

Scientific Program of ICXOM 2007

September 16 (Sun.) – 21 (Fri.) at Kyoto University, Kyoto, Japan

Sep. 16, 6:00-20:00 at Kyoto Tower Hotel: registration and wine

Sep. 17: Oral talks and Posters

Sep. 18: Oral talks and banquet

Sep. 19: Oral talks

Sep. 20: Visit to Ritsumeikan University SR Center or Spring-8

Sep. 21: Visit to X-Ray companies in Kyoto

If you have any question, please ask

Prof. Shinjiro Hayakawa: hayakawa@hiroshima-u.ac.jp

Prof. Jun Kawai: jun.kawai@materials.mbox.media.kyoto-u.ac.jp

Prof. Kouichi Tsuji: tsuji@a-chem.eng.osaka-cu.ac.jp

Conference web pages are:

www.nims.go.jp/xray/xbun/ www.process.mtl.kyoto-u.ac.jp www.a-chem.eng.osaka-cu.ac.jp/tsujilab/

Scientific Program

Sep. 17 (Mon) The conference bus starts from Rihga Royal Hotel Kyoto at 8:30, then Kyoto Tower Hotel at 8:40

Sep. 17 (Mon) Kyoto University Clock Tower

9:00 Opening (The Clock Tower entrance opens exactly at 9:00.)

9:30 Plenary 1: Micro-analysis of aerosol particles by XRS for diverse applications

Rene Van Grieken; University of Antwerp

10:00 Coffee

10:30 Invited 2: X-Ray optics enabling new capabilities for materials characterization

George J. Havrilla; Los Alamos National Laboratory

10:55 Invited 3: Recent development of transmission electron microtomography for quantitative nano-scale structural analysis

Hiroshi Jinnai; Kyoto Institute of Technology, Japan

11:20 Invited 4: Quantitative ED-EPMA of individual particles and its application for characterization of atmospheric aerosol particles

Chul-Un Ro; Inha University, Korea

11:45 Invited 5: Tire debris identification in urban and airport aerosols by micro-XRS and small angle scattering

Szabina Török; KFKI Atomic Energy Research Institute, Hungary

12:10 Invited 6: Synchrotron radiation induced total reflection X-ray fluorescence analysis: instrumentation and application

Peter Wobrauschek; Atominstitut, Vienna Univ. of Technology, Vienna, Austria

12:35-14:00 Lunch

14:00-16:00 Poster session

Poster 7: Status and potential of multilayer X-ray optics at the ESRF

Ch. Morawe, Ch. Borel, J-Ch. Peffen; European Synchrotron Radiation Facility, Grenoble, France

Poster 8: Spectrum mapping using X-ray analytical

microscopy

Shintaro Komatani, Sumito Ohzawa, Yoshimichi Sato, Yoshihiro Yokota, Kazunori Fujita, Yasushi Hirata, Daisuke Matsunaga; HORIBA, Ltd.

Poster 9: Development of doubly-curved crystals (DCCs) for a portable X-ray fluorescence spectrometer

Markus Krämer, Kaori Kuzushita, Tadashi Utaka and Kazuo Taniguchi; Osaka Electro-Communication University

Poster 10: First-principles calculations of split acceptor levels in boron-doped semiconducting diamonds

A. Sawamura, J. Iihara, Y. Muramatsu, T. Takebe, A. Namba-Ueda, T. Imai, R. C. C. Perera, J. D. Denlinger Sumitomo Electric Industries, Ltd., Japan; University of Hyogo, Japan; Sumitomo Electric Industries, Ltd., Japan; Lawrence Berkeley National Laboratory, USA

Poster 11: Chemical effects on valence→L emissions of lanthanide compounds

Hisashi Hayashi, Kyoko Okada; Japan Women's University, Tokyo; PRESTO, JST, Tokyo

Poster 12: Crystalline phase analysis of clam shell by X-ray diffractometry

Akiko Hayashi, Masaru Kitano, Toshihiro Nakamura; Meiji University

Poster 13: Size distribution of free-flying nanoparticles investigated by small-angle X-ray scattering

Yohko F. Yano, Kazuo Matsuura, Yoshio Katsuya, Kazuki Ito, Masahiko Tanaka; Ritsumeikan Univ.; Ultrasound Brewery Co. Ltd.; SPring-8 Service Co. Ltd.; National Institute for Material Science

Poster 14: Application of table top TXRF spectrometer with multi target X-ray tube

S. Nomura, S. Uraike, S. Maeo, Y. Nagaoka, K. Taniguchi; Osaka Electro-Communication University

Poster 15: Micro-XRF imaging of cadmium in plants using high-energy synchrotron radiation

N. Fukuda, N. Kitajima, Y. Terada, T. Abe, Y. Hayashi, A. Hokura, I. Nakai; Tokyo University of Science; Fujita Co.; SPring-8 JASRI; Riken

Poster 16: Trace analysis of Cr oxide (6+) in Cr compound

by X-ray photoelectron spectrometer
Yoshitoki Iijima, Toshiyuki Ohama; Electron Optics Sales Division, JEOL Ltd., Tachikawa, Tokyo; Electron Optics Technical Division, SA group, JEOL Ltd., Akishima, Tokyo

Poster 17: Element imaging in millimeter resolution with X-ray generation device which uses pyroelectric crystal and dry battery
So Hatakeyama, Shinsuke Kunimura, Jun Kawai; Kyoto University

Poster 18: Study on the role of spores in arsenic hyperaccumulation in fern, *Pteris vittata* L., by SR-micro-XRF analysis
T. Kashiwabara, A. Hokura, N. Kitajima, Y. Terada, H. Saito, T. Abe, I. Nakai; Tokyo University of Science; Fujita Co.; JASRI; RIKEN

Poster 19: Low-voltage projection X-ray microscopy for samples consisting of light elements
Katsunori Minami, Yukio Oguchi Keiji Yada; TOHKEN Co., Ltd., X-Ray R&D Dept.

Poster 20: High sensitive analysis of light elements using EDXRF with focusing X-ray optics
Koichi Muraoka, Tadashi Utaka, Kazuo Taniguchi; Institute of X-ray Technologies Co. Ltd, Osaka, Japan; Osaka Electro-Communication University, Osaka, Japan

Poster 21: Development of a next-generation SEM-EDS system utilizing a high spectral resolution TES microcalorimeter
Qinghui Li, Yuki Ono, Yoshikazu Homma, Izumi Nakai, Keiichi Tanaka, Yukari Baba, Satoshi Nakayama; Tokyo University of Science, Shinjuku, Tokyo, Japan; SII NanoTechnology Inc., Matsudo, Chiba, Japan

Poster 22: Research of focusing properties of first and second order zone Plates by synchrotron X-ray radiation
Armen Kuyumchyan, Alecsey Souvorov, Tetsuya Ishikawa, Edvard Sarkisian, Vitali Aristov, Eugene Shulakov; Institute of Microelectronics Technology RAS, Chernogolovka, Moskow District, Russia; Spring-8, JASRI, Hyogo, Japan; International Academy of Science and Technology, Los Angeles, CA, USA

Poster 23: Development of soft X-ray multilayer laminar-type plane gratings and VLS spherical grating for flat-field spectrograph in the 1-8 keV region
Masato Koike, Masahiko Ishino, Takashi Imazono, Kazuo Sano, Hiroyuki Sasai, Masatoshi Hatayama, Hisataka Takenaka, Philip A. Heimann, Eric M. Gullikson; Japan Atomic Energy Agency (JAEA); Shimadzu Emit Co. Ltd; Shimadzu Corp.; NTT Advanced Technology Co.; Lawrence Berkeley National Laboratory

Poster 24: Self-absorption effects in TXRF-XANES measurements – a parameter study
F. Meirer, G. Peponi, C. Strelti, P. Wobrauschek, P. Kregsamer, C. Horntrich, J. Broekaert, U. Fittschen, G. Falkenberg; Atominstitut, Vienna University of Technology, Wien, Austria; ITC-irst, Povo (Trento) Italy; Department of Chemistry, University of Hamburg, Hamburg, Germany; Hamburger Synchrotronstrahlungslabor at DESY, Hamburg, Germany

Poster 25: Hg diffusion in books of XVIIIth and XIXth centuries

M. L. Carvalho, A. Guilherme, A. Cavaco, M. Manso, S. Pessanha, A. Marques, F. R. Ferreira, C. A. Perez; Centro de Física Atômica, Universidade de Lisboa, Faculdade de Ciências, Lisboa, Portugal; Associação dos Arqueólogos Portugueses, Lisboa Portugal; Laboratório Nacional de Luz Sincrotron-LNLS, Campinas, SP, Brasil

Poster 26: Total reflection X-ray fluorescence spectrometric determination of major and minor elements in freshwater biofilms - an overview on our investigations at the Tisza river and Velence lake, Hungary
Mihály Ovari; Eötvös University, Hungary

Poster 27: Application of the confocal μ -XRF for 3D analysis of elements distribution in hot environmental particles
M. Bielewski, J. Himbert, M. Betti, R. Simon; European Commission -DG JRC, Institute for Transuranium Elements, Karlsruhe, Germany; Institute for Synchrotron Radiation, Forschungszentrum Karlsruhe GmbH, Karlsruhe, Germany

Poster 28: Confocal μ -XANES analysis of the Pu oxidation state distribution in environmental radioactive particles
M. Bielewski, J. Himbert, M. Betti, G. Falkenberg; European Commission -DG JRC, Institute for Transuranium Elements, Karlsruhe, Germany; HASYLAB, DESY, Hamburg, Germany

Poster 29: Differential charging compensation in XPS with low energy electron beam and positive specimen bias method
Masahide Shima, Kenichi Tutumi, Toyohiko Tazawa; SA Group, Electron Optics Division, JEOL Ltd.

Poster 30: Preparation of calibration standard for analysis of fly ash by powder briquette/X-ray Fluorescence spectrometry
Atsushi Ohbuchi, Toshihiro Nakamura; Department of Applied Chemistry, Meiji University, Kawasaki, Japan

Poster 31: Chemical analysis of boron atoms in diamond by soft X-ray emission spectroscopy
Yasuji Muramatsu, Junji Iihara, Toshihiko Takebe, Jonathan D. Denlinger; Graduate School of Engineering, University of Hyogo, Himeji, Japan; Sumitomo Electric Industries, Ltd., Itami, Hyogo, Japan; Advanced Light Source, Lawrence Berkeley National Laboratory, Berkeley, CA, USA

Poster 32: Sulfur K XAFS study of diethyldithiocarbamate complexes
Yusuke Makiyama, Shinjiro Hayakawa, Shan Qiao, Hirofumi Namatame, Takeshi Hirokawa; Department of Applied Chemistry, Graduate School of Engineering, Hiroshima University, Hiroshima, Japan; Hiroshima Synchrotron Radiation Center, Hiroshima University, Hiroshima, Japan

Poster 33: Examination of analysis condition for low accelerating voltage EPMA analysis by L line of transition metals
Norihisa Mori; JEOL Ltd., Akishima, Tokyo, Japan

Poster 34: In situ XAS Analysis for EUV projection optics contamination
Masahito Niibe, Keigo Koida, Yukinobu Kakutani; Lab. Advanced Sci. & Technol. for Industry, University of Hyogo

Poster 35: Development of soil standard material for X-ray fluorescence analysis
Yasuhiro Shibata, Junnosuke Suyama, Aki Hamamoto, Satoshi Tsuruta, Masaru Kitano, Toshihiro Nakamura; Department of Applied Chemistry, Meiji University,

Kawasaki, Japan; KANKYO TECHNOS, Kitakyushu, Japan

Poster 36: Development of a compact XRF probe with a ring-type secondary target
Tasuku Yonehara, Kouichi Tsuji; Osaka City University; PRESTO-JST

Poster 37: Preliminary experiment of micro-XRF combined with AFM
Shintaro Fukuoka, Kouichi Tsuji; Osaka City University; JST-PRESTO

Poster 38: Solid-liquid interface analysis by compact XRF probe
Yoshihiko Nishida, Tasuku Yonehara, Kouichi Tsuji; Osaka City University; JST-PRESTO

Poster 39: Micro-optics test bench at the ESRF
A. Snigirev, R. Hustache, J.-Y. Massonnat, I. Snigireva, P. Duboc; ESRF, Grenoble, France

Poster 40: Fundamental research of X-ray focusing lens
Akinori Matsuda, Kazuhiko Nakano, Kouichi Tsuji, Shintaro Komatani, Sumito Ohzawa, Hiroshi Uchihara; Osaka City University; JST Innovation Plaza Osaka; JST(Japan Science and Technology Agency)-PRESTO; Horiba Ltd.

Poster 41: Comparison of micro-TXRF and micro grazing-exit XRF
Hiroshi Matsui, Kazuhiko Nakano, Kouichi Tsuji; Osaka City University; JST Innovation Plaza Osaka; JST-PRESTO

Poster 42: Time-resolved XRF measurement of living plants
Keiko Katsui, Kouichi Tsuji; Osaka City University; JST-PRESTO

Poster 43: Compact TXRF instrument developed by using a secondary target and a Si reflector
Yousuke Hanaoka, Hiroshi Matsui, Kazuhiko Nakano, Kouichi Tsuji; Osaka City University; JST Innovation Plaza Osaka, 3) JST-PRESTO

Poster 44: Precise measurements and analysis of Cu- $K\alpha_1$ and $K\alpha_2$ X-ray profiles using a (++) double crystal spectrometer
Tomoya Arai; RIGAKU Industrial Corporation, Takatsuki, Osaka, Japan

Poster 45: Quantitative chemical state analysis of supported vanadium oxides by high resolution X-ray fluorescence V $K\alpha$ spectra
Takashi Yamamoto, Fumitaka Nanbu, Tsunehiro Tanaka, Jun Kawai; Department of Materials Science and Engineering, Kyoto University; Department of Molecular Engineering, Kyoto University

Poster 46: Oxygen bonding effects on $K\beta$ spectra of phosphor
Joji Kuniya; Gunma complex Shine-etsu Chemical Co., Ltd., 13-1, Isobe-2-chome, Annaka-shi, Gunma 379-0195 Japan

Poster 47: Non-destructive evaluation of condensed Fe layer near face of soda-lime float glass by using TXRF spectrometer
Takashi Yamada, Yuichiro Shimizu, Kazushi Aranami; Rigaku Industrial Corporation, Takatsuki, Osaka, Japan

Poster 48: A significant impact for Pb $L\beta$ intensity by major

elements in soil

Mitsuru Yamamura, Katsumi Marumo, Masahiro Ono, Yukihiro Mizuochi; Japan Conservation Engineers & Co.LTD.; National Institute of Advanced Industrial Science and Technology (AIST); Sumiko Consultants Co.LTD.

Poster 49: X-ray archaeometric analysis of Iraq luster-painted pottery with reddish color excavated in Raya
S. Miura, I. Nakai, Y. Shindo; Department of Applied Chemistry, Tokyo University of Science; Middle Eastern Culture Center in Japan

Poster 50: The X-ray absorption fine structure (XAFS) analysis of nano metal fumes trapped by differential mobility analyzer (DMA)
N. Sakai, K. Kodera, Y. Matsui, K. Shiota, T. Urabe, D. Okuda, M. Takaoka, I. Uchiyama; Kyoto University, SHIMADZU Corporation

Poster 51: X-ray refractive lens made from a gramophone record as an X-ray focusing tool for a portable total reflection X-ray fluorescence spectrometer
Shinsuke Kunimura, Jun Kawai; Kyoto University

Poster 52: Development of an X-ray detector using surface plasmon resonance (SPR)
Yuichi Kunieda, Keisuke Nagashima, Noboru Hasegawa, Maki Kishimoto, Tetsuya Kawachi, Kouta Sukegawa, Momoko Tanaka, Yoshihiro Ochi, Masaharu Nishikino, Hiroshi Yamatani; X-ray laser research group, Quantum Beam Science Directorate, Japan Atomic Energy Agency (JAEA)

Poster 53: Prototype for depth profiling of ultra shallow junctions with grazing incidence X-ray fluorescence analysis
N. Zoeger, C. Strel, G. Peponi, I. Schraik, D. Ingerle, P. Wobrauschek; Vienna University of Technology, Atominstut, Vienna Austria; ITC-irst, Centro per la Ricerca Scientifica e Tecnologica, via Sommarive 18, I-38050 Povo, Trento, Italy

Poster 54: Trace metal analysis on hafnium silicate deposited Si wafer by total reflection X-ray fluorescence
Hikari Takahara, Hiroyuki Murakami, Toru Kinashi, Chris Sparks; Technos co., Ltd. Nagao-Tanimachi, Hirakata, Osaka Japan; ATDF, Montopolis Drive, Austin, Texas USA

Poster 55: Non-destructive monitoring of alloying between double-layered metal samples using bench-top TXRF spectrometer
Kazushi Aranami, Yuichiro Shimizu, Takashi Yamada; Rigaku Industrial Corporation, Takatsuki, Osaka, Japan.

Poster 56: High-sensitivity EXAFS investigation of arsenic shallow implant in silicon
H. Yamazaki, M. Yoshiki, M. Takemura, M. Tomita, S. Takeno; Toshiba Corporation, Corporate Research and Development Center

Poster 57: Silica alumina coordination environmental high speed analysis by EXEFS
Tomoyuki Kudo, Takashi Yamamoto, Jun Kawai; Kyoto University

Poster 58: Soft X-ray emission spectroscopy of carbon black
Yasuji Muramatsu, Ryusuke Harada, Jonathan D. Denlinger; Graduate School of Engineering, University of Hyogo, Himeji, Hyogo, Japan; Chita Laboratory, Tokai Carbon Co., Ltd., Aichi, Japan; Advanced Light Source, Lawrence Berkeley National Laboratory, Berkeley, CA, USA

Poster 59: X-ray spectroscopic microstate analysis of carbons formed by the W-filament-CVD method
Muneyuki Motoyama, Satoshi Ueda, Kazutoshi Yamada, Yasuji Muramatsu; Center for Corporate Relations, University of Hyogo, Kobe, Japan; Graduate School of Engineering, University of Hyogo, Himeji, Hyogo, Japan; Hyogo Prefectural Institute of Technology, Kobe, Japan

Poster 139: Investigation of ancient and medieval beads by means of electron microscopy and X-ray fluorescence analysis

T. Trojek, M. Hložek, D. Staššiková-Štukovská; Department of Dosimetry and Application of Ionizing Radiation, Czech Technical University in Prague, Praha, Czech Republic; Department of Archeology and Museology, Masaryk University, Brno, Czech Republic; Methodical centre of conservation, Technical museum, Brno, Czech Republic; Archaeological Institute, Slovak Academy of Science, Nitra, Slovakia

Poster 60: $K\alpha/K\beta$ ratio of characteristic X-rays as an information source on depth distribution of elements in low Z matrix

T. Trojek, T. Čechák, L. Musílek; Czech Technical University in Prague, Department of Dosimetry and Application of Ionizing Radiation, Praha, Czech Republic

Poster 61: Chemical effects on $K\beta/K\alpha$ intensity ratios of Mo compounds induced by electron bombardment

Yoichi Tamaki, Shouhei Harada; Miyagi University of Education

Poster 62: Chemical effects on $L\alpha$ and $L\beta$ intensity ratio of spectra

Ryosuke Shioi, Nobuharu Sasaki, Goro Kinugawa, Jun Kawai; Kyoto University

Poster 63: Comparison of medium to heavy metals analytical data of soil samples by three XRF analytical systems

Katsumi Marumo, Toru Ujiie, Yuka Onoki; National Institute of Advanced Industrial Science and Technology (AIST); Japan Conservation Engineers & Co.LTD.

Poster 64: Application of synchrotron-radiation soft X-ray spectroscopy for food analysis; oxidation of the Japanese traditional sweets "Karinto"

Keishi Kamamoto, Nozawa Jiro, Yasuji Muramatsu, Osamu Amano, Eric M. Gullikson; Graduate School of Engineering, University of Hyogo, Himeji, Hyogo, Japan; TOKIWADOSEIKA, Co., Ltd, Himeji, Hyogo, Japan; Center for X-Ray Optics, Lawrence Berkeley National Laboratory, Berkeley, CA, USA

Poster 65: Chemical speciation of arsenic accumulating minerals in a sedimentary iron rock by synchrotron radiation multiple X-ray analytical techniques.

S. Endo, Y. Terada, Y. Kato, I. Nakai; Tokyo University of Science; JASRI; The University of Tokyo

Poster 66: Development of portable and saving-energy type EDXRF

Y. Mizoue, T. Itoh, M. Ito, S. Uraike, T. Utaka, K. Taniguchi; Osaka Electro-Communication University, Neyagawa, Osaka, Japan; Institute of X-ray Technologies Co., Ltd., Yodogawa-ku, Osaka, Japan; Arkwright Soft Co., Ltd., Kita-ku, Osaka, Japan

Poster 67: Development of high performance micro X-ray fluorescence coating thickness tester

T. Utaka, S. Uraike, N. Kawada, M. Nagano, K. Taniguchi; Osaka Electro-Communication University, Osaka, Japan; Institute of X-ray Technologies Co., Ltd., Osaka, Japan

Poster 68: Characterization on the surface of aluminum particles coated with tin deposits by X-ray microanalysis

T. Sonoda, K. Katou, T. Asahina; National Institute of Advanced Industrial Science and Technology (AIST)

Poster 69: X-Ray transfocator based on Al parabolic refractive lenses for high energy X-ray focusing and collimation

M. Rossat, G. Vaughan, J. Wright, I. Snigireva, A. Snigirev, A. Bytchkov, C. Curfs; ESRF, Grenoble, France

Poster 140: Application of electron-probe X-ray microanalysis method for investigation of metallurgical silicon

L. Suvorova, N. Nemchinova; Institute of Geochemistry, Siberian Branch, Russian Academy of Sciences, Irkutsk, Russia; Irkutsk State Technical University, Irkutsk, Russia

Poster 71: X-ray computed tomography in Zernike phase contrast mode at 8 keV with 50-nm resolution using Cu rotating anode x-ray source

Michael Feser, Andrei Tkachuk, Fred Duewer, Hongtao Cui, Jeff Gelb, Steve Wang, Juana Rudati, Wenbing Yun; Xradia, Inc. 5052 Commercial Circle, Concord, CA, USA

Poster 72: Ethanol intake during lactation: Evaluate to the mineral concentrations on pup's brain using total reflection X-ray fluorescence spectrometry

L. A. Marins, R.F.B. Serpa, E.F.O. de Jesus, M.J. dos Anjos, M. G. T. do Carmo, M. S. Rocha, S. Moreira, R. T. Lopes; Federal University of Rio de Janeiro/COPPE, Nuclear Instrumentation Laboratory,; University of Rio de Janeiro State, Physics Institute, RJ, Brazil; Federal University of Rio de Janeiro, Nutrition Institute, RJ, Brazil; Federal University of Rio de Janeiro, Department of Basics and Clinic Pharmacy, RJ, Brazil; University of Campinas State, Civil Engineering department, SP, Brazil

Poster 73: Trace elements analysis in normal and pathological human tissues using synchrotron X-ray fluorescence

M. J. Anjos, A. S. S. Saddock, R. T. Lopes; Federal University of Rio de Janeiro, Nuclear Instrumentation Laboratory, Brazil; State University of Rio de Janeiro, Physics Institute, Brazil

Poster 74: Bidimensional mapping of elemental concentration in the brain of wistar rats by X-ray microfluorescence with synchrotron radiation

R. F. B. Serpa, E. F. O. de Jesus, M. J. Anjos, L. A. Marins, M. G. T. do Carmo, J. D. Corrêa Junior, M. S. Rocha, R. T. Lopes, A. M. B. Martinez; Federal University of Rio de Janeiro, Nuclear Instrumentation Laboratory; State University of Rio de Janeiro, Physics Institute; Federal University of Rio de Janeiro, Nutrition Institute; Federal University of Rio de Janeiro, Department of Basics and Clinic Pharmacology; Federal University of Rio de Janeiro, Department of Histology and Embryology

Poster 75: Research in micro-beam X-ray fluorescence analysis of individual particles

M. Lankosz, M. Bielewski, D. Wegrzynek, A. Markowicz, R. Simon; AGH-University of Science and Technology, Faculty

of Physics and Applied Computer Science, Krakow, Poland; European Commission-DG RJC, Institute for Transuranium Elements, Karlsruhe, Germany; International Atomic Energy Agency, Agency's Laboratories Seibersdorf, Vienna, Austria; Institute for Synchrotron Radiation, Forschungszentrum Karlsruhe GmbH, Karlsruhe, Germany

Poster 76: Micro imaging analysis for osteoporosis assessment

I. Lima, M. J. Anjos, M. L. F. Farias, D. Rosenthal, R. T. Lopes; Nuclear Instrumentation Laboratory, UFRJ, Brazil; Physics Institute, UERJ, Brazil; University Hospital, UFRJ, Brazil; Biophysics Institute, UFRJ, Brazil

Poster 77: A new approach to free standing thin film reference samples for micro XRF analysis

G. Falkenberg, R. Dietsch, U. Fittschen, R. Simon, D. Weissbach; HASYLAB at DESY, Hamburg, Germany; AXO DRESDEN GmbH, Heidenau, Germany; University of Hamburg, Department of Chemistry, Hamburg, Germany; FZ Karlsruhe, Institute for Synchrotron Radiation, Karlsruhe, Germany

Poster 78: EPMA determination of modes of silver occurrence in lithochemical stream sediments exemplified by Ducat gold-silver deposit in northeastern Russia

Ludmila A. Pavlova, Raisa G. Kravtsova; Institute of Geochemistry, Siberian Branch, Russian Academy of Sciences, Favorsky St., Irkutsk

Poster 79: Nanofabrication of high aspect ratio 24 nm X-ray zone plates for X-ray imaging applications

Michael Feser, Yan Feng, Alan Lyon, Steve Rishton, Xianghui Zeng, Sharon Chen, Simone Sassolini, Juana Rudati, Wenbing Yun; Xradia Inc., Concord, CA, USA; Santur Corp., Fremont, CA, USA

Poster 80: Determination of the amount of antimony trioxide and bromine in molding compounds for semiconductor packages by X-ray fluorescence

Mitsuhiro Oki, Miyuki Takenaka; Corporate Research and Development Center, Toshiba Corporation, Kawasaki, Japan

Poster 81: EDXRF and FTIR techniques for characterization of wall paintings

Olimpia – Hinamatsuri BARBU; National University of Arts Bucharest, Department of Conservation-Restoration, Romania

Poster 82: To track a diesel exhaust particle path from the nose to brain by X-ray fluorescence analysis

Y. Matsui, N. Sakai, K. Kodaoka, M. Takaoka, H. Fujimaki, A. Tsuda, I. Uchiyama; Grad. Sch. of Engr., Univ. of Kyoto, Japan; Div. of Environ. Health Sci., Natl. Inst. for Environ. Studies, Japan; Dep. of Environ. Health, Harvard Sch. of Pub. Health, USA

Poster 83: Speciation of Pb in the tidemark of human articular bone – a feasibility study

N. Zoeger, F. Meirer, J. Goettlicher, R. Steining, S. Mangold, C. Strel, P. Wobraschek, A. Tampieri, S. Sprio, G. Pepponi; Vienna University of Technology, Atominstitut, Vienna, Austria; Forschungszentrum Karlsruhe, Institute for Synchrotron Radiation, Synchrotron Radiation Source ANKA Karlsruhe, Germany; Istituto di Scienza e Tecnologia dei Materiali Ceramici CNR, Faenza, Italy; Fondazione Bruno Kessler-irst, Povo, Italy

Poster 84: X-ray emission study of lead compounds excited around L absorption edges

Yasushi Uehara, Kazumasa Kawase; Advanced Technology R&D Center, Mitsubishi Electric Co.

Poster 85: Quantitative analysis for lead in solder plating of chip resistors using XRF

Michiko Noguchi, Mitsuo Ozaki; Fujitsu Laboratories Ltd.

Poster 86: X-ray fluorescence analysis of Pb in Sn coating using the theoretical intensity of scattered X-rays

H. Ochi, S. Watanabe, H. Nakamura; Shimadzu Analytical & Measuring Center, Inc., Shimadzu Corp.

Poster 87: X-ray electron probe microanalysis of cassiterites and columbite-tantalite inclusions in rare metal pegmatites of the East Sayan Mountains

O. Yu. Belozerova, V. M. Makagon; Institute of Geochemistry, Siberian Branch, Russian Academy of Sciences, Favorsky St. 1 A, 664033 Irkutsk, Russia

Poster 88: Nucleation and growth settings of olivine and pyroxene high pressure phases in shocked chondrites.

T. Ferroir, A. El Goresy, P. Beck, B. Van de Moortèle, M. Bohn, A. Simionovici, Ph. Gillet; LST, ENS Lyon, 46 Allée d'Italie, Lyon, France; BGI, Universität Bayreuth, Bayreuth, Germany; Geophysical Laboratory, Carnegie Institution of Washington, Washington, DC, USA; Microsonde Ouest, IFREMER and CNRS, Centre de Brest, Plouzane, France; LGIT, Univ. J. Fourier, Grenoble, Grenoble, France

Poster 89: Surface analysis combining grazing-exit conditions and synchrotron radiation X-ray microprobe

C. A. Pérez, H. J. Sánchez, E. Avedaño, A. L. Gobbi, G. M. Azevedo; LNLS, Laboratório Nacional de Luz Sincrotron, Brasil; FaMAF, Facultad de Matemática, Astronomía y Física, Argentina

Poster 90: Quantitative separative mapping of rutile and anatase by projection-type X-ray diffraction imaging

Kenji Sakurai, Mari Mizusawa; National Institute for Materials Science, Tsukuba, Japan

Poster 91: Characterization of magnetic materials using quick X-ray fluorescence spectrometer with 2D detector

Hiromi Eba, Kenji Sakurai; Musashi Institute of Technology; National Institute for Materials Science

Poster 92: Behavior and origin of chemical components in ambient particulate matter by XRF analysis

Etsu Yamada, Kazuo Otani, Yasuro Fuse, Takeshi Yamada; Kyoto Institute of Technology

Poster 93: GI-XRF in a multitechnique approach for the characterisation of As ultra shallow implants in Si

G. Pepponi, D. Giubertoni, M. Barozzi, M. Bersani, N. Zoeger, C. Strel, J. A. van den Berg; Fondazione Bruno Kessler - irst, Povo, Trento, Italy; Atominstitut der Österreichischen Universitäten, TU-Wien, Vienna, Austria; Joule Physics Laboratory, Institute of Materials Research, University of Salford, Salford, United Kingdom

Poster 94: Application of X-ray imaging techniques for studying the morphology of malaria mosquitoes

D. Wegrzynek, E. Chinea-Cano, A. Markowicz, C. A. Malcolm, M. Helinski, P. Wobraschek, Ch. Strel, N. Zoeger, R. Simon, T. Weitkamp, Ch. Frieh; Agency's Laboratories Seibersdorf, International Atomic Energy Agency, Vienna, Austria; Faculty of Physics and Applied Computer Science, University of Science and Technology, Krakow, Poland; Atominstitut der Oesterreichischen Universitaeten,

Technische Universitaet Wien, Stationallee, Vienna, Austria; Forschungszentrum Karlsruhe GmbH, Institute for Synchrotron Radiation, Eggenstein-Leopoldshafen, Germany

Poster 122: Development of total-reflection XAFS at the liquid-liquid interface

Hajime Tanida, Hirohisa Nagatani, Makoto Harada; Japan Synchrotron Radiation Research Institute; Nagasaki University; Tokyo Institute of Technology

Poster 151: X-ray Absorption Studies of Contamination and Decontamination of Copper and Cadmium in Soil by Electrokinetic Process

Arvind Agarwal, Bala Ramadu P., R. P. Tiwari, R. K. Srivastava, T. Konishi, M. Sakamaki, T. Kaneko; Department of Physics, Motilal Nehru National Institute of Technology, Allahabad-India; Department of Civil Engineering, Motilal Nehru National Institute of Technology, Allahabad-India; Graduate School of Science, Chiba University, Inage, Chiba 263-8522, Japan

Poster 152: High-Energy Polycapillary X-Ray Optics and Its Applications for Micro EDXRF Analysis of Trace Cadmium and Other Elements

Ning Gao, Igor Ponomarev, and Yejun He; X-Ray Optical Systems, Inc., East Greenbush, NY, USA

Poster 153: Metallic Threads

Gulsu SIMSEK; Istanbul Technical University, Ayazaga Campus, Metallurgy and Materials Engineering, Maslak 34469, Istanbul, TURKEY

16:00 Invited 95: XRF Surface Analysis Combining Grazing-Exit Conditions and X-Ray Microprobe

Carlos A. Perez; Brazilian Synchrotron Light Source, Brazil

16:25 96: X-Ray microfocusing by capillary optics

D. Hampai, S. B. Dabagov, G. Cappuccio, G. Cibin, V. Sessa; MINASlab, Dip. Di Scienze e Tecnologie Chimiche, Università di Roma "Tor Vergata" and INFN, Via della Ricerca Scientifica 1, Rome, Italy; INFN – LNF, Via E. Fermi 40, Frascati (RM), Italy; RAS - P.N. Lebedev Physical Institute, Moscow, Russia; CNR – ISMN, Via Salaria Km 29,300, Monterotondo Scalo (RM), Italy; Diamond Light Source Ltd., Chilton, Didcot, United Kingdom

16:45 97: Carbon polymorph in ureilites: a fine scale raman and synchrotron mapping

T. Ferroir, A. Simionovici, A. El Goresy, Ph Gillet, G. Montagnac ; LST, ENS Lyon, Lyon, France ; LGIT, Univ. J. Fourier, Grenoble, Grenoble, France ; BGI, Universität Bayreuth, 95440 Bayreuth, Germany

98 Withdraw

17:05 Invited 99: Three-dimensional microanalysis of environmental and cultural heritage materials by means of confocal μ -XRF and tomographic μ -XRD

K. Janssens, M. Ahlfeld, W. De Nolf, J. Jaroszewics, G. Van der Snickt, O. Schalm; Department of Chemistry, University of Antwerp, Belgium

17:30 Invited 100: On the non-destructive multi-probe, multi-scale investigation of the stardust cometary grains

Alexandre Simionovici, L. Lemelle, T. Ferroir, Ph. Gillet, J. Borg, F. Grossemy, Z. Djouadi, P. Bleuet, J. Susini, B. Lanson, A. El Goresy ; LGIT, Univ. J. Fourier, Grenoble, France ; LST, ENS Lyon, 46 allée d'Italie, Lyon, France ; IAS, Univ. Paris XI, Orsay, France; ESRF, Grenoble, France; BGI,

Univ. Bayreuth, Bayreuth, Germany

17:55 101: Design of an apparatus for polarization measurement in soft X-ray region

Takashi Imazono, Yoji Suzuki, Kazuo Sano, Masato Koike; Quantum Beam Science Directorate, Japan Atomic Energy Agency; Shimadzu Emit Co., Ltd.

18:15 102: Focusing synchrotron radiation with home-made polycapillary X-ray optics

Roberto D. Pérez, Héctor J. Sánchez, Marcelo Rubio, Carlos A. Pérez ; FAMAFA, Universidad Nacional de Córdoba, (5000) Ciudad Universitaria, Córdoba, Argentina ; CEPROCOR-Agencia Córdoba Ciencia S.E, (5164) Santa María de Punilla, Córdoba, Argentina ; CONICET, Rivadavia 1917, (1033) Buenos Aires, Argentina; Laboratorio Nacional de Luz Síncrotron—LNLS, POB 6192, 13084-971 Campinas, SP, Brasil

18:35 103: Three dimensional conic beam X-ray microtomography in bone quality

I. Lima, R. T. Lopes; Nuclear Instrumentation Laboratory, UFRJ, Brazil

19:00 Welcome party

Sep. 18 (Tue) The conference bus starts from Rihga Royal Hotel Kyoto at 8:00, then Kyoto Tower Hotel at 8:10.

Sep. 18 (Tue) Kyoto University, Kogaku-bu, Butsuri-tou

8:30 Plenary 104: The development and future of the emission microscope

Takanori Koshikawa, Osaka Electrocommunication University, Japan

9:00 Invited 105: Synchrotron microprobe at the LURE: applications to the study of human hard tissues and geological materials

Maria Luisa de Carvalho, M. O. Figueiredo, P. Chevallier; Centro de Física Atómica da Universidade de Lisboa, Faculdade de Ciências, Lisboa; INETI-IGM, Dept. Min. Resources, Apt. 7586, 2721-866 Alfragide & CENIMAT, Mat. Sc. Dept., Univ. Nova de Lisboa (UNL), Caparica, Portugal; LURE, Orsay, France

9:25 Invited 106: Chemical speciation of cadmium and arsenic hyper-accumulator plants by SR- μ -XRF analysis

Izumi Nakai; Tokyo University of Science, Japan

9:50 Invited 107: Synchrotron radiation induced TXRF for XANES application at HASYLAB, Beamline L

C. Strelí, F. Meirer, G. Pepponi, P. Wobrauschek, G. Zaray, U. Fittschen, J. Broekaert, G. Falkenberg; Atominstitut, Vienna Univ. of Technology, Vienna, Austria; ITC-irst, Trento, Italy; Eötvös Univ., Budapest, Hungary; Univ. Hamburg, Hamburg, Germany; HASYLAB at Deutsches Elektronensynchrotron, Hamburg, Germany

10:15 Coffee break

10:45 108: Hard X-ray focusing by single bounce capillary

A. Snigirev, A. Bjeoumikhov, A. Erko, I. Snigireva, M. Grigoriev, V. Yunkin, M. Erko, S. Bjeoumikhova; ESRF, Grenoble, France; IFG Institute for Scientific Instruments GbmH, Berlin, Germany; BESSY GmbH, Berlin, Germany; IMT RAS, Chernogolovka, Moscow region, Russia; Bundesanstalt für Materialforschung und Prüfung, Berlin,

Germany

11:05 Invited 109: Multi capillary X-ray lens and its applications

Hiroyoshi Soejima; Shimadzu Scientific Research Inc.

11:30 Invited 110: Recent progress of polycapillary X-ray lens and its application

Xunliang Ding; X-Ray Optics Laboratory, Institute of Low Energy Nuclear Physics, Beijing Normal University, Beijing, China; Beijing Radiation Center

11:55 Invited 111: X-ray analytical microscope with mono-capillary

Yoshihiro Yokota; Horiba

12:20 Invited 112: How the X-ray refractive lens was born
Toshihisa Tomie; National Institute of Advanced Industrial Science and Technology (AIST), Japan

12:45-14:00 Lunch

(ICXOM Advisory Committee meeting)

14:00 113: Quality of EPMA determinations obtained from laboratory reference samples of copper-rich alloys and basaltic glasses

Ludmila A. Pavlova; Institute of Geochemistry, Siberian Branch, Russian Academy of Sciences, Irkutsk

14:20 Invited 114: On X-ray waveguiding: Channeling formalism – from micro- down to nanofocusing

Sultan B. Dabagov ; INFN – Laboratori Nazionali di Frascati, Frascati (RM), Italy; RAS – P.N. Lebedev Physical Institute, Moscow, Russia

14:45 Invited 115: Three-dimensional element analysis using a full-field X-ray fluorescence imaging microscope

Masato Hoshino, Norio Watanabe, Sadao Aoki; Graduate School of Pure and Applied Sciences, University of Tsukuba

15:10 Invited 116: Recent trends of projection X-ray microscopy in Japan

Keiji Yada; Tohken Co., Ltd, Chofu, Tokyo, Japan

15: 35 117: X-ray gathering power enhancing and emergent beam divergence decreasing for planar waveguide-resonator: methods and realization

V. K. Egorov, E. V. Egorov; IMT RAS, Chernogolovka, Moscow district, Russia

15:55 Coffee break

16:20 Invited 118: Reference-free X-ray fluorescence analysis

B. Beckhoff, M. Kolbe, M. Mantler; Physikalisch-Technische Bundesanstalt, Berlin, Germany; Technische Universität Wien, Wiedner Hauptstr., Wien, Austria

16:45 Invited 119: Spatially resolved μ -XRF, μ -XAFS, and μ -XRD studies related to nuclear waste disposal safety issues

Melissa A. Denecke; Forschungszentrum Karlsruhe, Institut für Nukleare Entsorgung, Karlsruhe, Germany

17:10 Invited 120: Analysis of biological and environmental samples with total reflection X-ray fluorescence spectrometry

Mihály Ovari; Eötvös University, Hungary

121 Withdraw

17:35 123: Silicon planar lenses for high energy X-ray nanofocusing

I. Snigireva, A. Snigirev, M. Grigoriev, M. Di Michiel, V. Yunkin, S. Kuznetsov, G. Vaughan, P. Van Vaerenbergh; ESRF, Grenoble, France; IMT RAS, 142432 Chernogolovka, Russia

17:55 124: Selective formation of CaCO_3 polymorphism and XAFS characterization

Shinjiro Hayakawa, Naoko Ikezoe, Koji Yamamuro, Yuki Hajima, Shan Qiao, Hirofumi Namatame, Takeshi Hirokawa; Dept. of Applied Chemistry, Graduate School of Engineering, Hiroshima University, Hiroshima, Japan; Hiroshima Synchrotron Radiation Center, Hiroshima University, Hiroshima, Japan

18:30 Bus starts to Conference Banquet

Sep. 18 (Tue) The conference bus starts from Rihga Royal Hotel Kyoto at 8:00, then Kyoto Tower Hotel at 8:10.

Sep. 19 (Wed) Kyoto University, Kogaku-bu, Butsuri-tou

8:30 Invited 125: Development of laboratory ultra soft X-ray spectrometer

Tsutomu Kurisaki, Hisanobu Wakita; Department of Chemistry, Faculty of Science, Fukuoka University

8:55 126: Development and application of confocal 3D-micro-XRF spectrometer

Kazuhiko Nakano, Kouichi Tsuji; Osaka City University; Innovation Plaza Osaka, Japan Science and Technology Agency; PRESTO-JST

9:15 127: Development of μ -XRF spectrometer combined an multi target X-ray tube

S. Maeo, M. Krämer, K. Taniguchi; Osaka Electro-Communication University

9:35 128: On site XRF analysis of faience objects excavated from Abu-sir south hill remains, Egypt: application to the study of faience classification.

K. Tantrakarn, I. Nakai, N. Kawai, A. Nishisaka, S. Yoshimura; Department of Applied Chemistry, Tokyo University of Science; Institute of Egyptology, Waseda University

9:55 Coffee break

10:20 Invited 129: Chemical effect on soft X-ray spectroscopy

Rupert Perera; ALS, USA

10:45 Invited 130: Observation of surface dynamic processes by LEEM/PEEM

Tsuneo Yasue; Osaka Electrocommunication University, Japan

11:10 Invited 131: Speciation of light elements in submicron particles deposited on silicon wafers using TXRF-NEXAFS, János Osán; KFKI Atomic Energy Research Institute, Hungary

11:35 132: Crystal optics for spectroscopy of hard-X-rays emitted in flight by highly charged ions

Heinrich F. Beyer; for the Atomic Physics X-Ray Collaboration, GSI Darmstadt, Germany

133 Withdraw

11:55 134: Hepatic metal content imaging in Wilson disease

G. Falkenberg, W. Osterode, F. Wrba, P. Ferenci; HASYLAB at DESY, Hamburg, Germany; Department of Internal Medicine 4, Medical University of Vienna, Vienna, Austria; Department of Clinical Pathology, Medical University of Vienna, Vienna, Austria

12:15 135: Synchrotron radiation laboratory for environmental studies

J. Göttlicher, R. Steininger; Forschungszentrum Karlsruhe, Institute for Synchrotron Radiation, ANKA, Karlsruhe, Germany

12:35-13:30 Lunch

13:30 136: Investigation of soil mineral component in Baikal Region by X-ray electron probe microanalysis

O. Yu. Belozeroza; Institute of Geochemistry, Siberian Branch, Russian Academy of Sciences, Irkutsk, Russia

13:50 137: State analysis for corrosion compound of a gold Plated copper alloy by EPMA and EELS of TEM

Hideyuki Takahashi, Noriaki Endo, Hideo Nishioka; Electron Optics Division, JEOL Ltd., Akishima, Tokyo, Japan

14:10 138: Three-dimensional microscopic elemental analyses based on X-ray fluorescence analysis combined with NC high-precision machining process

Kazuhiro Fujisaki, Hideo Yokota, Naomichi Furushiro, Shintaro Komatani, Sumito Ohzawa, Yoshimichi Sato, Ryutaro Himeno, Toshiro Higuchi, Akitake Makinouchi; RIKEN; HORIBA, Ltd.; The University of Tokyo

14:30 Coffee break

14:50 70: Application of electron-probe X-ray microanalysis for studying minerals from kimberlites and deep-seated xenoliths

L. Suvorova, S. Kostrovitsky, D. Yakovlev, N. Alymova, L. Solovyeva; Institute of Geochemistry, Siberian Branch, Russian Academy of Sciences, Russia

15:10 141: 3D Scanning X-ray microscope with 30 nm resolution

Juana Rudati, Tobias Beetz, Michael Feser, Tom Case, Jeff Irwin, Benjamin Hornberger and Wenbing Yun; Xradia, Inc., Concord, CA, USA

15:30 Invited 142: A method of X-ray hologram registration for Fresnel region

A. V. Kuyumchyan, V. V. Aristov, E. Sarkisian, R. T. Gabrielyan, A. K. Lorsabyan, A. A. Hambardzumyan; Institute of Microelectronics Technology RAS, Chernogolovka, Moscow District, Russia; International Academy of Science and Technology, Los Angeles, CA, USA; Yerevan State University, Department of Physics, Yerevan, Armenia

15:55 143: Determination of the elemental distribution in osteoarthritic joints by confocal micro-XRF

N. Zoeger, J.G. Hofstaetter, C. Strel, F. Meirer, P. Wobraschek, P. Roschger, A. Maderitsch, S. Smolek, G. Peponi, G. Falkenberg, R. Simon, A. Berzlanovich; Vienna University of Technology, Atominstitut, Austria; Ludwig Boltzmann Institute of Osteology, Hanusch Hospital of WGKK and AUVA Trauma Centre Meidling, Austria; Dept. of Orthopaedics, Vienna General Hospital, Med. University of Vienna, Austria; ITC-irst, Centro per la Ricerca Scientifica e Tecnologica, Italy; Hamburger Synchrotronstrahlungslabor

HASYLAB am DESY, Germany; Institut für Synchrotronstrahlung, Forschungszentrum Karlsruhe, Karlsruhe, Germany; Dept. of Forensic Medicine, Med. Univ. of Vienna, Austria & Univ. of Munich, Germany

16:15 Invited 144: Artificial temperature anisotropy of crystals at X-band frequencies

V. P. Mkrtychyan, L. G. Gasparyan, M. K. Balyan; Yerevan State University, Yerevan, Armenia

16:40 145: Elemental distribution in prostate samples by XRF μ CT

G. R. Pereira, M. J. Anjos, H. S. Rocha, C. A. Pérez, R. T. Lopes; Nuclear Instrumentation Laboratory (LIN), COPPE, UFRJ, Rio de Janeiro, Brazil; Physics Institute - UERJ, Brazil; Brazilian Synchrotron Light Laboratory, Brazil

17:00 146: Synchrotron radiation microprobe studies of human brain gliomas

M.Lankosz, M.Szczerbowska-Boruchowska, J.Chwiej, S.Wojcik, Z.Stegowski, D.Adamek, J.P.Susini, M.Cotte, G. Falkenberg; Faculty of Physics and Applied Computer Science, AGH University of Science and Technology, Krakow, Poland; Institute of Neurology, Collegium Medicum Jagiellonian University, Krakow, Poland; ESRF, Grenoble, France; HASYLAB at DESY, Hamburg, Germany

17:20 147: Micro-SR-XRF and micro-PIXE studies for archaeological gold identification – the case of Carpathian (Transylvanian) gold

B. Constantinescu, R. Bugoi, M. Radtke, T. Calligaro, J. Salomon, L. Pichon, S. Röhrs, D. Ceccato; Department of Applied Nuclear Physics, “Horia Hulubei” National Institute of Nuclear Physics and Engineering, Bucharest, Romania; Bundesanstalt für Materialforschung und – prüfung (BAM), Fachgruppe Nuclearanalytik, Berlin, Germany; Laboratoire de Recherche et de Restauration des Musées de France, CNRS UMR 171, Palais du Louvre, Paris, France; Istituto Nazionale di Fisica Nucleare, Laboratori Nazionali di Legnaro, Padova, Italy

Concluding session

17:40 Invited 148: Stress analysis in tungsten coated silicon wafers

Robert E. Ogilvie, Jeffrey Nicolich; Massachusetts Institute of Technology; PANanalytical

149 Withdraw

18:05 Invited 150: X-ray fluorescence analysis

Tomoya Arai; RIGAKU Industrial Corporation, Takatsuki-shi Osaka, Japan

18:30 Closing

Sep. 20 (Thu)

10:00 Bus starts from hotels to Ritsumeikan University SR Center

11:00 Workshop at SR Center 154: Synchrotron Radiation and EXAFS Research in Japan

Toshiaki Ohta; Ritsumeikan University, SR Center

12:30 Lunch

13:00 Bus start to Kyoto city downtown

Sep. 21 (Fri)

10:00 Bus starts from hotels to Horiba

11:00 Workshop

12:00 Lunch

13:00 Bus start to Kyoto city downtown

Afternoon: ISO/TC201/WG2(TXRF) Committee Meeting