

Tuesday July 26, 2005

9:00 - 9:30 Opening Ceremony

SESSION I: Instrumentation 1

Chair **Chris Jacobsen** (Stony Brook Univ., USA)

9:30 - 10:00 **Weilun Chao** (CXRO, LBNL, USA) IT1

Zone Plate Microscopy to sub-15 nm Spatial Resolution with XM-1 at the ALS

10:00 - 10:30 **Jean Susini** (ESRF, France) IT2

X-ray micro-analysis activities at the ESRF

10:30 - 11:00 Break

11:00 - 11:30 **Hwa Shik Youn** (Pohang Accelerator Laboratory, Korea) IT3

Phase Contrast Hard X-ray Microscopy with the Spatial Resolution better than 100 nm

11:30 - 12:00 **Tolek Tyliczszak** (LBNL, USA) IT4

High Spatial Resolution Scanning Transmission X-ray Microscopes at the Advanced Light Source

12:00 - 12:30 **Burkhard Kaulich** (ELETTRA, Italy) IT5

TwinMic – A European Twin X-ray Spectromicroscopy Station

12:30 - 14:00 Lunch & Registration

14:00 - 16:00 **Poster Session I**

SESSION II: Instrumentation 2

Chair **Yasushi Kagoshima** (Univ. Hyogo, Japan)

16:00 - 16:20 **Christoph Rau** (APS, USA) CT1

A full-field KB-FZP microscope for hard X-ray imaging with sub-100 nm resolution

16:20 - 16:40 **Masato Hoshino** (Univ. of Tsukuba, Japan) CT2

Development of a soft X-ray microscope with Wolter mirrors for the observation of biological specimens in the atmospheric state

16:40 - 17:00 **Per A. C. Jansson** (Royal Institute of Technology/Albanova, Sweden) CT3

Table-Top X-ray Microscopy

17:00 - 17:20 **Christian G. Schroer** (HASYLAB at DESY, Germany) CT4

Hard X-Ray Nanoprobe with Refractive X-Ray Lenses

17:20 - 17:40 Break

SESSION III: Instrumentation 3

Chair **Mau-Tsu Tang** (National Synchrotron Radiation Research Center, Taiwan)

- 17:40 - 18:00 **Nagao Kamijo** (Kansai Medical Univ. Japan) **CT5**
Practical use of quasi-kinoform zone plate: Towards high-efficiency microbeam for hard/high-energy x-rays
- 18:00 - 18:20 **Hyon Chol Kang** (Center for Nanoscale Materials, ANL, USA) **CT6**
Multilayer Laue lens for hard x-ray nano-focusing optics
- 18:20 - 18:40 **Hidekazu Mimura** (Osaka Univ., Japan) **CT7**
Hard X-ray diffraction-limited nanofocusing with unprecedentedly accurate mirrors
- 18:40 - 19:00 **Vitaly Aristov** (Institute of Microelectronics Technology, Russia) **CT8**
Status and recent developments of microfocusing optics in IMT RAS

Wednesday July 27, 2005

SESSION IV: Instrumentation 4

Chair **David Attwood** (Univ. of California, USA)

- 9:00 - 9:20 **Hans M Hertz** (Royal Institute of Technology/Albanova, Sweden) **CT9**
High-brightness liquid-metal-jet-anode electron-impact hard x-ray source
- 9:20 - 9:50 **Hiroaki Nishimura** (Osaka Univ. Japan) **IT6**
Development of high-average power extreme ultra violet source by laser produced plasmas
- 9:50 - 10:20 **Jörg Maser** (APS, USA) **IT7**
Hard X-ray Microscopy at the Advanced Photon Source
- 10:20 - 11:00 Break
- 11:00 - 11:30 **Peiping Zhu** (Beijing Synchrotron Radiation Facility, China) **IT8**
Recent Developments on the X-ray Phase Contrast Imaging and CT in BSRF
- 11:30 - 12:00 **Stefan Rehbein** (BESSY, Germany) **IT9**
Volume zone plate development at BESSY
- 12:00 - 12:30 **Mau-Tsu Tang** (National Synchrotron Radiation Research Center, Taiwan) **IT10**
Hard X-ray Microscopy with sub-30 nm Spatial Resolution in Taiwan
- 12:30 - 14:00 Lunch & Registration
- 14:00 -16:00 **Poster Session II**

SESSION V: Instrumentation 5

Chair **Ian McNulty** (APS, USA)

- 16:00 - 16:20 **Hironari Yamada** (Ritsumeikan Univ., Japan) **CT10**
Portable Synchrotron Hard X-ray Source "MIRRORCLE-6X" for X-ray Imagings
- 16:20 -16:40 **Graeme R Morrison** (King's College, United Kingdom) **CT11**
A fast-readout CCD system for configured-detector imaging in STXM
- 16:40 - 17:00 **Stephen W Wilkins** (CSIRO, Australia) **CT12**
Quantitative X-ray Phase-Contrast Microscopy and Microtomography Using An SEM
- 17:00 - 17:20 **Diane Eichert** (ESRF, France) **CT13**
Contribution of X-ray Microscopy to Bone Mineral Studies
- 17:20 - 17:40 Break

SESSION VI: Applications 1

Chair **Jean Susini** (ESRF, France)

- 17:40 - 18:00 **Wolfgang Ludwig** (GEMPPM - INSA de Lyon, France) **CT14**
A deep look into polycrystals: X-ray diffraction contrast tomography
- 18:00 - 18:20 **Zhonghou Cai** (APS, USA) **CT15**
Observation of Anisotropic Disorientation Grain Boundaries in Sn₂O₃ Nanobelts Using X-Ray Nanodiffraction
- 18:20 - 18:40 **Hiroyuki Toda** (Toyohashi Univ. of Technology, Japan) **CT16**
3D Internal Strain Mapping by Tracking Microstructural Features in Tomographic Volumes of Structural Materials
- 18:40 - 19:00 **Marine Cotte** (ESRF, France) **CT17**
Ancient cosmetics and painting analysed by combination of complementary microanalysis techniques

Thursday July 28, 2005

SESSION VII: Applications 2

Chair **Hiroshi Kihara** (Kansai Medical Univ., Japan)

- 9:00 - 9:30 **Carolyn A Larabell** (Univ. California, San Francisco, USA) **IT11**
Biological Nano-Tomography
- 9:30 - 10:00 **Rainer H Fink** (Univ. Erlangen, Germany) **IT12**
Optimizing Organic Thin Films from Microspectroscopic Analysis
- 10:00 - 10:30 **Kuniko Takemoto** (Kansai Medical Univ., Japan) **IT13**
Micro XANES Study on Vanadium in Living Blood Cells of Ascidians by Fluorescence Scanning X-Ray Microscopy at ESRF ID21 Beamline
- 10:30 - 11:00 Break
- 11:00 - 11:30 **Adam P Hitchcock** (McMaster Univ., Canada) **IT14**
In situ STXM: Studies of Wet Electrochemical Systems under Potential Control
- 11:30 - 12:00 **Enju Lima** (Stony Brook Univ., USA) **IT15**
Coherent imaging of biological samples: yeast cells
- 12:00 - 12:20 **Peter Guttmann** (Univ. Göttingen c/o BESSY, Germany) **CT18**
X-ray microscopy studies of electromigration in integrated circuits
- 12:20 - 14:00 Lunch
- 14:00 -16:00 **Poster Session III**

SESSION VIII: Applications 3

Chair **Peter Fischer** (CXRO, LBNL, USA)

- 16:00 - 16:20 **Hendrik Ohldag** (Stanford Univ., USA) **CT19**
Dichroism Soft X-ray Absorption Spectromicroscopy and Antiferromagnetic Surface and Interfaces
- 16:20 -16:40 **Christoph Quitmann** (Paul Scherrer Institute, SLS, Swiss) **CT20**
Time-resolved imaging of magnetic excitations in micro-particles using X-Ray microscopy
- 16:40 - 17:00 **Kanta Ono** (KEK, Japan) **CT21**
Hard x-ray spectromicroscopy using photoelectron emission microscope
- 17:00 - 17:20 **Shih Chieh Wang** (National Synchrotron Radiation Research Center, Taiwan) **CT22**
X-Ray Absorption Spectromicroscopic Analysis of Functionalized Pattern Surface

17:20 - 17:40 Break

SESSION IX: Applications 4

Chair **Adam P Hitchcock** (McMaster Univ., Canada)

17:40 - 18:00 **Harald Ade** (North Carolina State Univ., USA) **CT23**

X-ray Linear Dichroism Microscopy of Crystalline Short Chain Alkanes and Semi-crystalline Polyethylene Thin Films

18:00 - 18:20 **George J Flynn** (Stony Brook Univ., USA) **CT24**

Organic Analysis of Extraterrestrial Materials at the Sub-Micron Scale

18:20 - 18:40 **Juergen Thieme** (Univ. of Goettingen, Germany) **CT25**

Speciation of sulphur in soils

18:40 -19:00 **Nobuyuki Kitajima** (Tokyo Univ. of Science, Japan) **CT26**

Distribution and XANES of Arsenic in Root of Hyperaccumulator Fern (*Pteris vittata* L.) measured by μ -SR-XRF analysis

Friday July 29, 2005

SESSION X: Methods and novel approaches 1

Chair **Maya P. Kiskinova** (ELETTRA, Italy)

- 9:00 - 9:30 **Benjamin Hornberger** (Stony Brook Univ., USA) **IT16**
Combined Differential Phase Contrast Imaging and Fluorescence Trace Element Mapping at the Advanced Photon Source
- 9:30 - 10:00 **Luca Gregoratti** (ELETTRA, Italy) **IT17**
The Scanning Photoemission Microscope at Elettra: recent results and developments
- 10:00 - 10:30 **Eva Pereiro-López** (ESRF, France) **IT18**
X-ray projection microscopy to investigate liquid Ga penetration in Al bicrystals
- 10:30 - 11:00 Break
- 11:00 - 11:30 **Peter Fischer** (CXRO, LBNL, USA) **IT19**
Achievements and perspectives of magnetic soft X-ray transmission microscopy
- 11:30 - 12:00 **Wenbing Yun** (Xradia, USA) **IT20**
Sub-10 nm X-ray Microscopy: Status and Pathways
- 12:00 - 12:20 **Hermann Stoll** (Max Planck Institute, Germany) **CT27**
100ps Time-Resolved Magnetic X-ray Microscopy – Techniques and Applications
- 12:20 - 14:00 Lunch

SESSION XI: Methods and novel approaches 2

Chair **Graeme R Morrison** (King's College, United Kingdom)

- 14:00 - 14:20 **Malcolm R Howells** (ALS, Lawrence Berkeley National Laboratory, USA) **CT28**
Coherent x-ray diffraction microscopy: fundamental and technical limits
- 14:20 - 14:40 **David Paterson** (APS, USA) **CT29**
Characterization of medium-range order in noncrystalline systems by fluctuation x-ray microscopy
- 14:40 - 15:00 **Ivan A Vartanyants** (HASYLAB at DESY, Germany) **CT30**
Coherent X-ray Diffraction on Nano-size Objects
- 15:00 - 15:20 **Yoshinori Nishino** (SPring-8/RIKEN, Japan) **CT31**
Hard X-ray Diffraction Microscopy at SPring-8
- 15:20 - 15:40 **Chris Jacobsen** (Stony Brook Univ., USA) **CT32**
Spectromicroscopy analysis: clustering, error-finding, and interpreting
- 15:40 - 16:00 Break

SESSION XII: Methods and novel approaches 3

Chair **Hyun Joon Shin** (Pohang Accelerator Laboratory, Korea)

- 16:00 - 16:20 **Christian David** (Paul Scherrer Institute, Swiss) **CT33**
Quantitative phase imaging and tomography with polychromatic x-rays
- 16:20 - 16:40 **Ian McNulty** (APS, USA) **CT34**
Nanometer-scale x-ray holography with 1-2 keV x-rays
- 16:40 - 17:00 **Ulrich Vogt** (Royal Institute of Technology/Albanova, Sweden) **CT35**
Soft x-ray phase-sensitive imaging with diffractive optical elements
- 17:00 - 17:20 **Takahisa Koyama** (Univ. of Hyogo, Japan) **CT36**
Hard X-ray Micro-Interferometer for High-Spatial-Resolution Phase Measurement
- 17:20 - 18:00 Election for next meeting
- 18:00 - 18:20 Break
- 18:20 - 19:00 Leave for Banquet
- 19:00 - 22:00 Banquet
- 22:00 Return to Egret

Saturday July 30, 2005

SESSION XIII: Methods and novel approaches 4

Chair **Harald Ade** (North Carolina State Univ., USA)

- 9:00 - 9:30 **Stefan Heim** (BESSY, Germany) IT21
Novel X-ray Microscopes for 3-D and fs-imaging at BESSY
- 9:30 - 10:00 **Keith A Nugent** (Univ. of Melbourne, Australia) IT22
X-ray Image Reconstruction using the Transport of Intensity Equation
- 10:00 - 10:30 **Stefano Marchesini** (Lawrence Livermore National Laboratory, USA) IT23
Coherent Imaging: Materials Science
- 10:30 - 11:00 Break

SESSION XIV: Closing Ceremony

Chair **Yoshio Suzuki** (SPring-8/JASRI, Japan)

Sadao Aoki (Univ. of Tsukuba, Japan)

- 11:00 - 11:30 **Werner Meyer-Ilse Award**
- 11:30 - 12:00 **Closing Ceremony**
Conference Summary by **Janos Kirz**
- 12:00 - 12:30 Remark by Next Conference Host
Break
Farewell
Bus to SPring-8
- 12:30 - 14:00 Lunch at SPring-8
- 14:00 - 17:00 SPring-8 Site Tour
- 17:00 Return to Himeji City