace elemental distribution in Palaeolithic reindeer antlers**
Céline Chadeveau, Ina Reiche, Laurent Pichon and Céline Aballea
- P3-26 **Access to the Louvre IBA facility through the Eu-ARTECH European program**
Stefan Roehrs, Joseph Salomon, Lucile Beck, Jean Claude Dran, Thierry Guillou, Michel Menu, Brice Moignard, Laurent Pichon, Philippe Walter

Session 4 : Applications of XRS in Earth and Environmental Science

- P4-1 **Analysis of the invasion profile due to drilling fluid mudcake filtration by X-ray microfluorescence using synchrotron radiation**
João Luis Ribeiro, Ricardo Lopes, Marcelino Anjos, João Queiroz Neto and Luis Bianco
- P4-2 **Analysis of rock-geological material from places in Tanzania by wavelength-dispersive X-ray fluorescence spectrometer**
Y.I.A Koleleni
- P4-3 **The use of small-spot EDXRF for the study of core sediments geochemistry**
Ignacio Queralt, Oscar Gonzalez, Ramón Julià, Gregorio García and Jose Ignacio Manteca
- P4-4 **Applications of a 10 μm spot size laboratory micro-XRF to environmental sciences**
J. Rose, P. Chaurand, A. Bénard, P. Böning, C. Suavet, J. Gattacceca, E. Doelsch, D. Borschneck, J.-P. Ambrosi, E. Bard, P. Rochette and J.-Y. Bottero
- P4-5 **Evaluation of distribution and bioavailability of Cr, Mn, Fe, Cu, Zn and Pb in water of the upper course of the Lerma river**
P. Avila-Pérez, G. Zarazúa, S. Tejeda, I. Barceló-Quintal and C. Díaz-Delgado
- P4-6 **Temporal and spatial abundance of particles in suspended matter of water from Lerma River in Mexico**
G. Zarazúa, P. Avila-Pérez, L. Carapia, S. Tejeda and J. A. García-Aragón
- P4-7 **XRS method and device for fast determination of metals in used timber**
Horst Guenther, Bernhard Koch, Hans Miessner and Thomas Dobe
- P4-8 **Analysis for cleaning and protection from vandals' smear on stone-like materials availing of a specifically assembled portable EDXRF system**
Stefano Ridolfi, Roberto Cesareo and Giorgio Cerichelli
- P4-9 **Elemental content of PM2.5 aerosol particles at different locations in and around Göteborg during February 2005**
Johan Boman, Ardhendu Shannigrahi, Annemarie Wagner and Michael J. Gatari
- P4-10 **Single-particle characterization of NIST-SRM 70a (potassium feldspar) using low-Z particle EPMA**
M.S.I. Khan, H. Hwang, H. Kim, and C.-U. Ro
- P4-11 **Single-particle characterization of seasonal aerosol samples collected at a subway station platform in Seoul, Korea**
S. Kang, H. Hwang, Y. Park, E. Choi, M.S.I. Khan, H. Kim, and C.-U. Ro
- P4-12 **Single particle characterization of aerosol samples collected during an "Asian Dust" storm event in 2004, using low-Z particle electron probe X-Ray microanalysis**
H. Hwang, M.S.I. Khan, H. Kim, and C.-U. Ro

- P4-13 **Suspended particles in a water supply reservoir: A case study of the Passauna reservoir at Curitiba, southern Brazil**
D.G. Meger, A.V.L. Bitterncourt, A.F.L. Godoi, S. Potgieter-Vermaak, P.E.D. Lagos, C.M.S. Carneiro, Y. Makarovska, R. Van Grieken and R.H. M. Godoi
- P4-14 **Calibration of an energy dispersive X-ray fluorescence facility for the analysis of environmental samples**
P. K. Rouni, M. J. Anagnostakis and S. E. Simopoulos
- P4-15 **Cadmium and chromium (VI) determination by small-spot EDXRF after membrane concentration**
Clàudia Fontàs, Eva Marguí, Manuela Hidalgo and Ignacio Queralt
- P4-16 **Comparison between indoor-outdoor atmospheric particulate mater using the evaluation of inorganic composition aerosols by different X-ray techniques**
G. I. Alcaraz Bañuelos, M. Delgado, A. Campos, C. Solis and E. F Herrera
- P4-17 **Elemental composition of vegetables in the Dar es Salaam market using wavelength dispersive X-ray fluorescence analysis**
Y.I.A Koleleni
- P4-18 **Comparison of four different filter materials for aerosol analysis with XRF**
Yaroslava Makarovska, Katleen Van Meel, Anna Worobiec and Rene Van Grieken
- P4-19 **Concentration of some elements in the Adriatic coastal sea sediments: Case study the Kvarner bay**
Vladivoj Valkovic, Jasmina.Obhodas and Mladen Crnjar
- P4-20 **Geochemical mapping of Croatian soils obtained by GPS-GIS supported XRS methods**
Jasmina Obhodas, Darko Tiblja and Vladivoj Valkovic
- P4-21 **EDXRF monitoring of element transport in column experiments**
Dieter Rammlmair
- P4-22 **Non destructive X-ray and neutron techniques for assessing environmental impact of uranium at the premises of remediated Hungarian uranium mine**
Anita Alsec, Janos Osán, József Pálfalvi, Szabina Török and Gerald Falkenberg
- P4-23 **Capabilities of microanalytical methods for uranium analysis of individual mine tailings particles**
A. Alsec, J. Osán, B. Alföldy, S. Török, A. Varhegyi, E. Stefaniak, A. Worobiec and R. Van Grieken
- P4-24 **Possibilities of XRF spectrometry for trace element analysis of vegetation samples in environmental studies**
Eva Marguí
- P4-25 **Heavy metal analysis on candles**
Nikolaos Kallithrakas-Kontos and Rumpini Moschochoritou

TUESDAY JUNE 20, 17:45 – 19:00 POSTER SESSION B (5,6,7,8,9)

Session 5 : XRS Instrumentation at Synchrotron Facilities

- P5-1 **Adaptive matched filtering of XRF detector signals**
Georgi Georgiev and Ivaylo Peev
- P5-2 **Application of Kumakhov's polycapillary optics for synchrotron radiation focusing**
Oleg Mikhin
- P5-3 **Properties of polymer X-ray refractive lenses for spectroscopy**
A. Last, V. Nazmov, E. Reznikova and J. Mohr
- P5-4 **Polarization dependence of X-ray reflection and absorption spectra of hexagonal CdS crystal in the energy region of S L_{2,3}- and Cd M_{4,5}-edges**
E. Yu Taracheva, E.O. Filatova and J.-M. André
- P5-5 **Present Status and upgrading project of X-ray fluorescence beamline at BSRF**
Yuying Huang, Wei He, Wei Hua and Tiandou Hu
- P5-6 **Metrology and Test beamline at SOLEIL**
M. Idir, P. Mercere, T. Moreno, A. Delmotte, M.-C. Lépy, J. Plagnard, P. Stemmler and G. Soullié
- P5-7 **Combination of micro X-ray techniques: The synchrotron Radiation Laboratory for Environmental Studies at ANKA**
Jörg Göttlischer, Ralph Steininger and Rolf Simon
- P5-8 **XSW - X-ray standing waves in simulation and experiment**
Markus Krämer, Alex Von Bohlen, Christian Sternemann and Roland Hergenröder

Session 6 : X-ray absorption spectroscopy

- P6-1 **Chemometrics based XAS characterization of titanium on titanium-oxide-modified chromatographic silica**
Karen Goraieb, Kenneth E. Collins and Maria Izabel M.S Bueno
- P6-2 **Double acceptor levels in the band gap of boron-doped diamond semiconductors analyzed by soft X-ray absorption spectroscopy and DV-XA calculations**
Y. Muramatsu, T. Takebe, A. Sawamura, J. Iihara, A. Nanba, T. Imai, J. D. Denlinger and R. C. C. Perera
- P6-3 **Speciation of carbonitride nanolayers**
O. Baake, P. Hoffmann, A. Klein, W. Ensinger, B. Beckhoff, B. Pollakowski, J. Weser, G. Ulm, N. Fainer, M. Kosinova and V. Trunova
- P6-4 **XANES analysis of Ru valence in La₂RuO₅**
Iztok Arcon, Andreja Bencan, Marija Kosec and Alojz Kodre
- P6-5 **X-ray spectrometry with highly oriented pyrolytic graphite (HOPG)**
H. Legall, H. Stiel, V. Arkadiev and A. Bjeoumikhov
- P6-6 **Long term corrosion mechanisms of iron in atmosphere - X-ray absorption analyses of archaeological corrosion layers**
D. Neff, J. Monnier, S. Reguer, L. Bellot-Gurlet, L. Legrand, F. Mirambet and P. Dillmann
- P6-7 **Environmental analyses by combining TXRF-NEXAFS and IR-spectroscopy: Speciation of bromine in organics and characterization of the organic matrix**
B. Beckhoff, O. Hahn, J. Weser, M. Wilke, G. Ulm and O. Jann
- P6-8 **XAFS studies of the local structure of Mn doped magnetic semiconductors**
I. N. Demchenko, K. Lawniczak-Jablonska, J. Sadowski, M. Klepka and A. Wolska

- P6-9 **XAS investigation of Fe ions in chitosan complexes**
M. Klepka, K. Lawniczak-Jablonska, N. Nedelko, A. Slawska-Waniewska, M. Walczak, C.A. Rodrigues and C. Bordini
- P6-10 **The speciation of iron in minerals using the L_{3,2} edges measured by XRF-NEXAFS**
Max Wilke, Burkhard Beckhoff, Isabel Sommerweiß and Gerhard Ulm
- P6-11 **EXAFS technique in use to investigate local iron neighbourhood inside compounds applicable in cancer therapy**
M. Walczak, K. Lawniczak-Jablonska, M. Czuba, M. Klepka, A. Graczyk and S. Nikitendo
- P6-12 **Temperature and pressure dependence of the Yb valence state of some intermetallic Yb-Tm-Ga phases**
U. Burkhardt, R. Gumeniuk, M. Schmidt, W. Schnelle, Y. Prots, L. Vasylechko and Y. Grin
- P6-13 **Local structures in Pb_{1-x}Mn_xTe systems**
I. Radisavljevic, N. Ivanovic, N. Novakavic, N. Romcevic and H.-E. Mahnke
- P6-14 **XAFS study of nanocomposite system for syngas production**
V.V. Krivenstov, D.I. Kochubey, Y.V. Frolova, V.A. Sadykov and S.G. Neophytides
- P6-15 **Study of CNF supported Co(Ni)-Mo catalytic system used for HDS by EXAFS and XANES**
V.V. Krivenstov, Z.R. Ismagilov, D.I. Kochubey, O. Yu Poduacheva, A.E. Shalagina and A.N. Startsev
- P6-16 **XAFS study of titania and titania-silica supported systems**
V.V. Krivenstov, D.I. Kochubey, M. Tsodikov, J.A. Navio, G. Colon, M.C. Hidalgo, J.M. Marin and G. Restrepo

Session 7 : Data processing

- P7-1 **An improved genetic algorithm and its application to curve fitting in geological samples**
Liqiang Luo, X. Zhan and Y. Li
- P7-2 **Fundamental parameter method using scattering X-rays and Monte Carlo simulation**
N. Kawahara, Y. Kataoka, S. Hara, Y. Yamada, T. Matsuo and M. Mantler
- P7-3 **Use of the theoretical simulation in the choice of XRF technique of analysis with the synchrotron radiation**
Anatoly Revenko
- P7-4 **Simple method to improve a detection system resolution**
Alexander Serebryakov
- P7-5 **Application of the Monte Carlo method to X-ray unfolding: Comparison between germanium and silicon detectors**
Sergio Gallardo, José Rodenas, Gumersindo Verdu, Jorge E. Fernandez
- P7-6 **Performances of calibrations and validation: influence of EDXRF measuring time**
L. Perring and C. Servais

Session 8 : Applications of XRS in Life Science

- P8-1 **X-ray diffraction from cell walls for *Escherichia coli* G 35 #61 strain**
Astghik Pepoyan, Larisa Kirakosyan, Margarita Hovnanyan and Karlen Hovnanyan
- P8-2 **Characterization of osteoporotic bone structures by bidimensional images through X-ray microfluorescence with synchrotron radiation**
Inayá Lima, Marcelino Anjos, Renata Serpa, Maria Lucia Fleiuss, Doris Rosenthal and Ricardo Lopes
- P8-3 **Elemental concentration bidimensional mapping in the brain of Wistar rats by X-ray microfluorescence with synchrotron radiation**
R. F.B. Serpa, E. F.O. de Jesus, M. J. dos Anjos, L. F. de Oliveira, M. G.T. do Carmo, A. M.B. Martinez, J. D. Corrêa Júnior and R. T. Lopes
- P8-4 **The investigations of iron local environment in human brain tissue using XAFS technique - Preliminary results**
S. Wójcik, M. Szczerbowska-Boruchowska, M. Lankosz, C. Kapusta, M. Borowiec, D. Adamek and K. Klementiev
- P8-5 **Trace elements in human brain**
A. F. Marques and M. L. Carvalho
- P8-6 **Broad beam- and micro-PIXE analysis of normal and in vitro demineralized dental enamel**
Eugen A. Preoteasa, Elena Preoteasa, Livia Harangus, Dieter Grambole and Folker Herrmann
- P8-7 **Micro-XANES investigations of Cu and Fe oxidation state inside single neurons from substantia nigra of Parkinson's diseased patient**
J. Chwiej, M. Szczerbowska-Boruchowska, M. Lankosz, S. Wojcik, D. Adamek, A. Krygowska-Wajs, G. Falkenber and S. Bohic
- P8-8 **Trace element analysis of biologic samples using energy-dispersive X-ray fluorescence and total reflection X-ray fluorescence**
Annemarie Wagner, Johan Boman and Michael J. Gatari
- P8-9 **Detection of mercury in the kidney via source-excited X-ray fluorescence**
Joanna Grinyer, Marija Popovic and David R. Chettle
- P8-10 **Semi-quantative analysis of Fe, Cu and Zn concentration in breast cancer**
MP Silva, ALC Conceição, A Tomal, CA Pérez, A Ribeiro-Silva and ME Poletti
- P8-11 **X-ray scattering profiles of some normal and malignant human breast tissues**
D.M. Cunha, O.R. Oliveira, C.A. Pérez and M.E. Poletti
- P8-12 **Monitoring plasma and skin iron concentrations in human metabolic disorders**
M. A. Barreiros, C. Ralheta, T. Pinheiro, L. C. Alves, P. Filipe, J.N. Silva, R. Silva and R. Fleming
- P8-13 **Quality control of reference, generic, similar amoxicillin and diclofenac by X-ray scattering and chemometrics**
Simone S. de Oliveira Borges and Maria Izabel M. S. Bueno
- P8-14 **Study of the effects of chronic arsenic poisoning in rat organs by means of synchrotron microscopic X-ray fluorescence analysis**
Roberto D. Perez, Marcelo Rubio, Carlos A. Perez, Aldo H. Eynard, Guillermina A. Bongiovanni
- P8-15 **Two-dimensional elemental mapping by μ -SRXRF in liver slices with continuous scanning mode**
Gerald Falkenberg, Romana Höftberger, Friedrich Wrba and Wolf Osterode
- P8-16 **The effect of correlation between the K-alpha and the K-beta lead peak concentrations on the uncertainty in the result of in vivo ¹⁰⁹Cd KXRF bone lead measurement**
Jose Brito

- P8-17 **Characterization of cataract in dogs; trace element concentration for mature and immature cataract**
Andrea Antunes

Session 9 : Applications of XRS in Materials Science and Industry – Nanotechnology

- P9-1 **X-ray nanophotonics for material structures on base of the planar waveguide-resonator**
Vladimir Egorov and Evgeniy Egorov
- P9-2 **Applications of two-wave X-ray reflectometry in study of nanostructures**
Alexander Touriyanski, M.A. Khumakov, A.G. Touriyanski, I.V. Pishin and P.N. Lebedev
- P9-3 **X-ray fluorescence analysis of steel using VERBA-XRF conception**
Petro Verkhovodov
- P9-4 **Analysis of alternative fuel in the cement industry**
Clemens Schaefer and Dirk Wissmann
- P9-5 **Analysis of honey by X-ray spectroscopy allied to chemometrics**
Gisele G. Bortoleto, Simone S. O. Borges, Maria Helena L. do Rego and Maria Izabel M. S. Bueno
- P9-6 **X-ray spectroscopy and multivariate analysis in investigating counterfeit coins**
G. G. Bortoleto, R. C. Rossi, S. G. Guadagnin, L. C. M. Pataca, S. Rath and M. I. M. S. Bueno
- P9-7 **Determination of varnishes nonvolatile matter using XRS and PLS**
Fabiola M. Verbi Pereira and Maria Izabel M. S. Bueno
- P9-8 **Calibration and classification of sugars using chemometrics tools and X-ray spectrometry**
Karen Goraleb, Thais L. Alexandre and Maria Izabel M. S. Bueno
- P9-9 **Preparation and certification of the new reference materials; plastics (disk form, JAC 0621 - 0625) for determination of mercury using X-ray fluorescent analysis**
K. Nakano, K. Tsuji, T. Nakamura, I. Nakai, A. Kawase, M. Imai, M. Hasegawa, Y. Ishibashi, I. Inamoto, K. Sudou, M. Kozaki, A. Turuta, A. Ono, K. Kakita and M. Sakata
- P9-10 **SAIME: Study and development of innovative analysis methods for determining gold in precious metal alloys by EDXRF**
Stefano Ridolfi, Michele Tosti, Filippo Niccolai, Roberto Stancampiano and Elio Poma
- P9-11 **Development of two analytical methodologies for quantitative determination of total Cd, Cr, Hg, Pb in fluorinated materials by means of WDS-XRF spectroscopy**
Elena Cattaneo, Domenico Ferrari and Giuliana Geniram
- P9-12 **Quantitative and standard-less analysis of high alloy steel by wavelength dispersive X-ray fluorescence spectroscopy (WD-XRF)**
S. M. A. Iqbal and A. Butt
- P9-13 **Accurate analysis of light element samples by evaluation of the complete scattered background spectrum**
Bernhard Nensel
- P9-14 **The effect of nonhomogeneity of gold and platinum alloys using ED-XRF analysis**
V. Röbiger
- P9-15 **Optimized procedures for trace analysis in (liquid or loose powder) samples of light matrices**
Kai Behrens, Arnd Bühler and Dominique Porta
- P9-16 **Structure and physico-chemical properties of metal containing nano-composites based on polymer and porous glasses**
Leonid Trakhtenberg, Genrikh Gerasimov, Vladimir Gromov and Aleksandr Morovov

- P9-17 **Asphaltene determination in crude oil by X-ray scattering spectrometry allied to chemometrics**
Claudete Bernardo Henriques and Maria Izabel Maretti Silveira Bueno
- P9-18 **Microstructural characterisation of eutectoid and TRIP steels by EDS, EBSD XRD and thermoelectric analysis**
Janos Dobranszky
- P9-19 **Use of WDXRF and XRD to assess the content and chemical form of metals in automotive shredder residues (ASR)**
Oscar Gonzalez, Ignacio Queralt, Jordi Soler and Manuela Hidalgo

THURSDAY JUNE 22, 16:10 - 18:00 POSTER SESSION C (10,11,12,13,14,15,16)

Session 10 : TXRF and related techniques

- P10-1 **Determination of trace elements by TXRF analysis in tobacco samples from Mexican cigarettes**
T. Martinez, J. Lartigue, P. Avila-Perez, G. Zarazua, M. Navarrete, S. Tejeda and L. Cabrera
- P10-2 **TXRF analysis on activated reflectors**
Nikolaos Kallithrakas-Kontos, Ioanna Aretaki, Pavlos Koulouridakis and Vasilios Hatzistavros
- P10-3 **Evaluation of the contamination and bioavailability of heavy metals in lake sediments using SR-TXRF**
A. E. Sirito De Vives, S. Moreira, S. M. Boscolo Brienza, O. L. A. D. Zucchi and V. F. Do Nascimento Filho
- P10-4 **Determination of trace elements in tree-rings by synchrotron radiation total reflection X-ray fluorescence analysis (SR-TXRF)**
A. E. Sirito de Vives, S. Moreira, S. M. Boscolo Brienza, J. G. S. Medeiros, M. Tomazello Filho, O. L. A. D. Zucchi and V. F. Do Nascimento Filho
- P10-5 **Study of the heavy metal removal in Wetlands by SR-TXRF**
S. Moreira, A. Mello Jr, E. A. Nour, A. E. S Vives, R. C. Barroso, O. L. A. D. Zucchia and V. F. Nascimento Filho
- P10-6 **Study of the removal of heavy metals in a slow filtration system by SR-TXRF**
S. Moreira, A. Mello Jr, E. A. Nour, A. E. S Vives, R. C. Barroso, O. L. A. D. Zucchia and V. F. Nascimento Filho
- P10-7 **Ultra-trace analysis and speciation by TXRF-NEXAFS in the soft X-ray range**
B. Beckhoff, R. Fliegauf, M. Kolbe, M. Müller, J. Weser and G. Ulm
- P10-8 **Application of the TXRF for analysis of the plants cultivated on post industrial zinc wastes**
Beata Ostachowicz, Katarzyna Turnau and Teresa Anielska
- P10-9 **Uncertainty evaluation in seawater analysis by TXRF**
C. Ralheta, M. A. Barreiros, M. A. Trancoso and M. F. C. Camões
- P10-10 **Analysis of low Z elements in biofilms directly cultivated on the TXRF quartz carrier plates**
H. Hoefler, C. Strelj, P. Wobrauschek, M. Óvári and Gy. Záray
- P10-11 **Water-polysaccharide macromolecules: Competitive interaction onto glass microspheres**
Patricia Piccirilli, Néstor Caracciolo, Susana Boeykens, Cristina Vázquez and Marta Rosen
- P10-12 **Honey characterization by using total reflection X-ray fluorescence: Evaluation of the environmental quality and risks for the human health**
Graciela Custo, Susana Boeykens, Néstor Caracilo, Martha Ortiz and Cristina Vázquez
- P10-13 **Micro total reflection x ray fluorescence (micro-TXRF)**
Kouichi Tsuji, Keita Tanaka, Yosuke Nishida, Kazuhiko Nakano and Ken-ichi Sasaki
- P10-14 **Trace element analysis of fine aerosol particles with high time resolution using SR-TXRF**
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- P10-15 **Analysis of geometric-dependent effects on TXRF measurements by Monte Carlo Simulation**
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- P10-16 **Arsenic speciation in cucumber (*Cucumis sativus* L.) xylem sap by K-edge TXRF-XANES**
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- P11-2 **High energy resolution X-ray fluorescence microanalysis by energy dispersive spectrometer with superconducting detector**
R. Cristiano, A. Casaburi, C. Santagata and J. Hohne
- P11-3 **X-ray fluorescent analysis at sample excitation by secondary target radiation**
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A. Gianoncelli, P. Walter, E. Dooryhée, L. Ortega, P. Bordet and J. Castaing
- P11-5 **Diamond prism X-ray spectrometer**
Alexander Touriyanski and Igor Pirshin
- P11-6 **New highly effective X-ray complexes (XRF+XRD) on the basis of Kumakhov's polycapillary optics**
Ekaterina Likhushina, S.V. Nikitina and N.S. Ibraimov
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Victor Mikhin, O. Matveeva, B. Vasiliev, V. Ivanov and N. Avontynsh
- P11-8 **X ray capillary optics: Status and perspective**
Semfira Bjeoumikhova, Aniouar Bjeoumikhov, Heinrich Riesemeier and Martin Radtke
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Aniouar Bjeoumikhov and Semfira Bjeoumikhov
- P11-10 **Ring anode X-ray source for the image X-ray fluorescence spectrometer (IXRF) combined with multi-channel plate (MCP) optics**
Huawei Su, George W. Fraser and James F. Pearson
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Roberto Cesareo, Antonio Brunetti, Aniouar Bjeoumikhov, Norbert Langhoff and Stefano Ridolfi
- P11-12 **Accurate efficiency calibration of low-energy HPGe detector using monochromatic X-ray source**
Johann Plagnard and Marie-Christine Lépy
- P11-13 **X-Ray fluorescence measurement with a small glass X-Ray tube for photoionizer**
Jun Kawai, Kohji Matsuda and Toyohide Hayashi
- P11-14 **The advantages of using digital signal processing in polarized X-ray fluorescence analysis**
R. Padilla Alvarez, P. Van Espen and J.R. Estévez Alvarez

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Ch.Zarkadas, A.G. Karydas and V. Kantarelou
- P12-2 **Quantitative in situ XRFA: Monte Carlo approach in validity examination**
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- P12-3 **Some considerations to quality control and method validation in EDXRF analysis**
R. Padilla Alvarez, D. Hernández Torres, A. Markowicz, D. Wregzynek, E. China Cano and S. Bamford

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T. Caillaud, M. Manson, D. Desenne, B. Goze, A. Rivet and P. Derouineau

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A. Aliane, C. Socquet, P. Agnese, C. Pigot, J.-L. Sauvageot and C. Louis
- P14-2 **Charge introduction in semiconductor detectors with pixelated structure**
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A. Sokolov, A. Pchelintsev, A. Loupilov and Z. Struve
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Matias Rodrigues, Martin Loidl, Elvire Leblanc and Andreas Fleischman
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Stephane Terracol, Thomas Niedermayr, Dragos Hau, Shafinaz Ali, Jean-Pierre Briand and Stephan Friedrich

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J. C. Lima, R. Cély Barroso, D. Braz, L. F. Oliveira, C. R. Ferreira Castro and R. Tadeu Lopes
- P15-2 **Synchrotron micro-tomographic reconstruction of gunshot residues and 3-dimensional lead distributions**
Ivan Kempson, William Skinner and K Paul Kirkbride
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Alessandra Gianoncelli, Graeme R Morrison and Burkhard Kaulich
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O.-C. Lind, L. Claussen, B. Salbu, B. Vekemans, W. De Nolf, K. Janssens, M. Denecke, R. Simon, G. Falkenberg and E. Van De Castele

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Xiuchun Zhan, Liqiang Luo and Xingtao Fan
- P16-2 **Determination of sulfur content in oil with benchtop WDXRF**
Takashi Yamada, Mokoto Doi, Noboru Yamashita, Takashi Shoji and Hisayuki Kohno
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Ch. Zarkadas, M. Mueller, A.G. Karydas, B. Beckhoff, M. Kolbe and R. Fliegau
- P16-4 **Fast determination of mineral nutrients in milk powders**
L. Perring and J. Blanc