

— ALC'09 Scientific Program —

December 6, 2009 (Sunday)

Room A

Tutorial

06TU01 (10:00~11:00)
**“Molecular Studies of Surfaces under Reaction Conditions; Sum Frequency Generation
Vibrational Spectroscopy, Scanning Tunneling Microscopy and Ambient Pressure X-ray
Photoelectron Spectroscopy”**
G.A. Somorjai (*University of California, Berkeley*)

06TU02 (11:00~12:00)
“Nanoscale Chemical Imaging of Biomaterials with Mass Spectrometry”
N. Winograd (*Penn State University*)

— LUNCH at leisure by own —

06TU03 (14:00~15:00)
**“Creation and Characterization of Atomic-scale Structures — Necessary Steps towards a
Future Nanotechnology”**
W.-D. Schneider (*Ecole Polytechnique Fédérale de Lausanne*)

06TU04 (15:00~16:00)
“Theoretical Approaches for the Analyses of Scanning Probe Microscopy”
M. Tsukada (*Tohoku University*)

— BREAK —

06TU05 (16:30~17:30)
**“Electron Energy Loss Spectroscopy — A Versatile Tool for the Atomic Level Characterization
of the Chemical and Electronic Properties of Surfaces”**
H. Ibach (*Research Center Jülich*)

Mixer (18:00~20:00)

December 7, 2009 (Monday)

Room A

Opening Ceremony (9:00~9:20)

Opening Address: C. Oshima (*Chairman of the Organizing Committee of ALC'09*)

Awarding Ceremony: JSPS 141 Committee Award, Student Award

Plenary

07PL01 (9:20~10:10)
“Electronic Structure Relations of Oxide Supported Nanoparticles at the Atomic Level”
H.-J. Freund (*Fritz Haber Institute of the Max Planck Society*)

— BREAK —

07PL02 (10:40~11:30)
“Single-atom Electron Sources”
C. Oshima (*Waseda University*)

SSSJ Special Session on SPM

07AM01 (11:30~12:00) — *Invited* —
“Hopping, Flipping, Turning: Inelastic Electron Tunnelling Action Spectroscopy with Single Molecules”
M. Parschau, D. Passerone, H.J. Hug, K.-H. Rieder and K.-H. Ernst (*Empa - Swiss Federal Laboratories for Materials Testing and Research*)

Conference Photo (12:00~12:20)

— LUNCH at leisure by own —

Room A

Workshop: Microbeam Analysis for Materials —Toward IUMAS-V (2011) in Korea—

07WS01 (14:00~14:30) — *Invited* —
“A Review of the Secondary Electron Imaging of Nanoscale Detail of Surfaces in the Scanning Electron and Ion Microscopes”
B.J. Griffin, D.C. Joy and J.R. Michael (*The University of Western Australia*)

07WS02 (14:30~15:00) — *Invited* —
“Sub-Angstrom Resolution Analysis with Electron Beam: Challenge and Prospect”
S.A. Song (*Samsung Electronics Co.*)

07WS03 (15:00~15:20)
“Achieving Trace Nanoanalysis with the Thermal Field Emission Gun Scanning Electron Microscope–Silicon Drift Detector Energy Dispersive X-ray Spectrometer (SEM/SDD-EDS)”
D.E. Newbury (*National Institute of Standards and Technology*)

— BREAK —

07WS04 (15:50~16:20) — *Invited* —
“Quantitative X-ray Microanalysis of Nanomaterials in the FE-SEM and the FE-TEM”
R. Gauvin, P. Michaud and M.L. Trudeau (*McGill University*)

07WS05 (16:20~16:50) — *Invited* —
“X-ray Spectroscopy and Quantitative Analysis using the Microcalorimeter X-ray Detector”
T. Jach (*National Institute of Standards and Technology*)

— *BREAK* —

Sponsored Session I

JEOL Ltd. (17:10~17:30)
“Visualization of Light Elements at Ultrahigh Resolution by STEM Annular Bright Field Microscopy”
E. Okunishi

Kawai Lab., Kyoto University (17:30~17:50)
“Potable Total Reflection X-Ray Fluorescence Spectrometers”
J. Kawai

Room B

New Materials Characterization & Theoretical Approach

07BA01 (14:00~14:20)
“In Situ Studies of Catalysts at Work: from Single Crystals to Nano Particles on Oxide Supports”
E. Lundgren, R. Westerström, J. Gustafson, M.E. Messing, K. Deppert, R. Van Rijn, O. Balmes, H. Bluhm and J.W.M. Frenken (*Lund University*)

07BA02 (14:20~14:40)
“On The Structure of Electron Induced Cross-linked Aromatic SAMs”
P. Cabrera-Sanfelix, A. Arnau and D. Sánchez-Portal (*Donostia International Physics Center*)

07BA03 (14:40~15:00)
“Surface Structures of Ionic Liquids Studied by High-resolution Rutherford Backscattering Spectroscopy”
A. Ohno, H. Hashimoto, K. Nakajima, M. Suzuki and K. Kimura (*Kyoto University*)

07BA04 《10P57》 (15:00~15:20)
“Hydrogen Storage Characteristics of an Innovative Composite Material of Pt-Li₂ZrO₃ Exposed to Air at Room Temperature Studied by Ion Beam Analysis”
K. Morita, B. Tsuchiya, S. Nagata, Y. Oya and K. Okuno (*Meijo University*)

— *BREAK* —

07BA05 (15:50~16:10)
“Reduction of Native Oxides on GaAs during Atomic Layer Growth of Al₂O₃”
T. Gustafsson, H.D. Lee, T. Feng, L. Yu, D. Mastrogiovanni, A. Wan and E. Garfunkel (*Rutgers University*)

07BA06 (16:10~16:30)
“Determination of Contact Formation in Single-molecule Tunnel Junctions”
A. Garcia-Lekue, L. Vitali, T. Frederiksen, D. Sánchez-Portal, K. Kern and A. Arnau (*Donostia International Physics Center*)

07BA07 (16:30~16:50)
“**Density Functional Theory Calculation for GaN and GaP Growth on Graphite**”
A. Ishij, T. Tatani, Y. Oda and K. Nakada (*Tottori University*)

07BA08 (16:50~17:10)
“**Step Bunching Induced by (7×7)-(1×1) Transition on Vicinal Si(111) Surface Misoriented toward $[\bar{1}\bar{1}2]$: DMRG and Monte Carlo Analyses Based on the Modified RSOS-I Model**”
N. Akutsu, H. Hibino and T. Yamamoto (*Osaka Electro-Communication University*)

— DINNER at leisure by own —

Room A

Surface Imaging

07AN01 (19:30~20:00) — *Invited* —
“**Spin-polarized Low Energy Electron Microscopy of Ultrathin Fe Single Crystal Films**”
R. Zdyb and E. Bauer (*Arizona State University*)

07AN02 (20:00~20:30) — *Invited* —
“**Magnetic Circular Dichroism using Laser Photoemission and Its Application to Photoemission Electron Microscope**”
T. Nakagawa (*Institute for Molecular Science*)

— BREAK —

07AN03 (20:50~21:10)
“**Growth of Transmission-type Photocathode Based on a GaAs-GaAsP Strained Superlattice for Real-time SPLEEM**”
T. Ujihara, X.G. Jin, Y. Maeda, S. Fuchi, Y. Takeda, N. Yamamoto, A. Mano, Y. Nakagawa, S. Okumi, T. Nakanishi, M. Yamamoto, T. Saka, T. Kato, M. Suzuki, M. Hashimoto, T. Yasue, T. Koshikawa, T. Ohshima, T. Kohashi and H. Horinaka (*Nagoya University*)

07AN04 (21:10~21:30)
“**Step Structure and Motion on an Icosahedral-ALPdMn Quasicrystal**”
Y. Sato, B. Unal, K.F. McCarty, N.C. Bartelt, A.K. Schmid, T. Duden, K. Pussi, T.A. Lograsso, C.J. Jenks and P.A. Thiel (*Lawrence Berkeley National Lab*)

07AN05 (21:30~22:00) — *Invited* —
“**LEEM Studies of Island Coarsening and Mass Transport at Surfaces**”
A.B. Pang, K.L. Man and M.S. Altman (*Hong Kong University of Science and Technology*)

Room B

Electron Microscopy I & Cosmic

07BN01 (19:30~20:00) — *Invited* —
“**Atomic Resolution Electron Holography: Performance and Limits**”
H. Lichte, D. Geiger, M. Linck, A. Lubk and F. Röder (*Technische Universität Dresden*)

07BN02 (20:00~20:30) — *Invited* —
“**Recent Advances in Electron Microscopy in the Context of the TEAM Project**”
U. Dahmen, P. Denes, C. Kisielowski, V. Radmilovic and T. Duden (*Lawrence Berkeley Laboratory*)

— BREAK —

- 07BN03** (20:50~21:10)
“High-resolution Environmental Transmission Electron Microscopy Observation of Nanoparticle Catalysts in Gases”
H. Yoshida, T. Uchiyama, H. Kohno, Y. Homma and S. Takeda (*Osaka University*)
- 07BN04** (21:10~21:40) — *Invited* —
“Observation of Meteorites by Isotope Microscopy”
H. Yurimoto (*Hokkaido University*)
- 07BN05** (21:40~22:00)
“Transformation of Insulating Si Nanochains into Conducting Carbon Nanotubes by Electrical Breakdown”
H. Kohno, T. Nogami, Y. Ohno and S. Ichikawa (*Osaka University*)

December 8, 2009 (Tuesday)

Room A

Nanospectroscopy

- 08AM01** (9:00~9:30) — *Invited* —
“Molecular Spins at Surfaces”
N. Takagi (*The University of Tokyo*)
- 08AM02** (9:30~10:00) — *Invited* —
“Nonlinear Photoemission Electron Microscopy: A Tool for the Plasmonic Sandbox”
F.-J. Meyer zu Heringdorf and N.M. Buckanie (*Universität Duisburg-Essen*)

— *BREAK* —

- 08AM03** (10:30~11:00) — *Invited* —
“Digging Deeper: Characterization of Buried Layers, Interfaces, and Bulk Materials with Standing Wave- and Hard X-ray- Photoemission”
C.S. Fadley (*University of California Davis/LBNL*)
- 08AM04** (11:00~11:20)
“Hard X-ray Photoelectron Spectroscopy and XANES Analyses of Core (silver)–Shell (polydiacetylene) Type Hybridized Nanocrystals”
H. Yoshikawa, A.M. Vlaicu, M. Kimura, A. Masuhara, S. Tanuma, H. Nakanishi and H. Oikawa (*National Institute for Materials Science*)
- 08AM05** (11:20~11:50) — *Invited* —
“Spin Resolved Photoemission Microscopy and Magnetic Imaging in Applied Magnetic Fields”
F. Kronast, J. Schlichting, F. Radu, S. Mishra, T. Noll and H.A. Dürr (*Helmholtz Center Berlin*)

Short Presentations of Student Award Winners I (11:50~12:20)

(5min each, without discussion)

- 08P09** “Multilayer Nano-characterization by a Portable Bremsstrahlung X-ray Reflectometer”
A. Alshehabi (*Kyoto University*)
- 08P22** “Optical Second Harmonic Spectroscopy of the Electronic States of Stepped Rutile TiO₂ (12 12 5) Surface Adsorbed with Formic Acid”
H. Takahashi (*Japan Advanced Institute of Science and Technology*)
- 08P40** “Measurement of a Charge Distribution in the Specimen Chamber in a Scanning Electron Microscope”
D. Kawano (*Osaka Institute of Technology*)
- 08P61** “Real-time Photoelectron Spectroscopy Study of 3C-SiC Nucleation and Growth on Si(001) Surface by Carbonization with Ethylene”
H. Hozumi (*Tohoku University*)
- 08P70** “Nano-structure Formation onto a Tip of Field Gas Ion Emitter by Field-assisted Oxygen Etching”
Y. Kobayashi (*Mie University*)

Room B

Medical, Bio & Organic Materials

- 08BM01** (9:00~9:30) — *Invited* —
“Diamond-like Carbon Films for Blood-contacting Medical Devices: Plasma-modified Biomimetic Surface”
T. Hasebe, A. Kamijo, S. Nagashima, Y. Yoshimoto, Y. Ueda, N. Kitamura, H. Morita, M. Tanaka, A. Hotta, H. Terada, K. Takahashi and T. Suzuki (*Toho University*)
- 08BM02** (9:30~10:00) — *Invited* —
“Oligothiophene Adsorption on Noble Metal Surface: From Chiral Self Organization to Surface Polymerization”
A. Höfer, M. Kiel, K. Duncker and W. Widdra (*University of Halle*)
- *BREAK* —
- 08BM03** (10:30~11:00) — *Invited* —
“Mass Microscopy; Integration of Imaging Mass Spectrometry with Microscopy”
M. Setou (*Hamamatsu University School of Medicine*)
- 08BM04** (11:00~11:30) — *Invited* —
“Development and Application of a Multi-functional Optical Sum Frequency Microscope”
G. Mizutani (*Japan Advanced Institute of Science and Technology*)
- 08BM05** (11:30~11:50)
“Reduction Behaviors of Rh Catalysts with *in situ* XAFS Analysis”
K. Dohmae, T. Tanabe, Y. Nagai, A. Suzuki, Y. Inada, M. Nomura and H. Shinjoh (*TOYOTA Central Research and Development Labs.*)

— *LUNCH at leisure by own* —

Room A

Workshop: New Trends in SIMS and Related Technology for Biomaterials Analysis

- 08WS01** (14:00~14:30) — *Invited* —
“Modeling Energetic Particle Bombardment of Solids”
B.J. Garrison, L. Rzeznik, R. Paruch and Z. Postawa (*Penn State University*)
- 08WS02** (14:30~15:00) — *Invited* —
“Probing Soft Materials with Energetic Ions and Molecules: From Microscopic Models to the Real World”
A. Delcorte, P. Bertrand, B.J. Garrison, K. Hamraoui, T. Mouhib, C. Nascimento, C. Poleunis, A. Prabhakaran, O.A. Restrepo and S. Yunus (*Université catholique de Louvain*)
- 08WS03** (15:00~15:30) — *Invited* —
“Analysis of Organic and Biological Materials by Electrospray Droplet Impact/SIMS”
K. Hiraoka, Y. Iijima and Y. Sakai (*University of Yamanashi*)

— *BREAK* —

08WS04 (16:00~16:30) — *Invited* —
“Strategies for the Use of TOF-SIMS in Biomedical Research”
H. Nygren and P. Malmberg (*University of Gothenburg*)

08WS05 (16:30~16:50)
“Secondary Ion Mass Spectrometry of Biomedical Samples”
H.-J. Yang, Y. Sugiura, I. Ishizaki, N. Sanada, K. Ikegami, N. Zaima and M. Setou (*Hamamatsu University School of Medicine*)

Sponsored Session II

ION-TOF USA, Inc. (16:50~17:10)
“Recent Developments in Time-of-Flight Secondary Ion Mass Spectrometry and Low Energy Ion Scattering”
N. Havercroft

— *DINNER at leisure by own* —

Poster Session I (19:00~22:00)

(† Student Award Winner)

08P01 *Withdrawn*

08P02 *Withdrawn*

08P03 **“Construction of a Pump-probe System for Observing Time Resolved Sum Frequency Images”**
H.T.T. Khuat, Y. Miyauchi and G. Mizutani (*Japan Advanced Institute of Science and Technology*)

08P04 **“Interface Characterization by Sum Frequency Generation Spectroscopy”**
P.A. Thiry, Y. Sartenauer, D. Lis, F. Cecchet, L. Dreesen, G. Tourillon, Y. Caudano and A. Peremans (*University of Namur*)

08P05 **“Simultaneous Optical Second Harmonic and Sum Frequency Microscopy of a H-Si(111)1×1 Surface after Light Pulse Irradiation”**
Y. Miyauchi, H. Sano, J. Okada, H. Yamashita and G. Mizutani (*Japan Advanced Institute of Science and Technology*)

08P06 **“Polarization and Azimuthal Angle Dependence of Optical Second Harmonic Generation from Pt Nanowires on the MgO(110) Faceted Template”**
Y. Ogata, T.A. Nguyen, S. Takase and G. Mizutani (*Japan Advanced Institute of Science and Technology*)

08P07 *Withdrawn*

08P08 **“Influence of Surface Roughness to Depth Analysis nearby the Surface at Vertical Scanning of X-ray Scattering Vector”**
Y. Fujii (*Kobe University*)

† **08P09** **“Multilayer Nano-characterization by a Portable Bremsstrahlung X-ray Reflectometer”**
A. Alshehabi, S. Kunimura and J. Kawai (*Kyoto University*)

08P10 **“Application of a Multilayer X-ray Reflectivity Software”**
A. Alshehabi and J. Kawai (*Kyoto University*)

08P11 **“Evaluation Method of Attoliter Volume Control by Fluorescence Spectroscopic Technique”**
M. Kawano, M. Hamada, Y. Nishi, M. Yoshioka, K. Takamune and H. Kubota (*Kumamoto University*)

08P12 **“Atomic Level Analysis of Chromium in Environmental Samples”**
H. Miyauchi and J. Kawai (*Kyoto University*)

- 08P13** “Total Reflection Portable Low-power X-ray Fluorescence Spectrometer with X-ray Waveguide for Ultra Trace Analysis”
S. Kunimura and J. Kawai (*Kyoto University*)
- 08P14** *Withdrawn*
- 08P15** “Bias-application in Hard X-ray Photoelectron Spectroscopy for Characterization of Advanced Materials”
Y. Yamashita, K. Ohmori, S. Ueda, H. Yoshikawa, T. Chikyo and K. Kobayashi (*National Institute for Materials Science*)
- 08P16** “HAXPES Analysis of Pt-Ceria Fuel Cell Electrode”
H. Yoshikawa, M. Takahashi, T. Mori, I. Matolínová, V. Matolín, Y. Yamashita, S. Ueda and K. Kobayashi (*National Institute for Materials Science*)
- 08P17** “Pt₃Ti- and Pt_xCe-based Model Catalysts: Growth and Morphology of Ultrathin Oxide Films Prepared by Oxidation of These Alloys”
J.M. Essen, S. Le Moal, M. Moors, C. Breinlich, C. Becker and K. Wandelt (*University of Bonn*)
- 08P18** “First-principles Study of Mechanism of Environment-dependent Structure Change of Au Nanoparticles on CeO₂”
S. Tanaka, T. Akita, M. Kohyama and S. Takeda (*National Institute of Advanced Industrial Science and Technology*)
- 08P19** “Dynamic Behavior of Nano-particulate Gold Catalysts during Reaction Observed by Environmental-cell Transmission Electron Microscopy”
T. Kawasaki, T. Miura, T. Tanji, H. Tsutsui and T. Matsutani (*Nagoya University*)
- 08P20** “HAADF-STEM Observation of Au Nanoparticle on Metal Oxides”
T. Akita, S. Tanaka, K. Tanaka, M. Kohyama and M. Haruta (*National Institute of Advanced Industrial Science and Technology*)
- 08P21** “Nanoscale Characterization of Au/TiC Catalysts by HREM and Electron Holography”
S. Ichikawa, S. Takeda, H. Sakurai, T. Akita, K. Tanaka and M. Kohyama (*Osaka University*)
- [†]**08P22** “Optical Second Harmonic Spectroscopy of the Electronic States of Stepped Rutile TiO₂ (12 12 5) Surface Adsorbed with Formic Acid”
H. Takahashi, R. Watanabe and G. Mizutani (*Japan Advanced Institute of Science and Technology*)
- 08P23** “Two Pathways for Water Interaction with Oxygen Adatoms on TiO₂(110) Surfaces”
I. Lyubinetsky, Y. Du, N.A. Deskins, Z. Zhang, Z. Dohnálek and M. Dupuis (*Pacific Northwest National Laboratory*)
- 08P24** *Withdrawn*
- 08P25** “Fabrication of Arrays of Sub-100 nm Dots Using Electron Beam Lithography in Scanning Electron Microscope”
S. Haviar, I. Khalakhan, I. Matolínová and V. Matolín (*Charles University in Prague*)
- 08P26** “A Combined HPXPS, SEM, and XRD Study of Pd Nanoparticles on a SiO_x Support”
R. Westerström, M.E. Messing, R. Van Rijn, S. Blomberg, J. Gustafson, O. Balmes, K. Deppert, H. Bluhm, E. Lundgren and J.W. Frenken (*Lund University*)
- 08P27** “Surface Reaction of Ethanol on Alumina-supported Pd Nanoparticle Catalyst Studied by Pd L₃-edge NEXAFS”
S. Yagi, S. Ogawa, H. Niwa, K. Miura, M. Morihara, T. Nomoto, G. Kutluk, H. Namatame and M. Taniguchi (*Nagoya University*)
- 08P28** “NEXAFS and XPS Studies of (CH₃)₂S Adsorption on Rh(PVP) Nanoparticle”
H. Niwa, S. Ogawa, S. Yagi, G. Kutluk, H. Namatame and M. Taniguchi (*Nagoya University*)

- 08P29** “Data Base of Absolute Auger Electron Spectra for Surface Analysis; Carbons”
K. Goto, H. Morikawa, K. Kamegawa, A. Kurokawa, Y. Yamauchi and M. Kusunoki (*National Institute of Advanced Industrial Science and Technology*)
- 08P30** “Working Group Report of Database Construction of Secondary Electron Yield (JSPS141-WG-SEY) — [I] Precise Measurement by Charge Amplification Method”
T. Nagatomi, K. Goto, R. Shimizu and Members of JSPS141-WG-SEY (*Osaka University*)
- 08P31** “Absolutely Determined Inelastic Mean Free Pathes for 300-3000 eV Electrons in 10 Elemental Solids”
T. Nagatomi, S. Tanuma and K. Goto (*Osaka University*)
- 08P32** “Photoelectron Escape Depths Studied on H₂O/Si(001) Surface by using Synchrotron Radiation Soft X-ray”
Y. Kato, T. Muro, T. Matsushita and T. Kinoshita (*Japan Synchrotron Radiation Research Institute*)
- 08P33** “Direct Electron Detection by CCD Device for TEM Imaging”
Y. Kimura, H. Kizawa, M. Hayashida, T. Iyasu, T. Maruno, K. Hara, S. Isakozawa, H. Yumen and K. Sato (*Osaka University*)
- 08P34** “Development of Computer Assisted Imaging System for TEM with Direct Electron Detection Type CCD Camera”
H. Kizawa, W. Togashi, M. Hayashida, Y. Kimura and Y. Takai (*Osaka University*)
- 08P35** “Three-dimensional Fourier Filtering Method Applied to Tilted Illumination”
F. Nakatani, K. Kitade and Y. Takai (*Osaka University*)
- 08P36** “Z-sliced Imaging by Annular Dark Field Confocal Scanning Transmission Electron Microscopy”
M. Takeguchi, A. Hashimoto, K. Mitsuishi and M. Shimojo (*National Institute for Materials Science*)
- 08P37** “Development of Electron Optical System Using Annular Pupils for Scanning Transmission Electron Microscope”
T. Matsutani, M. Taya, T. Tanaka, Y. Kimura, Y. Takai, T. Kawasaki, M. Ichihashi and T. Ikuta (*Kinki University*)
- 08P38** “Towards Automatic Electron Tomography for Rod-shaped Specimen”
M. Hayashida, Y. Kimura and T. Fujimoto (*National Institute of Advanced Industrial Science and Technology*)
- 08P39** “Development of a Mobile Scanning Electron Microscope for Elementary Science Education”
M. Inoue, Y. Hashimoto, T. Iyasu, H. Saito and T. Tanaka (*Setsunan University*)
- [†]**08P40** “Measurement of a Charge Distribution in the Specimen Chamber in a Scanning Electron Microscope”
D. Kawano and M. Kotera (*Osaka Institute of Technology*)
- 08P41** “Nano Material Modification in Scanning Electron Microscope Plasma Etching System for Device Evaluation”
T. Wataya, M. Tanaka, H. Suga, Y. Naitoh, H. Tokumoto and T. Shimizu (*National Institute of Advanced Industrial Science and Technology*)
- 08P42** “Structural Analysis of Rattle-type Hollow Mesoporous Spheres using Electron Tomography and Energy Filter Imaging”
M. Okuda, M. Takeguchi, Y. Zhu, A. Hashimoto, M. Tagaya, N. Hanagata and T. Ikoma (*National Institute for Materials Science*)
- 08P43** “Mechanism of an Extra-distribution of Exposure Intensity on EB Lithography”
M. Kotera and Y. Akiba (*Osaka Institute of Technology*)

- 08P44** “Surface Modification by Electron-beam Lithography and Fluorinated Diamond-like Carbon Coatings for Blood-contacting Devices”
Y. Ueda, T. Hasebe, A. Kamijo, A. Hotta and T. Suzuki (*Keio University*)
- 08P45** “Development of Spin-dependent Nanostructure Field Emission — Electron Beam Annealing of Low Energy Fe⁺ Ion Implanted Silicon Nanostructures”
A. Markwitz, D. Carder, J. Kennedy, V. Fang and P. Johnson (*GNS Science*)
- 08P46** “Spin Polarized Field Emission from Fe/W(100) Tips”
Y. Niu and M.S. Altman (*Hong Kong University of Science and Technology*)
- 08P47** “Temperature and Emission Current Dependence of Spin Polarization of Field-emitted Electrons from <110>-oriented Magnetite Whisker”
S. Nagai, H. Sakakibara, K. Hata, M. Okada and H. Mimura (*Mie University*)
- 08P48** “In-situ, Real Time Observation of Operating Condition of Multi Emitters in Pulse Mode”
H. Murata, K. Sakai, D. Tsubaki, H. Shimoyama, K. Sakemura, N. Negishi and A. Watanabe (*Meijo University*)
- 08P49** “Field Electron Emission from Thoriated Tungsten (ThO₂-W) Alloy Tips”
H. Katsuda, K. Nomura, T. Matsumura and C. Oshima (*Waseda University*)
- 08P50** “Long-term Stability of Field Emission Current from Single Atom Tips”
T. Matsumura, Y. Akamine, T. Ishikawa and C. Oshima (*Waseda University*)
- 08P51** “Application of a Single-atom Electron Source to Electron Microscopy”
T. Sasaki, T. Ishikawa, N. Chiyoda, K. Fukase, A. Yonezawa, H. Saito, M. Kanda and C. Oshima (*Waseda University*)
- 08P52** “Numerical Study of Shape Variation of Point Cathode by Surface Diffusion and Evaporation”
R. Iiyoshi (*Aichi Institute of Technology*)
- 08P53** “Atomically Sharp Tip Fabricated by Field-assisted Etching”
J. Onoda, S. Mizuno and H. Ago (*Kyushu University*)
- 08P54** “Observation of Electron-wave Interference Pattern and Electron-emission Site of Pt Nanocrystalline Field Emitter by Field-emission Microscopy and Field-ion Microscopy”
K. Murakami, T. Matsuo, F. Wakaya and M. Takai (*Osaka University*)
- 08P55** *Withdrawn*
- 08P56** “Field Emission Studies on Methane- and Ethane-adsorbed Carbon Nanotubes”
H. Nakahara, T. Yamashita and Y. Saito (*Nagoya University*)
- 08P57** “Carbon Nanotubes Synthesis in Water by Arc Discharge Using Metal Electrodes”
T. Kizu, S. Aikawa and E. Nishikawa (*Tokyo University of Science*)
- 08P58** “Simple and Fast Spectroscopy for Assaying Semiconducting and Metallic Carbon Nanotubes”
W. Lu, Y. Xiong, A. Hassanien, W. Zhao, M. Zheng and L. Chen (*National Institute of Advanced Industrial Science and Technology*)
- 08P59** “In-situ TEM Observation of Joining of Carbon Nanotubes”
K. Asaka, M. Karita and Y. Saito (*Nagoya University*)
- 08P60** “In-situ TEM Analysis of the Reaction at the Interface between Iron and Carbon under Elevated Temperature”
N. Ishikawa, T. Ogiwara, T. Harada and T. Inami (*National Institute for Materials Science*)
- [†]**08P61** “Real-time Photoelectron Spectroscopy Study of 3C-SiC Nucleation and Growth on Si(001) Surface by Carbonization with Ethylene”
H. Hozumi, S. Ogawa, A. Yoshigoe, S. Ishidzuka, J.R. Harries, Y. Teraoka and Y. Takakuwa (*Tohoku University*)

- 08P62** “Statistical Properties of Stacking Sequences in SiC Nanowires”
H. Kohno, H. Yoshida, S. Ichikawa and S. Takeda (*Osaka University*)
- 08P63** “Computational Study on Defect Formation in Electron-irradiated Carbon Nanomaterials”
 R. Mimura, M. Yasuda, S. Wakuda, H. Kawata and Y. Hirai (*Osaka Prefecture University*)
- 08P64** “Graphitization of an Amorphous Carbon Film under Electron Beam Irradiation Catalysed by Metal Particles”
S. Aikawa, T. Kizu and E. Nishikawa (*Tokyo University of Science*)
- 08P65** “*In-situ* High-resolution TEM Observation of Graphite Formation using Cobalt Oxide Nanoparticles”
 T. Yahiro and Y. Takai (*Osaka University*)
- 08P66** “Self-standing Graphene Sheets Prepared with Chemical Vapor Deposition and Chemical Etching”
G. Odahara, T. Ishikawa, S. Otani and C. Oshima (*Waseda University*)
- 08P67** “Characterization of Crystal Structure and Chemical Bonding Configuration of Multilayer Graphene Grown on SiO₂ Substrate”
S. Ogawa, H. Sumi, A. Saikubo, E. Ikenaga, M. Sato, M. Nihei and Y. Takakuwa (*Tohoku University*)
- 08P68** *Withdrawn*
- 08P69** “Proposal for Emitter Shape to be Obtained Higher Ion Current of Gas Field Ion Source”
Y. Sugiyama, Y. Kobayashi, Y. Morikawa, K. Kajiwara and K. Hata (*Mie University*)
- †08P70** “Nano-structure Formation onto a Tip of Field Gas Ion Emitter by Field-assisted Oxygen Etching”
Y. Kobayashi, Y. Sugiyama, Y. Morikawa, K. Kajiwara and K. Hata (*Mie University*)
- 08P71** “Development of AFM Tip Characterizers using Si/SiO₂ Multilayers”
H. Takenaka, A. Takano, H. Itoh, H. Ito, M. Hatayama, S. Kurosawa, H. Takagi and S. Ichimura (*NTT-AT Nanofabrication Co.*)
- 08P72** “Pushing Qplus AFM at 5 K towards Higher Frequencies, Smaller Amplitudes and AFM Based Manipulation”
 A. Bettac, J. Koeble, M. Maier, K. Winkler, B. Uder and A. Feltz (*Omicron NanoTechnology GmbH*)
- 08P73** “Liquid Atomic Force Microscopy of Individual Water Molecules at Room Temperature”
H. Kawakatsu, S. Nishida and D. Kobayashi (*The University of Tokyo*)
- 08P74** “Molecular Dynamics Study of Atomic-scale Friction Phenomena on Si and SiO₂ Surface”
 K. Tada, K. Araki, M. Yasuda, H. Kawata and Y. Hirai (*Osaka Prefecture University*)
- 08P75** “Variable Frequency Drive of Piezoelectric Actuator for Wear-reduction”
Y. Soh, K. Kosaka and H. Kubota (*Kumamoto University*)

December 9, 2009 (Wednesday)

Room A

Presidential Session

- 09PL01** (9:00~10:00)
“Symmetry Breaking of CP Parity”
M. Kobayashi (*KEK / JSPS (Nobel Laureate in Physics 2008)*)

— BREAK —

Room A

Graphene

- 09AM01** (10:20~10:50) — *Invited* —
“Structure and Properties of Chemically-prepared Graphene”
K. Saiki, S. Obata and M. Yamamoto (*The University of Tokyo*)
- 09AM02** (10:50~11:20) — *Invited* —
“Dynamics of Graphene Growth on a Metal Surface: a Time-dependent Photoemission Study”
A. Grüneis, D. Haberer, K. Kummer and D.V. Vyalikh (*University of Vienna/IFW-Dresden*)
- 09AM03** (11:20~11:50) — *Invited* —
“Microscopic Evaluations of Structure and Electronic Properties of Epitaxial Graphene”
H. Hibino, H. Kageshima and M. Nagase (*NTT Basic Research Laboratories*)
- 09AM04** (11:50~12:20) — *Invited* —
“The Validity of the Quasiparticle Approximation in Defective Graphene”
A. Bostwick, T. Ohta, J.L. McChesney, K. Emtsev, T. Seyller, K. Horn, S.D. Kevan and E. Rotenberg
(*E. O. Lawrence Berkeley National Laboratory*)

Room B

SSSJ Special Session on SPM

- 09BM01** (10:20~10:50) — *Invited* —
“Single Molecule Manipulation”
K. Morgenstern (*Leibniz University of Hannover*)
- 09BM02** (10:50~11:20) — *Invited* —
“Direct Observation of Dynamic Structural Changes of Proteins using High-speed AFM”
T. Uchihashi and T. Ando (*Kanazawa University*)
- 09BM03** (11:20~11:50) — *Invited* —
“Graphene and Hexagonal Boron Nitride Layers: Nanostructures with 3 Bond Hierarchy Levels”
T. Greber (*University of Zurich*)
- 09BM04** (11:50~12:20) — *Invited* —
“Toward Atom-by-atom Assembly of Composite Nanostructures Based on AFM”
S. Morita, Y. Sugimoto, P. Pou, P. Jelinek, R. Pérez, Ó. Custance and M. Abe (*Osaka University*)

— Afternoon: FREE —

Banquet (19:00~21:00)

December 10, 2009 (Thursday)

Room A

Electron Microscopy II

- 10AM01** (9:00~9:30) — *Invited* —
“Design of Obstruction-free Phase Shifters Yielding Maximum Contrast over a Large Range of Spatial Frequencies”
H. Rose (*Technical University Darmstadt*)
- 10AM02** (9:30~10:00) — *Invited* —
“Transmission and Scanning-transmission Microscopy using Annular Objective Pupil”
T. Ikuta (*Osaka Electro-Communication University*)
- *BREAK* —
- 10AM03** (10:30~11:00) — *Invited* —
“Atomic-resolution Chemical Analysis by Electron Energy-loss Spectrometry and X-ray Energy Dispersive Spectrometry in Aberration-corrected Electron Microscopy”
M. Watanabe (*Lehigh University*)
- 10AM04** (11:00~11:30) — *Invited* —
“Atomic-resolution Elemental Mapping by STEM and EELS”
O.L. Krivanek, M.F. Chisholm, N. Dellby, M.F. Murfitt, V. Nicolosi and T.J. Pennycook (*Nion Co.*)
- 10AM05** (11:30~11:50)
“Playing Pinball with Atoms”
H.J.W. Zandvliet, A. Saedi and A. van Houselt (*University of Twente*)

Short Presentations of Student Award Winners II (11:50~12:20)

(5min each, without discussion)

- 10P13** **“Size Control of Mn-Zn Ferrite Nanoparticles and Their XAFS Spectra”**
Y. Moro (*Yokohama National University*)
- 10P18** **“Chemisorption of CO and Water on LaB₆(100) Surface Studied with Reflection Absorption Infrared Spectroscopy, X-ray Photoelectron Spectroscopy and High Resolution Electron Energy Loss Spectroscopy”**
T. Yorisaki (*Waseda University*)
- 10P42** **“Influence of Au Nano Particles on the Self-propelled Motion of Mesoscopic Droplets”**
E. Hilner (*Lund University*)
- 10P72** **“Development of Reconstruction Method for Highly Precise Shave-off Depth Profiling”**
M. Fujii (*The University of Tokyo*)

Room B

Nano Structures

- 10BM01** (9:00~9:30) — *Invited* —
“Magnetic Nanostructures on Surfaces”
A. Buchsbaum, S. Shah Zaman, W. Rupp, M. Schmid and P. Varga (*Vienna University of Technology*)
- 10BM02** (9:30~10:00) — *Invited* —
“Impurity Physics of Surface Atomic Wires: Doping and Finite Size Effect”
H.W. Yeom, P.G. Kang, H. Morikawa and J.S. Shin (*Yonsei University*)

— *BREAK* —

- 10BM03** (10:30~11:00) — *Invited* —
“Surface Nanostructures by Single Highly Charged Ions”
F. Aumayr (*Vienna University of Technology*)
- 10BM04** (11:00~11:30) — *Invited* —
“Modification of Graphene with Swift Heavy Ions”
M. Schleberger, S. Akcöltekin, H. Bukowska, M. El Kharrazi, O. Osmani and H. Lebius (*Universität Duisburg*)
- 10BM05** (11:30~11:50)
“Novel Anodic Aluminum Oxide Based Nanofabrication: Applications in Physics and Biology”
M. Macé, E. Moyen, F. Bedu, H. Sahaf, L. Masson, K. Sengupta and M. Hanbücken (*CINaM-CNRS*)

— LUNCH at leisure by own —

Room A

Nanoscale Three-Dimensional Element Imaging

(Supported by Grant-in-Aid for Creative Scientific Research No.18GS0204 from Japan Society for the Promotion of Science)

- 10AA01** (14:00~14:10)
“Nanoscale Three-dimensional Element Imaging — Introductory Talk”
M. Owari (*The University of Tokyo*)
- 10AA02** (14:10~14:40) — *Invited* —
“Three-dimensional Analysis in LSI Failure Analysis”
K. Nikawa (*NEC Electronics*)
- 10AA03** (14:40~15:10) — *Invited* —
“3D Elemental Mapping of Soft Materials using Transmission Electron Microtomography”
H. Jinnai (*Kyoto Institute of Technology / WPI-AIMR, Tohoku University*)

— BREAK —

- 10AA04** (15:40~16:10) — *Invited* —
“Advances in Atom Probe Tomography for Semiconductor”
L. Renaud, I. Martin, B. Sallé, S.J. Kang, R. Benbalagh and M. Schuhmacher (*CAMECA*)
- 10AA05** (16:10~16:30)
“Shave-off Profiling as a Nanoscale 3-D Element Imaging Technique”
M. Nojima, M. Fujii, M. Owari and Y. Nihei (*Tokyo University of Science*)
- 10AA06** (16:30~16:50)
“Development of Laser-assisted Wide Angle Three-dimensional Atom Probe”
N. Mayama, T. Iwata, S. Mikami, Y. Kajiwara, Y. Hanaoka, T. Kaito, T. Adachi, M. Nojima, M. Taniguchi and M. Owari (*The University of Tokyo*)

— BREAK —

Sponsored Session III

- SPECS GmbH** (17:10~17:30)
“Dare a Closer Look to Nanotechnology — In situ Surface Analysis Under Extreme Conditions and with Ultimate Lateral Resolution”
W. Heichler
- Omicron NanoTechnology GmbH** (17:30~17:40)
“Recent Advances in Surface Science Instrumentation”
M. Maier

Room B

Panel Discussion: Breakthrough for Practical SIMS Analysis

1. Instrumentation (13:40~15:05)

(Short Presentation: 10 min. each & Panel Discussion: 25 min)

- 10PD11 “Development of Isotope Microscope” — Keynote —**
H. Yurimoto (*Hokkaido University*)
- 10PD12 «10P67» “Development of a Ultra-high Performance Multi-turn TOF-SIMS System with a Femtosecond Laser for Post-ionization”**
M. Ishihara, K. Kumondai, S. Ebata, K. Uchino, R. Mibuka and H. Yurimoto (*Osaka University*)
- 10PD13 “Stigmatic Mass Microscopy using a Multi-turn Time-of-flight Mass Spectrometer”**
H. Hazama, J. Aoki, H. Nagao, H. Yoshimura, Y. Naito, M. Toyoda, K. Masuda, K. Fujii, T. Tashima and K. Awazu (*Osaka University*)
- 10PD14 “Instrumentation for Practical SIMS Analysis using FIB, SEM, and Laser”**
T. Sakamoto (*Kogakuin University*)
- 10PD15 “Trial for Small Area Chemical Analysis by FIB-TOF-SIMS Combined with Laser Ionization”**
S. Hayashi, N. Kubota and T. Sakamoto (*Nippon Steel Corporation*)
- 10PD16 “New Developments in 3D Microanalysis of Organic Structures”**
N. Havercroft, D. Rading, F. Kollmer, R. Möllers and E. Niehuis (*ION-TOF USA, Inc.*)

— BREAK —

2. Primary Ion Beams and Molecular Dynamics Simulation of Sputtering (15:15~17:10)

(Short Presentation: 10 min. each & Panel Discussion: 35 min)

- 10PD21 “Emerging Trends in Mass Spectrometry Imaging”**
N. Winograd (*Pennsylvania State University*)
- 10PD22 “Comments on MD Simulations of Sputtering”**
B.J. Garrison (*Pennsylvania State University*)
- 10PD23 “Choosing the Right Cluster Beam: A Trade-off between High Yields and Low Fragmentation?”**
A. Delcorte, B.J. Garrison and K. Hamraoui (*Université catholique de Louvain*)
- 10PD24 “SIMS with Highly Excited Primary Beams” — Keynote —**
J. Matsuo (*Kyoto University*)
- 10PD25 “Soft-ionization SIMS by using Size-selected Argon Cluster Ion as a Projectile”**
K. Mochiji (*University of Hyogo*)
- 10PD26 “Cluster Ion Beam Source using Vacuum Electrospray of Ionic Liquids for Secondary Ion Mass Spectrometry (SIMS)”**
Y. Fujiwara, N. Saito, H. Nonaka, T. Nakanaga and S. Ichimura (*National Institute of Advanced Industrial Science and Technology*)
- 10PD27 “G-SIMS: New Developments and Practical Use” — Keynote —**
I.S. Gilmore, F.M. Green, F. Kollmer, M.A. Phillips, T.L. Salter, S. Manning and M.P. Seah (*National Physical Laboratory*)
- 10PD28 “Effects of Cluster Ion Sources on Biomaterial Evaluation”**
S. Aoyagi (*Shimane University*)

— DINNER at leisure by own —

- 10P01 “XPS Study on Band Alignment at Pt-ZnO(000 $\bar{1}$) Interface”**
T. Kim, M. Yoshitake, S. Yagyū, S. Nemšák and T. Chikyo (*National Institute for Materials Science*)
- 10P02 “Nanocrystalline ZnO Thin Films Prepared by Ion Beam Sputtering”**
J. Kennedy, P. Murmu, J. Pithie and A. Markwitz (*GNS Science*)
- 10P03 “Characterization of Sputtered and Laser Recrystallized Phosphorus Doped ZnO Thin Films”**
M. Saemann, S. Eisele and G. Bilger (*Universität Stuttgart*)
- 10P04 “Conditions for Magnetic Behavior in ZnO-based Nanostructured Semiconductors”**
A. Quesada and M.A. Garcia (*Lawrence Berkeley National Laboratory*)
- 10P05 “Soft X-ray Absorption Spectroscopic Study of Magnesium Oxide Single Crystal and Thin Film”**
E. Kobayashi and T. Okajima (*Kyushu Synchrotron Light Research Center*)
- 10P06 “Novel Ultra-thin Epitaxial Alumina Layers Studied by Photoelectron Spectroscopy and Electron Diffraction”**
S. Nemšák, M. Yoshitake, T. Skála, N. Tsud, T. Kim and T. Chikyo (*National Institute for Materials Science*)
- 10P07 “Electronic and Optical Properties of La-aluminate Thin Films on Si(100)”**
D. Tahir, Y.J. Cho, S.K. Oh, H.J. Kang, H. Jin, S. Heo, J.G. Chung, J.C. Lee and S. Tougaard (*Chungbuk National University*)
- 10P08 “Evaluation for Conductivity and Permittivity Property of Gate Insulator Film by Pulse-photoconductivity Method”**
Y. Nishi, Y. Matsumura, T. Hirano, Y. Soh, M. Yoshioka and H. Kubota (*Kumamoto University*)
- 10P09 “Characterization of Nanometer Thin Sputtered Phosphorus Layers for Laser Doping of Solar Cells”**
S. Eisele, M. Sämann and G. Bilger (*Universität Stuttgart*)
- 10P10 “Fabrication of Silver Nanoparticles by High-intensity Laser Irradiation of Aqueous Solution”**
T. Nakamura, H. Magara, Y. Herbani and S. Sato (*Tohoku University*)
- 10P11 “Fabrication of Gold-platinum Alloy Nanoparticles by High-intensity Laser Irradiation of Aqueous Solution”**
T. Nakamura, Y. Herbani and S. Sato (*Tohoku University*)
- 10P12 “Fabrication and Characterization of Magnesium Nanoparticle by Gas Evaporation Method”**
S. Ogawa, H. Niwa, T. Nomoto and S. Yagi (*Nagoya University*)
- †10P13 “Size Control of Mn-Zn Ferrite Nanoparticles and Their XAFS Spectra”**
Y. Moro, H. Katayanagi, S. Kimura, D. Shigeoka, T. Hiroki, T. Mashino and Y. Ichiyanagi (*Yokohama National University*)
- 10P14 “Nondestructive Depth Resolved Chemical State Analysis of (La,Sr)MnO₃ Film under High Temperature”**
K. Shinoda, S. Suzuki, T. Uruga, H. Tanida, H. Toyokawa, Y. Terada, M. Takagaki, K. Yashiro and J. Mizusaki (*Tohoku University*)
- 10P15 “Structural and Chemical State Characterization of LiFePO₄ for Cathode Material”**
K. Inoue, K. Shinoda, S. Suzuki and Y. Waseda (*Tohoku University*)
- 10P16 “Non-volatile Resistance Switching using Simple Nanogap Junction”**
Y. Naitoh, H. Suga, M. Horikawa and T. Shimizu (*National Institute of Advanced Industrial Science and Technology*)

- 10P17 *Withdrawn*
- †10P18 **“Chemisorption of CO and Water on LaB₆(100) Surface Studied with Reflection Absorption Infrared Spectroscopy, X-ray Photoelectron Spectroscopy and High Resolution Electron Energy Loss Spectroscopy”**
T. Yorisaki, Y. Moriya, A. Tillekaratne, C. Oshima, S. Otani and M. Trenary (*Waseda University*)
- 10P19 **“Second Harmonic Spectroscopy of Au(887) Adsorbed with CO”**
H.C. Hoang, M. Ono and G. Mizutani (*Japan Advanced Institute of Science and Technology*)
- 10P20 **“Electrochemical Formation of Ultrathin Semiconductor Films: Cu₂S Growth on Au(100) and Au(111)”**
C. Schlaup, D. Friebel and K. Wandelt (*University of Bonn*)
- 10P21 **“The Growth of Thin Hf Films on 6H-SiC(0001) Surfaces”**
P. Mazur, L. Markowski, M. Kamiński and L. Boczek (*University of Wroclaw*)
- 10P22 **“Formation of Ordered Surface Alloys in the Hf/W(100) Adsorption System”**
A. Trembulowicz, L. Jurczyszyn, Z. Szczudlo and A. Ciszewski (*University of Wroclaw*)
- 10P23 **“Characterization of Thin Epitaxial Mn Oxide Films on Ag(001)”**
K. Meinel, R. Shantyr, M. Huth, S. Polzin, K. Gillmeister, H. Neddermeyer and W. Widdra (*Martin-Luther-University*)
- 10P24 **“Initial Adsorption of NO_x on a Si(111)7×7 Surface”**
K. Hattori, A. Yasui, Y. Inaba, K. Miyauchi and H. Daimon (*Nara Institute of Science and Technology*)
- 10P25 **“Iron Silicides Grown by Solid Phase Epitaxy on Si(001) Surfaces”**
K. Hattori, M. Someta, K. Maetani and H. Daimon (*Nara Institute of Science and Technology*)
- 10P26 **“Crystalline and the Surface Morphology of the β-FeSi₂ Film Prepared by Pulsed Laser Deposition”**
M.Z. Hossain, K. Mitobe and S. Uekusa (*Meiji University*)
- 10P27 **“STM Observation of Growth Process of Erbium on Si(111) and H/Si(111)”**
K. Shigeta, Y. Kanai, T. Yasue and T. Koshikawa (*Osaka Electro-Communication University*)
- 10P28 **“Depth Analysis on Oxidation of Al/Si Films using SR-XPS”**
M. Imamura, E. Kobayashi and M. Sasaki (*National Institute of Advanced Industrial Science and Technology*)
- 10P29 *Withdrawn*
- 10P30 **“Magic Cluster Arrays of In and In/Ag Compound on Si(111)-7×7 Studied by UHV-TEM/STM”**
M. Tanaka, A. Teraoka and M. Shimojo (*National Institute for Materials Science*)
- 10P31 **“Strain of GaAs/GaAsP Superlattices Used as Spin-polarized Electron Photocathodes, Determined by X-ray Diffraction”**
T. Saka, Y. Ishida, M. Kanda, X. Jin, Y. Maeda, S. Fuchi, T. Ujihara, Y. Takeda, T. Matsuyama, H. Horinaka, T. Kato, N. Yamamoto, A. Mano, Y. Nakagawa, M. Kuwahara, S. Okumi, T. Nakanishi, M. Yamamoto, T. Ohshima, T. Kohashi, M. Suzuki, M. Hashimoto, T. Yasue and T. Koshikawa (*Daido University*)
- 10P32 **“Step-zipping Process on the Vicinal Surface of the Restricted Solid-on-solid Model with the Step Attraction of the Point Type”**
N. Akutsu (*Osaka Electro-Communication University*)
- 10P33 **“The Ehrlich Schwoebel Barrier in Organic Thin Film Growth”**
C. Teichert, G. Hlawacek, P. Puschnig, C. Ambrosch-Draxl, P. Frank and A. Winkler (*University of Leoben, Austria*)

- 10P34 “Growth Mechanism of Anisotropic Pentacene Thin Film”**
Y. Fujikawa, A. Al-Mahboob, J.T. Sadowski and T. Sakurai (*Tohoku University*)
- 10P35 “Gate-voltage Modulation of Conductance in Graphene”**
H. Miyazaki, K. Tsukagoshi and A. Kanda (*National Institute for Materials Science*)
- 10P36 “Characterization of Graphene by Scanning Electron Microscope”**
H. Hiura, H. Miyazaki and K. Tsukagoshi (*National Institute for Materials Science*)
- 10P37 “Clean GaN(0001) Substrate Surface Structures and Their Properties”**
A.N. Hattori, F. Kawamura, M. Yoshimura, Y. Kitaoka, Y. Mori, K. Hattori, H. Daimon and K. Endo (*Osaka University*)
- 10P38 “Surface Plasmon Excitation at Topmost Surface in Reflection High-energy Positron Diffraction”**
Y. Fukaya, A. Kawasuso and A. Ichimiya (*Japan Atomic Energy Agency*)
- 10P39 “LEED Observation with Lens-less Field Emission Gun using Sharpened W Tips”**
S. Mizuno, K. Anegawa and D. Iwasaki (*Kyushu University*)
- 10P40 “Circular Dichroism of Photoelectron Diffraction Rings from Ga/Si(111)”**
M. Hashimoto, F. Matsui, T. Matsushita, F.Z. Guo, Y. Kato and H. Daimon (*Nara Institute of Science and Technology*)
- 10P41 “Quantum Fidelity and Periodic Orbit Scars in Dynamical Electron-wavepackets in 2D Nanostructures”**
M. Tomiya, H. Tsuyuki and S. Sakamoto (*Seikei University*)
- †10P42 “Influence of Au Nano Particles on the Self-propelled Motion of Mesoscopic Droplets”**
E. Hilner, A.A. Zakharov, J.N. Andersen, E. Lundgren and A. Mikkelsen (*Lund University*)
- 10P43 “High Brightness and Highly Polarized Electron Beam for Real-time Measurement in SPLEEM”**
M. Kuwahara, A. Mano, Y. Nakagawa, S. Okumi, T. Nakanishi, M. Suzuki, T. Yasue, T. Koshikawa, X. Jin, N. Yamamoto, T. Ujihara, Y. Takeda, M. Yamamoto, T. Ohshima, T. Kohashi, T. Saka, T. Kato and H. Horinaka (*Nagoya University*)
- 10P44 “Real Time Observation of Growth Process of Magnetic Thin Films by SPLEEM with High Brightness and High Spin-polarized Electron Source”**
M. Suzuki, M. Hashimoto, T. Yasue, T. Koshikawa, Y. Nakagawa, A. Mano, N. Yamamoto, M. Yamamoto, T. Konomi, M. Kuwahara, S. Okumi, T. Nakanishi, X.G. Jin, T. Kato, M. Tanioku, T. Ujihara, Y. Takeda, T. Kohashi, T. Ohshima, T. Saka, T. Kato and H. Horinaka (*Osaka Electro-Communication University*)
- 10P45 “XMCD-PEEM Study on Stabilization of Magnetic Domain Structure of Fe-3%Si(110)”**
M. Suzuki, K. Iwata, M. Hashimoto, M. Ueda, Y. Matsuoka, T. Yasue, M. Kotsugi, T. Ohkochi, T. Kinoshita, Y. Watanabe, K. Tanaka and T. Koshikawa (*Osaka Electro-Communication University*)
- 10P46 “Temperature Dependence of Magnetic Domain Structure of Fe-3%Si(110) by XMCD-PEEM”**
M. Hashimoto, K. Iwata, M. Suzuki, M. Ueda, Y. Matsuoka, M. Kotsugi, T. Kinoshita, Y. Watanabe, K. Tanaka, T. Yasue and T. Koshikawa (*Osaka Electro-Communication University*)
- 10P47 “An Application of a Meteoritic FeNi Alloy for Next-generation Magnetic Recording”**
M. Kotsugi, M. Mizuguchi, K. Takanashi and Y. Watanabe (*JASRI/SPRing-8*)
- 10P48 “Magnetic Domain Structures in a Magnetic Head of a Hard Disk Drive Observed by Strain Imaging”**
K. Takata (*Kansai University*)
- 10P49 “Fourier Optics of Image Formation in LEEM”**
A.B. Pang, Th. Müller, M.S. Altman and E. Bauer (*Hong Kong University of Science and Technology*)

- 10P50 “Display-type Ellipsoidal Mesh Analyzer for Microscopic and High-resolution Two-dimensional Photoelectron Spectroscopy”**
L. Tóth, H. Matsuda, K. Goto, H. Nojiri, M. Hashimoto, F. Matsui and H. Daimon (*Nara Institute of Science and Technology*)
- 10P51 “Energy Filtered (X)PEEM with a Double Hemispherical Analyser Based Spectromicroscope: Recent Developments”**
M. Escher, N. Weber, M. Merkel, K. Winkler, O. Renault, N. Barrett and C.M. Schneider (*FOCUS GmbH*)
- 10P52 “Nanoscale Surface Chemistry of Individual Si Nanowires by Energy-filtered XPEEM”**
O. Renault, A. Bailly, L.-F. Zagonel and N. Barrett (*CEA-LETI, MINATEC*)
- 10P53 “Influence of the Ferroelectric Polarization on the Electronic Structure of BaTiO₃ Thin Films”**
N. Barrett, J. Rault, I.P. Krug, B. Vilquin, G. Niu, B. Gautier, D. Albertini and O. Renault (*CEA Saclay*)
- 10P54 “Energy-filtered PEEM Study of the Ferroelectric Surface Potential in Polarity-patterned PbZr_{0.52}Ti_{0.48}O₃ Layers”**
I.P. Krug, N. Barrett, A. Petraru, L. LeGuyader, O. Renault, A. Besmehn, H.H. Kohlstedt and C.M. Schneider (*Research Center Jülich*)
- 10P55 “The Systems of TOF-low Energy Atom Scattering Spectroscopy for Insulator”**
K. Umezawa (*Osaka Prefecture University*)
- 10P56 “Investigation of Irradiation Damage with Large Gas Cluster Ion Beam using by HR-RBS”**
T. Seki, T. Aoki and J. Matsuo (*Kyoto University*)
- 10P57 «07BA04» “Hydrogen Storage Characteristics of an Innovative Composite Material of Pt-Li₂ZrO₃ Exposed to Air at Room Temperature Studied by Ion Beam Analysis”**
K. Morita, B. Tsuchiya, S. Nagata, Y. Oya and K. Okuno (*Meijo University*)
- 10P58** *Withdrawn*
- 10P59 “Advanced Ion Beam Materials Processing and Characterization”**
E. Alves, K. Lorenz, S. Magalhães and N.P. Barradas (*Instituto Tecnológico e Nuclear*)
- 10P60 “Investigations and Comparisons on Multivariate Analyses for TOF-SIMS Image Analysis”**
T. Kono (*Asahi Kasei Corporation*)
- 10P61 “Quantification of Phosphor Concentration in Amorphous Silicon Inhibited by the Isotopic Mass Effect?”**
G. Bilger (*University of Stuttgart*)
- 10P62 “Quantification on Micro Area Analysis in SIMS”**
S. Seki and H. Tamura (*Takushoku University*)
- 10P63 “Molecular Dynamics Simulation of Fragmentation of Arginine Molecule on Si(100) for TOF-SIMS Spectral Analysis”**
N. Kato and M. Kudo (*Seikei University*)
- 10P64 “Investigation of Molecular Surface Detection with Time-of-flight Secondary Ion Mass Spectrometry”**
S. Aoyagi, K. Namekawa, K. Yamamoto, K. Sakai, N. Kato and M. Kudo (*Shimane University*)
- 10P65 “Fragmentation of Negative Ions of Organosilicon Compounds in EI Mass Spectrometry”**
T. Takeuchi, K. Yoshikuni, M. Kiuchi and A. Naka (*Nara Women’s University*)
- 10P66 “Computational Studies of Dibenzothiophene Derivatives Adsorption on Au Small Clusters”**
T. Takeuchi, J. Fujita, K. Yoshikuni, H. Sakurai and M. Kiuchi (*National Institute of Advanced Industrial Science and Technology*)

- 10P67** **《10PD12》“Development of a Ultra-high Performance Multi-turn TOF-SIMS System with a Femtosecond Laser for Post-ionization”**
M. Ishihara, K. Kumondai, S. Ebata, K. Uchino, R. Mibuka and H. Yurimoto (*Osaka University*)
- 10P68** **“Development of High-sensitivity Ion Imager Corresponding to Real-time Readout”**
N. Sakamoto, S. Aoyama, S. Kawahito and H. Yurimoto (*Hokkaido University*)
- 10P69** **“Analysis of Noise Properties of Solid-state Ion Imager SCAPS and Development of Software Noise Reduction”**
K. Yamamoto, N. Sakamoto and H. Yurimoto (*Hokkaido University*)
- 10P70** **“Effects of the Laser Condition on the Field Evaporation in the Laser-assisted Atom Probe”**
Y. Kajiwara, N. Mayama, M. Taniguchi, T. Iwata, Y. Hanaoka and M. Owari (*The University of Tokyo*)
- 10P71** **“A New Specimen Preparation Method for Three-dimensional Atom Probe”**
Y. Hanaoka, S. Mikami, N. Mayama, T. Iwata, Y. Kajiwara, T. Kaito, T. Adachi, M. Nojima and M. Owari (*The University of Tokyo*)
- [†]**10P72** **“Development of Reconstruction Method for Highly Precise Shave-off Depth Profiling”**
M. Fujii, M. Nojima, M. Owari and Y. Nihei (*The University of Tokyo*)
- 10P73** **“The Effect of Shave-off Scanning at a Fabricated Section by Focused Ion Beam”**
Y. Morita, A. Kuroda, T. Iwata and M. Owari (*The University of Tokyo*)
- 10P74** **“Molecular Reaction Imaged by Scanning Atom Probe”**
M. Taniguchi and O. Nishikawa (*Kanazawa Institute of Technology*)
- 10P75** *Withdrawn*

December 11, 2009 (Friday)

Room A

Magnetism & Instrumentation

- 11AM01** (9:00~9:30) — *Invited* —
“Atomic Level Understanding of Magnetic Anisotropy”
H. Brune, S. Rusponi, P. Bulushek and N. Weiss (*Ecole Polytechnique Fédérale de Lausanne*)
- 11AM02** (9:30~9:50)
“Magnetization Dynamics in Interlayer-coupled Magnetic Heterostructures”
C.M. Schneider, A. Kaiser, C. Wiemann, C. Tieg and S. Cramm (*Research Centre Jülich*)
- 11AM03** (9:50~10:20) — *Invited* —
“Development of High Brightness and Highly Spin Polarized Low Energy Electron Microscope”
T. Yasue, M. Suzuki, M. Hashimoto, M. Kuwahara, A. Mano, Y. Nakagawa, S. Okumi, T. Nakanishi, X.G. Jin, N. Yamamoto, T. Ujihara, Y. Takeda, M. Yamamoto, T. Ohshima, T. Kohashi, T. Saka, T. Kato, H. Horinaka and T. Koshikawa (*Osaka Electro-Communication University*)

— BREAK —

- 11AM04** (10:50~11:20) — *Invited* —
“Element Selective Spin Polarization Analysis on Surfaces by Spin-polarized Ion Scattering Spectroscopy (SP-ISS)”
T. Suzuki and Y. Yamauchi (*National Institute for Materials Science*)
- 11AM05** (11:20~11:40)
“Evaluation of Two Dimensional Detectors for Low Energy Electron and Application to Diffractive Imaging”
T. Dobashi, O. Kamimura, K. Kawahara, T. Abe, Y. Maehara and K. Gohara (*Hitachi, Ltd.*)
- 11AM06** (11:40~12:00)
“Combined Scanning Tunneling and Atomic Force Microscopy with qPlus Sensors”
F.J. Giessibl (*University of Regensburg*)

Room B

Surface

- 11BM01** (9:00~9:30) — *Invited* —
“Laser-induced Photochemistry in (NO)₂ Layers on Silver Nanoparticles: Size and Plasmon Influences”
D. Mulugeta, K.H. Kim, K. Watanabe, D. Menzel and H.-J. Freund (*Fritz-Haber-Institut der MPG*)
- 11BM02** (9:30~10:00) — *Invited* —
“Structure of Surfaces from Classical and Quantum Mechanical Rainbow Scattering of Fast Atoms”
H. Winter, M. Busch, A. Schüller, J. Seifert and S. Wethekam (*Humboldt University Berlin*)
- 11BM03** (10:00~10:20)
“A Novel Route towards Electrical Connection of Molecular Nano-devices: Manipulation and Multiple STM Tip Based Transport Measurements on Au Island on MoS₂”
M. Maier, J. Koeble, D. Jie, N. Chandarsekhar and Ch. Joachim (*Omicron NanoTechnology GmbH*)

— BREAK —

11BM04 (10:50~11:20) — *Invited* —

“Self Assembled Metallic Nanowires on a Dielectric Support: Pd on Rutile TiO₂(110)”

D.S. Humphrey, G. Cabailh, C.L. Pang, C.A. Muryn, S.A. Cavill, H. Marchetto, A. Potenza, S.S. Dhesi and G. Thornton (*University College London*)

11BM05 (11:20~11:50) — *Invited* —

“Nano-measurements by Four-tip STM”

S. Hasegawa (*The University of Tokyo*)

Room A

Closing Remarks (12:00~12:10)

— Table of Chairpersons —

	December 6 (Sun)		December 7 (Mon)		December 8 (Tue)		December 9 (Wed)		December 10 (Thu)		December 11 (Fri)	
	Room A	Room B	Room A	Room B	Room A	Room B	Room A	Room B	Room A	Room B	Room A	Room B
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