

— ALC'15 Scientific Program —

October 26, 2015 (Monday)

Room A

Opening Ceremony (9:00 – 9:20)

Plenary Lectures

26a-A-1 (9:20–10:10) – *plenary* –

Forward to the Past: Now We Can Image and Identify Single Atoms, What's Next?

David B. Williams (*The Ohio State University*)

26a-A-2 (10:10–11:00) – *plenary* –

Importance of Electron Phases for Comprehensive Analysis of Structures and Fields

Hannes Lichte (*Technische Universität Dresden*)

– Break –

Spintronics and magnetism I

26a-A-3 (11:20–11:50) – *invited* –

A Single-Molecule Approach to Spintronics

D.E. Bürgler, T. Esat, S. Fahrendorf, C. Besson, N. Atodiresei, V. Caciuc, F. Matthes, P. Kögerler, S. Blügel and C.M. Schneider (*Peter Grünberg Institute*)

26a-A-4 (11:50–12:20) – *invited* –

Electronic and Spintronic Functions in Single Molecules

W. Wulfhekel (*Karlsruhe Institute of technology*)

26a-A-5 (12:20–12:40)

Orbital Selective Tunneling Processes Observed in Atomic Layer Iron Nitride Compounds

Toshio Miyamachi, Y. Takahashi, K. Ienaga, N. Kawamura, A. Ernst and F. Komori (*The University of Tokyo*)

– Lunch –

Low-energy electron microscopy

26p-A-1 (14:00–14:30) – *invited* –

Recent Advances in Cathode Lens Microscopy

Rudolf M. Tromp (*IBM T.J. Watson Research Center*)

26p-A-2 (14:30–15:00) – *invited* –

Investigation of Magnetic Structure with High Brightness and Highly Spin-Polarized LEEM

Tsuneo Yasue, M. Suzuki and T. Koshikawa (*Osaka Electro-Communication University*)

26p-A-3 (15:00–15:20)

Polar Structures and Tweed in BaTiO₃ above the Curie Temperature

Nick Barrett, J. Dionot, C. Mathieu and D. Martinotti (*CEA Saclay*)

Sponsored Session (15:20–15:40)

Energy, Momentum and Spin: All about Electrons...

Michael Merkel (*FOCUS GmbH*)

– Break –

Surface physics I

26p-A-5 (16:00–16:30) – *invited* –

Magnetic Nanostructures

Peter Varga (*Vienna University of Technology*)

26p-A-6 (16:30–17:00) – *invited* –

Surface Transport of Topological and Non-Topological Materials

Shuji Hasegawa (*University of Tokyo*)

26p-A-7 (17:00–17:20)

Phase Diagram for Step Faceting Caused by Discontinuous Surface Tension in p-RSOS Model

Noriko Akutsu (*Osaka Electro-Communication University*)

26p-A-8 (17:20–17:50)

Efficient Linear Phase Contrast in the Aberration-corrected STEM

Harald Rose and Colin Ophus (*University of Ulm*)

Room B

Surface chemistry

- 26a-B-1** (11:20–11:50) – invited –
Chiral Molecular Motors Driven by Electrons
G. Srivastava, T. Kudernac, M. Parschau, P. Stacko, B. Feringa and Karl-Heinz Ernst (*Empa, Swiss Federal Laboratories for Materials Science and Technology*)
- 26a-B-2** (11:50–12:20) – invited –
Engineering Polarons at an Oxide Surface
Geoff Thornton (*University College London*)
- 26a-B-3** (12:20–12:40)
Experimental Determination of the Potential Energy Curve of Diethyl Ether on Si(001) -- a Combined Optical Second-Harmonic Generation and Molecular Beam Study
Michael Dürr, M. Reutzel, M. Lipponer and U. Höfer (*Justus Liebig University Giessen*)

– Lunch –

Materials informatics

- 26p-B-1** (14:00–14:30) – invited –
Materials Informatics and High Throughput Experimentations
Toyohiro Chikyow (*National Institute for Materials Science*)
- 26p-B-2** (14:30–15:00) – invited –
Current Progress in a Data Mining Technique Applying to Digital Spectral Image Datasets
Shunsuke Muto, K. Tatsumi, M. Shiga and K. Tsuda (*Nagoya University*)
- 26p-B-3** (15:00–15:20)
Factor Analysis of Angle-Resolved REELS Spectra for Compound Semiconductors to Obtain Energy Loss Functions
Hideki Yoshikawa, H. Tanaka, H. Jin, H. Iwai and S. Tanuma (*National Institute for Materials Science*)
- 26p-B-4** (15:20–15:40)
Extended Mermin Method for Calculating Electron Inelastic Mean Free Path
Bo Da, H. Yoshikawa and S. Tanuma (*National Institute for Materials Science*)

– Break –

Beams

- 26p-B-5** (16:00–16:30) – invited –
Studying Solids using the Helium Ion Microscope
Torgny Gustafsson (*Rutgers University*)
- 26p-B-6** (16:30–17:00) – invited –
Accelerator-Driven Compact Neutron Source RANS and Its Practical Applications with Slow and Fast Neutrons
Yoshie Otake (*RIKEN*)

26p-B-7 (17:00–17:20)

Crystal Structure and Accelerated Ion-Irradiation Effect of Water Clusters

Gikan H. Takaoka, H. Ryuto, M. Takeuchi and F. Musumeci (*Kyoto University*)

Sponsored Session (17:20–17:40)

Development of radioactive Cs analyzer for foods with complicated shapes

Hideshi Ishii (*Techno-X Co., Ltd.*)

October 27, 2015 (Tuesday)

Room A

Plenary Lecture

27a-A-1 (9:00–9:50) – *plenary* –

Exploring of Organic Surfaces with Secondary Ion Mass Spectrometry: From Polymers to Biological Materials

Jiro Matsuo (*Kyoto University*)

Student Award Ceremony & Short Presentations (9:50–10:30)

27p-P-53 Surface Potential Distribution of Insulating Film on a Conductive Substrate Irradiated by Electron Beam with an Application of the Bias-Voltage

Yuki Handa, M. Tokai, T. Kawamoto and M. Kotera (*Osaka Institute of Technology*)

28p-P-1 Overwritable Liquid Selective Open Channel

Shuto Ito and D. Ishii (*Nagoya Institute of Technology*)

27p-P-61 Foucault Optical System by using Non-Dedicated Conventional TEM

Hiroshi Nakajima, A. Kotani, Y. Ishii, K. Harada and S. Mori (*Osaka Prefecture University*)

27p-P-24 Mass Spectrometry Imaging of Mouse Liver using Functional γ -Fe₂O₃ Nanoparticles

Shota Morimoto, K. Hyodo, T. Yamazaki, T. Ishikawa, S. Taira, K. Tsuneyama and Y. Ichianagi (*Yokohama National University*)

27a-B-4 Electron Energy Loss Spectroscopy of Exchange-Dominated Spin Waves in Ultrathin Hexagonal Cobalt Films Grown on Three Different Substrates

Eugen Michel, H. Ibach and C.M. Schneider (*Peter-Grünberg-Institut*)

28p-P-23 Edge-Roughness Engineering on Thermoelectric Performance of Graphene Nanoribbons: Theoretical and Computational Prediction

Tetsumi Izawa, T. Kengo and T. Yamamoto (*Tokyo University of Science*)

28p-P-26 In situ SEM/STM Observations and Growth Control of Monolayer Graphene on SiC (0001) Wide Terraces

Chenxing Wang, H. Nakahara, K. Asaka and Y. Saito (*Nagoya University*)

30a-B-3 A Theoretical Method for Calculation of STEM-EELS Spectra of Nanoparticles

Kejun Zhang, B. Da and Z. Ding (*University of Science and Technology of China*)

– Break –

Chemical imaging and nanoanalysis for biosystems

27a-A-2 (10:50–11:20) – *invited* –

ToF-SIMS Analysis of Complex Biological Systems Using Polyatomic and Gas Cluster Ion Beams

John S. Fletcher (*Chalmers University of Technology*)

27a-A-3 (11:20–11:50) – *invited* –

Ar-Cluster SIMS for -Omics

Tae Geol Lee (*Korea Research Institute of Standards and Science*)

27a-A-4 (11:50–12:20) – invited –

Ultrastructural Characterization of Surface Induced-Platelet Activation on Artificial Materials by Transmission Electron Microscopy

Terumitsu Hasebe, Y. Yamato, S. Maegawa, K. Bito, T. Mine, T. Matsumoto and T. Suzuki (*Tokai University*)

27a-A-5 (12:20–12:40)

The Structural Evaluation of Amyloid beta on Model Membranes

Satoka Aoyagi, T. Shimanouchi, Y. Yokoyama and H. Iwai (*Seikei University*)

– Lunch –

Chemical imaging and nanoanalysis for biosystems

27p-A-1 (14:00–14:30) – invited –

Advancing Studies of Biosystems with FTIR Spectroscopic Imaging

Sergei Kazarian (*Imperial College London*)

27p-A-2 (14:30–15:00) – invited –

Biomedical Applications of Raman Spectroscopy

Tatsuyuki Yamamoto, M. Kawamukai, Y. Kinoshita and H. Hamaguchi (*Shimane University*)

27p-A-3 (15:00–15:20)

MVOCFinder: A Diagnostic Tool to Identify Fungal Species with Ion Mobility and GC-MS Spectral Database of Microbial Volatile Organic Compounds for Conserving Cultural Heritage

Takae Takeuchi, S. Tsuru, T. Kimura, T. Suzuki, Y. Nakamura, Y. Aoki, A. Tachibana, H. Fujimiya, T. Sugai, M. Kiuchi and T. Akashi (*Nara Women's University*)

27p-A-4 (15:20–15:40)

Chemical Mapping of Plant Biomolecules by Cryo Time-of-Flight Secondary Ion Mass Spectrometry

Dan Aoki, Y. Hanaya, Y. Matsushita, M. Yoshida, K. Kuroda, R. Takama and K. Fukushima (*Nagoya University*)

– Break –

Scanning probe microscopy

27p-A-5 (16:00–16:30) – invited –

Molecular-Scale Investigations of Solid-Liquid Interfaces by Frequency Modulation Atomic Force Microscopy

Hirofumi Yamada (*Kyoto University*)

27p-A-6 (16:30–17:00) – invited –

What We Can Learn from High-Resolution AFM/STM Images?

Pavel Jelinek (*Academy of Sciences of the Czech Republic*)

Sponsored Session (17:00–17:20)

The approach from Scienta Omicron to support the latest frontiers of science.

— PES (Photoelectron Spectroscopy) and UHV-SPM —

Retsu Oiwa (*Scienta Omicron, Inc.*)

Room B

Spintronics and magnetism II

27a-B-1 (10:50–11:20) – invited –

Spin-Polarized Electron Energy Loss Spectroscopy at High Momentum Resolution

Juergen Kirschner and D. Vasilyev (*Max Planck Institute of Microstructure Physics*)

27a-B-2 (11:20–11:50) – invited –

Spin-Polarized Scanning Electron Microscopy and Its Recent Progress

Teruo Kohashi (*Hitachi, Ltd.*)

27a-B-3 (11:50–12:10)

REVISITING THE ELECTRONIC STRUCTURE OF MAGNETITE BY HARD X-RAY PHOTOEMISSION SPECTROSCOPY

Munetaka Taguchi, A. Chainani, S. Ueda, M. Matsunami, Y. Ishida, R. Eguchi, S. Tsuda, Y. Takata, M. Yabashi, K. Tamasaku, Y. Nishino, T. Ishikawa, H. Daimon, S. Todo, H. Tanaka, M. Oura, Y. Senba, H. Ohashi and S. Shin (*Nara Institute of Science and Technology*)

27a-B-4 (12:10–12:30)

Electron Energy Loss Spectroscopy of Exchange-Dominated Spin Waves in Ultrathin Hexagonal Cobalt Films Grown on Three Different Substrates

Eugen Michel, H. Ibach and C.M. Schneider (*Peter-Grünberg-Institut*)

Sponsored Session (12:30–12:50)

Introduction of soft-X-ray emission spectrometer equipped with Electron Probe Microanalyzer

Masaru Takakura (*JEOL Ltd.*)

– Lunch –

Catalysis

27p-B-1 (14:00–14:30) – invited –

Model Systems in Catalysis for Energy Economy

Hajo Freund (*Fritz-Haber-Institut der Max-Planck Gesellschaft*)

27p-B-2 (14:30–15:00) – invited –

Nature of Hot Electron Generated by Photons and Exothermic Catalytic Reactions

Jeong Young Park (*KAIST/IBS*)

27p-B-3 (15:00–15:20)

Anodic Oxidation of Silicon Observed *In-Situ* by Specular X-Ray Reflectivity

Wolfgang Voegeli, E. Arakawa, C. Kamezawa, R. Iwami, T. Shirasawa and T. Matsushita (*Tokyo Gakugei University*)

27p-B-4 (15:20–15:40)

Effect of Gold and Rhodium on the Morphology of Titanate Nanostructures

J. Kiss, P. Pusztai, E. Varga, A. Erdőhelyi, Á. Kukovecz and Zoltán Kónya (*University of Szeged*)

– Break –

Plasmonic and optical phenomena

27p-B-5 (16:00–16:30) – *invited* –

Plasmoemission: Emission of Electrons in a Strong Plasmonic Field

Frank Meyer zu Heringdorf (*University of Duisburg-Essen*)

27p-B-6 (16:30–16:50)

Plasmonic Enhancements of Nonlinear Optical Intensity from Nano-Micro Hierarchical Surface Structures on Silver

Yoichi Ogata, A. Vorobyev and C. Guo (*University of Rochester*)

27p-B-7 (16:50–17:10)

Optical Second Harmonic Generation (SHG) Microscopy of Two-Dimensional Dichalcogenide Semiconductors TX₂ (T=Mo, W, X=S, Se)

Y. Miyauchi, R. Morishita, M. Tanaka, S. Ohno, G. Mizutani and T. Suzuki (*National Defense Academy of Japan*)

Poster Session

- 27p-P-1 Development of High Precision Power Supply and Current Measuring Device for Field Emission Spectroscopy**
Shigeki Kumagai, H. Murata, H. Asai, E. Rokuta and H. Shimoyama (*Meijo University*)
- 27p-P-2 Observations of Crystalline Structures of Cr Thin Films Deposited on a W (001) Surface for a Direction-Controllable Spin-Polarized Field Emitter**
Naoya Sakai, H. Toyama, S. Nagai, T. Iwata, K. Kajiwara and K. Hata (*Mie University*)
- 27p-P-3 Influence of Height and Atomic Arrangement of Nano-Protrusion of Gas Field Ion Emitter on He-Ion Current**
Shigekazu Nagai, S. Katoh, T. Iwata, K. Kajiwara and K. Hata (*Mie University*)
- 27p-P-4 Abundance of Field-Ionized Ion Species and Current Stability of Ion Beam Emitted in He-Ne Gas Mixture**
Keisuke Komaki, S. Nagai, T. Iwata, K. Kajiwara and K. Hata (*Mie University*)
- 27p-P-5 Topological Quasi-Hydrogen, Topological Quasi-Positronium, and Soliton-Catalytic Effects on Hydrogen-Adsorbed Ni(111) Surface**
I. Kanazawa, T. Sasaki, K. Yamada, M. Saito and M. Nakajima (*Tokyo Gakugei University*)
- 27p-P-6 In-situ Depth Profiling of Li near Interface of Metal/Electrolyte/Metal Capacitors under Biasing by ERD and RBS Techniques**
Kenji Morita, B. Tsuchiya, T. Kato, Y. Katayama, Y. Iriyama, H. Tsuchida and T. Majima (*Nagoya Industrial Research Institute*)
- 27p-P-7 Radiation Effects on Li Transport in Solid State Li Ion Battery System Studied Using ERD-RBS Techniques with 9 MeV O⁺⁴ Ion Beam**
Kenji Morita, B. Tsuchiya, T. Kato, Y. Katayama, Y. Iriyama, H. Tsuchida and T. Majima (*Nagoya Industrial Science Research Institute*)
- 27p-P-8 CAICISS Analysis of Surface Structure of α -Fe₂O₃(0001) Film Grown on Sapphire by Mist CVD**
Shun Osaka, K. Takahashi, D. Tamba, M. Oda, K. Kaneko, H. Tabata, O. Kubo, S. Fujita and M. Katayama (*Osaka University*)
- 27p-P-9 Desorption/Ionization Induced by Neutral Clusters as a Versatile Tool for the Investigation of Large Surface-Adsorbed (bio-)molecules**
A. Portz, S. Abb, S. Rauschenbach, K. Kern, C. Gebhardt and Michael Dürr (*Justus Liebig University Giessen*)
- 27p-P-10 TOF-SIMS Imaging of Polyester/Melamine Resin with Bismuth Cluster Ion**
S. Nishinomiya, K. Toshin, R. Shishido and S. Suzuki (*Nippon Steel & Sumitomo Metal Corporation*)
- 27p-P-11 Development of a Mass Spectrometer using Two Rotating Electric Fields for the Separation of High Mass Ions**
Yuki Anai, M. Nojima, M. Hotta, S. Kurumi, T. Adachi, T. Kusanagi, K. Suzuki and K. Moritani (*Tokyo University of Science*)
- 27p-P-13 Development of Low-Pressure SIMS Instruments with Large Cluster Ion Beam**
Kanji Suzuki, M. Kusakari, M. Fujii, T. Seki, T. Aoki and J. Matsuo (*Kyoto University*)
- 27p-P-14 Scanning Atom Probe Study of Molecular System**
Masahiro Taniguchi and O. Nishikawa (*Kanazawa Institute of Technology*)

- 27p-P-16 Selective RIMS Imaging of Radio Active Cesium by Using High Resolution TOF-SIMS/SNMS Apparatus**
Kenji Ohishi, T. Sakamoto, T. Okumura and I. Kawakami (*Kogakuin University*)
- 27p-P-17 Development of a Simple System for the Analysis of Water Containing Biological Samples by TOF-SIMS**
Keita Kanenari, M. Morita, K. Ohishi and T. Sakamoto (*Kogakuin University*)
- 27p-P-18 Cluster Analysis of Aerosol Particles with TOF-SIMS**
Masato Morita, K. Kanenari, S. Tagata, K. Ohishi and T. Sakamoto (*Kogakuin University*)
- 27p-P-19 The Anisotropy of Lateral Resolution of Two-Dimensional Shave-off Method**
Daichi Shirakura, B. Tomiyasu, M. Karasawa, Y. Kim and M. Owari (*The University of Tokyo*)
- 27p-P-20 Data Acquisition Electronic System for Time-of-Flight Sputtered Neutral Mass Spectrometer**
Ken-ichi Bajo, O. Fujioka, S. Itose, M. Ishihara, K. Uchino and H. Yurimoto (*Hokkaido University*)
- 27p-P-21 Evaluation for Multi-Turn Time of Flight Mass Spectrum of Laser Ionization Mass NanoScope (LIMAS)**
Azusa Tonotani, K. Bajo, S. Itose, M. Ishihara, K. Uchino and H. Yurimoto (*Hokkaido University*)
- 27p-P-22 Evaluation on Organic Analysis with a Novel SIMS Apparatus using Model Standard Samples**
Makiko Fujii, T. Seki, T. Aoki and J. Matsuo (*Kyoto University*)
- 27p-P-24 Mass Spectrometry Imaging of Mouse Liver using Functional γ -Fe₂O₃ Nanoparticles**
Shota Morimoto, K. Hyodo, T. Yamazaki, T. Ishikawa, S. Taira, K. Tsuneyama and Y. Ichianagi (*Yokohama National University*)
- 27p-P-25 Correcting Reconstruction Images in Atom Probe Tomography Considering Local Electric Fields -Verification by FIM Images-**
Tsuyoshi Yukawa, M. Morita, Y. Kim, Y. Anai, M. Nojima and M. Owari (*The University of Tokyo*)
- 27p-P-26 Reconstruction Method for APT by using FEM**
Yun Kim, T. Yukawa, M. Morita, D. Sirakura, B. Tomiyasu and M. Owari (*The University of Tokyo*)
- 27p-P-27 Study on a Novel Sample Preparation Method for Organic Materials by APT**
Yutaro Hirai, Y. Kim, T. Yukawa and M. Owari (*The University of Tokyo*)
- 27p-P-28 Depth Profiling of Multilayer Thin Films by Atom Probe Tomography Compared with Auger Electron Spectroscopy of Higher Depth Resolution**
Katsuaki Yanagiuchi, Y. Ishida, Y. Shimizu, Y. Nozawa, N. Ebisawa, T. Toyama, K. Inoue and Y. Nagai (*TDK Corporation*)
- 27p-P-30 Oxidation at the Cs Pre-Adsorbed Si/6H-SiC(0001) Reconstruction Surfaces Studied by Metastable-Atom Induced Electron Spectroscopy**
Takuto Nakamura, K. Hirayama, K. Muraoka, J. Ishii, M. Naitoh and T. Ikari (*National Institute of Technology, Ube College*)

- 27p-P-31 A Study of the Electronic Structure at Alkali Metal Adsorbed HOPG Surface by MIES and UPS**
Kyosei Umeda, S. Hamada, K. Muraoka, J. Ishii, M. Naitoh and T. Ikari (*National Institute of Technology, Ube College*)
- 27p-P-32 Electronic Structure at MePc/Si(100) Surface Studied by Metastable-Atom Induced Electron Spectroscopy**
Kohei Matsuo, S. Uesugi, T. Daichi, J. Ishii, M. Naitoh and T. Ikari (*National Institute of Technology, Ube College*)
- 27p-P-33 Sum Frequency Generation on a Hydrogenated Regular Step Si Surface**
Khuat Thi Thu Hien, Y. Miyauchi, Md.A. Sattar and G. Mizutani (*Japan Advanced Institute of Science and Technology*)
- 27p-P-34 Analysis of Surface Roughness Correlation Function by X-Ray Reflectivity**
Yoshikazu Fujii (*Kobe University*)
- 27p-P-35 Chemical-State and Layer-Structure Analyses of Organic Thin Films by using the Soft X-Ray Absorption and Reflectivity Analysis System in BL-10 at NewSUBARU**
Keita Nambu, D. Fukuyama, T. Uemura, T. Harada, T. Watanabe, H. Kinoshita, E. Takahashi, S. Suehiro and Y. Muramatsu (*University of Hyogo*)
- 27p-P-36 Azimuthal Angular Dependence of Plasmon Loss in Core-Level Photoemission with Multiple Scattering Theory**
Noyuri Yamamura, N. Tanuma, M. Kazama, T. Fujikawa and K. Niki (*Chiba University*)
- 27p-P-37 Development of an in-situ XAFS/XRD Measurement System and Its Application to an Analysis of CuO in Hydrogen Atmosphere**
Eiichi Kobayashi, K.K. Bando and T. Okajima (*Kyushu Synchrotron Light Research Center*)
- 27p-P-38 Relationship between the Π^* Peak Height and Width in C K-XANES of Graphitic Carbons**
Kentaro Murayama, T. Okada and Y. Muramatsu (*University of Hyogo*)
- 27p-P-39 Atomic Site Separation of XMCD Spectra by Forward Focusing Peaks on Resonance Auger Electron Diffraction Patterns of Magnetite**
Yusuke Hashimoto, M. Taguchi, F. Matsui, M. Hiroyuki, T. Matsushita and H. Daimon (*Nara Institute of Science and Technology*)
- 27p-P-40 Strain-Induced Reaction Kinetics of O₂ Molecule at SiO₂/Si Interfaces Studied by Real-Time X-Ray Photoelectron Spectroscopy**
Jiayi Tang, S. Ogawa, A. Yoshigoe, S. Ishidzuka and Y. Takakuwa (*Tohoku University*)
- 27p-P-41 Synchrotron Radiation Photoemission Study of Oxides at Ge(100) Surface after Atmospheric Exposure**
Akitaka Yoshigoe, R. Okada, Y. Teraoka, Y. Yamada and M. Sasaki (*Japan Atomic Energy Agency*)
- 27p-P-42 Automatic Background Estimation for Highly-Reproducible XPS Analysis by using Active Shirley Method**
Hiromi Tanaka, R. Matsumoto, Y. Nishizawa, H. Yoshikawa, S. Tanuma and K. Yoshihara (*National Institute of Technology, Yonago College*)
- 27p-P-43 Temperature Dependence of the Energy Distribution of the Conduction Electrons in GaP Single Crystal**

Fumiaki Ichihashi, X. Dong, T. Kawaguchi, M. Kuwahara, T. Ito, S. Harada, M. Tagawa and T. Ujihara (*Nagoya University*)

- 27p-P-44 Performance Degradation of InGaP Cells by Radiation of Electron at 70 KeV**
Yasuki Okuno, S. Okuda, T. Kojima, T. Oka, S. Kawakita, M. Imaizumi and H. Kusawake (*Osaka Prefecture University*)
- 27p-P-45 Study of the Li K-Edge Spectra for Lithium Compounds using Reflection EELS**
Noboru Taguchi, M. Kitta, H. Sakaebe and T. Akita (*AIST*)
- 27p-P-46 Characterization of Au Clusters Formed in Ionic Liquids by TEM and UPS**
Gikan H. Takaoka, Y. Matsumoto, M. Takeuchi and H. Ryuto (*Kyoto University*)
- 27p-P-47 Auger Intensity Anomalies from ZnO(0001) Surface Excited by RHEED Incident Beam**
Yoshimi Horio, Y. Takakuwa, S. Ogawa and K. Abe (*Daido University*)
- 27p-P-48 Portable Analyzer Utilizing Pyroelectric Crystal**
Susumu Imashuku, I. Ohtani and J. Kawai (*Kyoto University*)
- 27p-P-49 Calculations of Electron Inelastic Mean Free Paths over the 50 eV to 200 KeV Range with the Relativistic Full Penn Algorithm**
S. Tanuma, H. Shinotsuka, C.J. Powell and D.R. Penn (*NIMS*)
- 27p-P-50 Structural Changes of Polymer Materials under Electron Irradiation: Molecular Dynamics Study**
Masaaki Yasuda, Y. Furukawa, S. Hitomi, H. Kawata and Y. Hirai (*Osaka Prefecture University*)
- 27p-P-51 Numerical Method for Simulation of Shape Evolution of Schottky Cathode**
Ryo Iiyoshi (*Aichi Institute of Technology*)
- 27p-P-52 Simulation of Fogging Electron Trajectories in Scanning Electron Microscope and Its Comparison with Experiment**
Taiki Nishino, T. Noda and M. Kotera (*Osaka Institute of Technology*)
- 27p-P-53 Surface Potential Distribution of Insulating Film on a Conductive Substrate Irradiated by Electron Beam with an Application of the Bias-Voltage**
Yuki Handa, M. Tokai, T. Kawamoto and M. Kotera (*Osaka Institute of Technology*)
- 27p-P-54 Simulation of Time-Dependent Charging of PMMA Film on Si Substrate under Electron Beam Irradiation**
Akihiro Fukuzawa, M. Tokai, K. Terada and M. Kotera (*Osaka Institute of Technology*)
- 27p-P-55 In-Situ SEM Observation of Graphene Growth on Molten Metal Surface**
Yudai Hoshi, J. Takahashi, H. Kato and Y. Homma (*Tokyo University of Science*)
- 27p-P-56 Preparation and Characterization of Amorphous Silicon Carbonitride Diaphragm for Environmental-Cell Transmission Electron Microscope**
Takaomi Matsutani, K. Yamasaki and T. Kawasaki (*Kinki University*)
- 27p-P-57 Size and Counting of Nano-Particles from Analyzed TEM/SEM Imaging**
T. Kikui, F. Uematsu, S. Nakanoda, H. Manabe, S. Kitamura, Y. Sasaki, Yoshitoki Iijima, K. Kumagai and A. Kurokawa (*JEOL Ltd.*)
- 27p-P-58 Development of Electrostatic Spherical-Aberration-Corrector with Annular and Circular Electrodes**

Tadahiro Kawasaki, T. Ishida, M. Tomita, Y. Takai, Y. Ogawa, D. Kanamori, T. Matsutani, T. Kodama and T. Ikuta (*Japan Fine Ceramics Center*)

27p-P-59 Visualization of Light-Element Atomic Columns by Hollow-Cone Illumination TEM
Tadahiro Kawasaki and T. Ishida (*Japan Fine Ceramics Center*)

27p-P-60 Development of a Defocus Modulation Transmission Electron Microscope System for In-situ High Resolution Observation
Takahiro Tamura, Y. Kimura and Y. Takai (*Osaka University*)

27p-P-61 Foucault Optical System by using Non-Dedicated Conventional TEM
Hiroshi Nakajima, A. Kotani, Y. Ishii, K. Harada and S. Mori (*Osaka Prefecture University*)

27p-P-62 Precise Measurement of Specimen Height by 3 Dimensional Fourier Filtering Method
Masayuki Inamori, Y. Kimura and Y. Takai (*Osaka University*)

27p-P-63 Quantitative Phase Reconstruction Method (ABFP) using an Annular Aperture and an Annular Detector in STEM
Takafumi Ishida, T. Kawasaki, T. Tanji and T. Ikuta (*Nagoya University*)

27p-P-64 Modeling Image Formation in Low Energy Electron Microscopy
Qin Wang, K.M. Yu and M.S. Altman (*Hong Kong University of Science and technology*)

27p-P-65 Magnetization Tilt Angle of Co/W(110) Studied with High Brightness and Highly Spin-Polarized LEEM
Masahiko Suzuki, T. Yasue, T. Koshikawa and E. Bauer (*Osaka Electro-Communication University*)

October 28, 2015 (Wednesday)

Room A

3D holographic imaging and characterizations of active atomic sites

28a-A-1 (9:00–9:30) – *invited* –

Looking into Complex Quantum Materials and Multilayer Heterostructures with Holographic, Standing-Wave, and Resonant Photoemission

Charles S. Fadley (*University of California Davis*)

28a-A-2 (9:30–10:00) – *invited* –

3D Atomic Structure Analysis around Active-Site Atoms by Photoelectron Holography

F. Matsui, T. Matsushita and Hiroshi Daimon (*Nara Institute of Science and Technology*)

28a-A-3 (10:00–10:20)

3D Atomic Structure Imaging of Graphene and Graphite Intercalated Superconductors by Photoelectron Holography

Fumihiko Matsui, S. Nishiyama, K. Sugita, E. Uesugi, R. Eguchi, H. Goto, H. Matsui, N. Maejima, H. Nishikawa, T. Matsushita and Y. Kubozono (*Nara Institute of Science and Technology*)

28a-A-4 (10:20–10:40)

Electron Density Analyses of Organic Semiconductors

Yusuke Wakabayashi, H. Morisaki, T. Kimura, T. Koretsune, C. Hotta and J. Takeya (*Osaka University*)

– Break –

3D holographic imaging and characterizations of active atomic sites

28a-A-5 (11:00–11:30) – *invited* –

Chemical State Selective Photoelectron Diffraction and Holography Applied to the Surface of Topological Insulators and Their Interfaces with Magnetic Metals

Lada V. Yashina, M.V. Kuznetsov, I. Jgogrodnikov and O. Rader (*Lomonosov Moscow State University*)

28a-A-6 (11:30–12:00) – *invited* –

Gap State Imaging and Spin-Orbit Effects in Resonant Photoelectron Diffraction

Peter Krüger (*Chiba University*)

28a-A-7 (12:00–12:30) – *invited* –

Holographic Imaging of Atomic Structures with White x-Rays

Pawel Korecki (*Jagiellonian University*)

28a-A-8 (12:30–12:50)

Observation of Nanostructures in Advanced Materials by X-Ray Fluorescence Holography

Kouichi Hayashi (*Tohoku University*)

– Lunch –

Surface microscopy and synchrotron-based characterization

28p-A-1 (14:00–14:30) – invited –

MCDPEEM and SPLEEM of Magnetic Materials

Ernst Bauer (*Arizona State University*)

28p-A-2 (14:30–15:00) – invited –

Recent Advances of Synchrotron-Based Scanning X-Ray Microscopy in Addressing Properties of Morphologically Complex Materials and Electrochemical Devices

Maya Kiskinova (*Elettra-Sincrotrone Trieste*)

28p-A-3 (15:00–15:20)

An x-Ray Fluorescence Holographic Study on a $\text{Bi}_2\text{Te}_3\text{Mn}$ Topological Insulator

Shinya Hosokawa, Y. Ideguchi, K. Kamimura, K. Kimura, N. Happo, K. Hayashi, Y. Ebisu, T. Ozaki, Y. Yoda, H. Ishi, M. Kitaura, A. Ohnishi and M. Sasaki (*Kumamoto University*)

28p-A-4 (15:20–15:40)

Bi Wire-Delta-Doping into Si Crystal, investigated with Wavelength Dispersive Fluorescence XAFS

Kazushi Miki, K. Murata, K. Nitta, T. Uruga and Y. Terada (*National Institute for Materials Science*)

– Break –

Surface physics II

28p-A-5 (16:00–16:30) – invited –

Two-Dimensional Quasicrystalline Oxides and Their Approximants

S. Förster, R. Hammer, K. Meinel, M. Trautmann, F. Schumann and Wolf Widdra (*Martin-Luther-Universität Halle-Wittenberg*)

28p-A-6 (16:30–17:00) – invited –

Surface Phonon-Polariton Mediated Electron Transport through CaO Thin Films

Y. Cui, S. Tosoni, Wolf-Dieter Schneider, G. Pacchioni, N. Nilius and H.-J. Freund (*Fritz-Haber-Institut der Max-Planck-Gesellschaft*)

28p-A-7 (17:00–17:20)

Electron Quantization in Finite Length Au Atomic Wires

Eui Hwan Do, S. Chung and H.W. Yeom (*Institute for Basic Science*)

Room B

Secondary mass spectrometry

28a-B-1 (9:00–9:30) – invited –

CHILI, a Nanobeam Secondary Neutral Mass Spectrometer with Extraordinary Spatial Resolution, Sensitivity, and Selectivity

Andrew M. Davis, T. Stephan, R. Trappitsch, M.J. Pellin, D. Rost and N. Dauphas (*The University of Chicago*)

28a-B-2 (9:30–10:00) – invited –

Examination of Ion Beam Induced Damage on Polymer Surface using Ar Clusters

Tomoko Kawashima, H. Morita, N. Fukumoto, T. Kurosawa and S. Aoyagi (*Panasonic Corporation*)

28a-B-3 (10:00–10:20)

Quantitative Analysis of Helium by Post Ionization Method using Femto-Second Laser Technique

Hisayoshi Yurimoto, K. Bajo, I. Sakaguchi, T.T. Suzuki, S. Itose, K. Uchino and M. Ishihara (*Hokkaido University*)

28a-B-4 (10:20–10:40)

Optical Property Simulation of Inductively Coupled Plasma Ion Source for a Focused Ion Beam

Haruo Kasahara, A. Niwata, N. Handa, T. Sato and S. Kitamura (*JEOL Ltd.*)

– Break –

Ion beams

28a-B-5 (11:00–11:30) – invited –

Mass Scale Calibration of TOF-SIMS Spectra with Molecular Ions of Internal Additives

Daisuke Kobayashi, S. Otomo, S. Aoyagi and H. Itoh (*ASAHI GLASS COMPANY, LTD.*)

28a-B-6 (11:30–11:50)

High Spatial Resolution Helium Isotope Imaging with LIMAS

Ken-ichi Bajo, S. Itose, M. Matsuya, M. Ishihara, K. Uchino, I. Sakaguchi and H. Yurimoto (*Hokkaido University*)

28a-B-7 (11:50–12:10)

Electronic Structures of Ta₂O₅ Thin Films via Ar Gas Cluster Ion Beam Sputtering

C. Park, S.K. Oh, H. Chae and Hee Jae Kang (*Chungbuk National University*)

28a-B-8 (12:10–12:30)

Solid-Liquid Interface Analysis with MeV-Energy Heavy Ion Beams

Toshio Seki, M. Kusakari, M. Fujii, T. Aoki and J. Matsuo (*Kyoto University*)

Sponsored Session (12:30–12:50)

Atomic Level Characterization using a State-of-the-Art Scanning Probe Microscope

Ryohei Kokawa (*SHIMADZU CORPORATION*)

– Lunch –

Ultrafast phenomena

28p-B-1 (14:00–14:30) – *invited* –

Ultrafast Electron Diffraction at Surfaces with 300 fs Temporal Resolution: Watch the Atoms while They Move!

Michael Horn von Hoegen (*Duisburg-Essen University*)

28p-B-2 (14:30–15:00) – *invited* –

Ultrafast Spin Dynamics Probed by Optical Pump-Probe STM

Shoji Yoshida, O. Takeuchi and H. Shigekawa (*University of Tsukuba*)

28p-B-3 (15:00–15:20)

High Energy-Resolved Two-Photon Photoemission Study of Elastic Scatterings in Image Potential State of Cu(001)

Takeo Nakazawa, R. Arafune, M. Kawai and N. Takagi (*University of Tokyo*)

Sponsored Session (15:20–15:40)

Development of advanced application techniques using electron holography microscope and in-situ TEM with gas injection system

Manabu Shirai (*Hitachi High-Technologies Corporation*)

– Break –

Graphene

28p-B-5 (16:00–16:30) – *invited* –

Defects, Strain and Polymorphism in Graphene on Metals

K.M. Yu, F. Wang and Michael Altman (*Hong Kong University of Science and Technology*)

28p-B-6 (16:30–17:00) – *invited* –

Noble Gas Nanobubbles at Extreme Pressure under Graphene

G. Zamborlini, M. Imam, L.L. Patera, T.O. Mentis, N. Stojic, C. Africh, A. Sala, N. Bingeli, G. Comelli and Andrea Locatelli (*Elettra - Sincrotrone Trieste*)

28p-B-7 (17:00–17:20)

Origin of Epitaxial Relation of Graphene Formed on SiC

Hiroyuki Kageshima and H. Hibino (*Shimane University*)

Poster Session

- 28p-P-1 Overwritable Liquid Selective Open Channel**
Shuto Ito and D. Ishii (*Nagoya Institute of Technology*)
- 28p-P-2 Oxygen Reduction Reaction Activities for Pt Shells on Pt_xNi_{100-x}**
Ryutaro Kawamura, M. Asano, N. Todoroki and T. Wadayama (*Tohoku University*)
- 28p-P-3 Practical Analysis of Li Distribution by EELS**
Tomoki Akita, N. Taguchi and M. Kohyama (*National Institute of Advanced Industrial Science and Technology*)
- 28p-P-4 Fabrication of Silicon Nanowires using Spontaneously Formed Porous Au Films during Annealing as Catalyst**
Daichi Yamaura and T. Ogino (*Yokohama National University*)
- 28p-P-5 XPS Characterization of Mg-Doped Bi-2212 High Temperature Superconducting Whisker**
Noriyuki Kataoka, H. Tanaka, Y. Araki, Y. Nishizawa, H. Yoshikawa and S. Kishida (*National Institute of Technology, Yonago College*)
- 28p-P-6 Spectroscopic Characterization of Pd/Mg Nanoparticles during Hydrogen Absorption**
Satoshi Ogawa, C. Tsukada, M. Ogawa, T. Ohta, T. Yoshida and S. Yagi (*Nagoya University*)
- 28p-P-7 Fabrication of Au Nanorods by Solution Plasma Method**
Chie Tsukada, T. Mizutani, S. Ogawa, H. Nameki and S. Yagi (*Nagoya University*)
- 28p-P-8 Evolution of Nanocolumnar Morphology in Ag Films Deposited Obliquely under Controlled Gas Atmospheres**
T. Ito, K. Namura and Motofumi Suzuki (*Kyoto University*)
- 28p-P-10 Raman Spectra and X-Ray Diffraction Studies of Orthorhombic Sb₂O₃ Nanobelts under High Pressure**
Zhilei Sui, R. Dai, Z. Wang, Z. Zhang, Z. Ding (*University of Science and Technology of China*)
- 28p-P-11 Control of Crystal Structures of Ferromagnetic Metal Nanowires Encapsulated in Carbon Nanotubes for Tuning of Their Magnetic Properties**
Eisuke Tamaki, H. Sato and Y. Fujiwara (*Mie University*)
- 28p-P-12 Graphitization of Amorphous Carbon on Ni Nanoparticles with Clean Surfaces**
Koji Asaka and Y. Saito (*Nagoya University*)
- 28p-P-13 Large-Scale Simulation on Inelastic Electronic Transport in Single-Walled Carbon Nanotubes**
Keisuke Ishizeki, K. Sasaoka and T. Yamamoto (*Tokyo University of Science*)
- 28p-P-14 Reduction of Breakdown Voltage by using Carbon Nanotube Film Electrode**
Yusuke Komatsu and H. Sato (*Mie University*)
- 28p-P-15 Multi-Walled Carbon Nanotubes with Rectangular Cross-Section**
Kanako Mizutani and H. Kohno (*Kochi University of Technology*)
- 28p-P-16 Splitting and Joining in Carbon Nanotube/Nanoribbon/Nanotetrahedron Growth**
T. Hasegawa and Hideo Kohno (*Kochi University of Technology*)

- 28p-P-17 Chains of Carbon Nanotetrahedra/Nanoribbons**
Hideo Kohno and T. Hasegawa (*Kochi University of Technology*)
- 28p-P-18 Influence of Interface Condition between Vertically Aligned Carbon Nanotube Film and Substrate on Its Thermal Conduction Property**
K. Maeda and Hideki Sato (*Mie University*)
- 28p-P-19 In situ Transmission Electron Microscopy of Individual Carbon Nanotetrahedron/Ribbon Structures in Bending or Joule Heating**
Yusuke Masuda and H. Kohno (*Osaka University*)
- 28p-P-20 In situ TEM Study on Structural and Electric Conduction Properties of a Multiwall Carbon Nanotube Connected to a Mo Electrode**
Yuji Shinomiya, K. Asaka, H. Nakahara and Y. Saito (*Nagoya University*)
- 28p-P-21 Molecular Dynamics Study of 2D SiC Monolayer and 2D Silica Bilayers under Electron Irradiation**
Kazuhiro Tada, R. Nakagawa, A. Kamanaka and M. Yasuda (*National Institute of Technology, Toyama College*)
- 28p-P-22 Application of Algebraic Number Theory to 2-Dimensional Lattice Matching**
Kazuaki Kawahara, R. Arafune, M. Kawai and N. Takagi (*The University of Tokyo*)
- 28p-P-23 Edge-Roughness Engineering on Thermoelectric Performance of Graphene Nanoribbons: Theoretical and Computational Prediction**
Tetsumi Izawa, T. Kengo and T. Yamamoto (*Tokyo University of Science*)
- 28p-P-24 Theoretical and Computational Study of Carrier Localization in Sub-100 nm Edge-Disordered Graphene Nanoribbons**
Kengo Takashima and T. Yamamoto (*Tokyo University of Science*)
- 28p-P-25 Field Emission Patterns Showing Symmetry of Electronic States in Graphene Edges**
N. Yokoyama, K. Nakakubo, K. Iwata, K. Asaka, H. Nakahara and Yahachi Saito (*Nagoya University*)
- 28p-P-26 In situ SEM/STM Observations and Growth Control of Monolayer Graphene on SiC (0001) Wide Terraces**
Chenxing Wang, H. Nakahara, K. Asaka and Y. Saito (*Nagoya University*)
- 28p-P-27 The Formation of Epitaxial Graphene Layers on the 4H-SiC(0001) Surface Studied by First-Principles Calculation**
Junko Ishii, S. Matsushima, T. Ikari and M. Naitoh (*Kyushu Institute of Technology*)
- 28p-P-28 A Study in the Growth of Graphene on the SiC(111) Surface with Ion Beam Irradiation**
Y. Miyawaki, J. Ishii, N. Tsuboi, T. Ikari, M. Naitoh (*Kyushu Institute of Technology*)
- 28p-P-29 In-situ RHEED Study on Graphene Growth during Catalytic Chemical Vapor Deposition**
Hitoshi Nakahara, S. Fujita, T. Minato and Y. Saito (*Nagoya University*)
- 28p-P-30 Effect of Catalyst Film Crystallinity on Graphene Growth by Low-Pressure Chemical Vapor Deposition Method**
Yusuke Matsuura, H. Sato, H. Miyake and K. Hiramatsu (*Mie University*)
- 28p-P-31 Auger and Secondary Electron Emissions from Single Layer of Graphene**
Takamasa Okubo, K. Goto, Y. Ichikawa and W. Kanematsu (*Nagoya Institute of*

Technology)

28p-P-32 Characterization of Interfacial Water Layer between Single-Layer Graphene and Substrate

Tomohiro Koyama, T. Inaba, H. Kato and Y. Homma (*Tokyo University of Science*)

28p-P-33 Study on Morphological Changes of Large-Area Monolayer Graphene Oxide Films on Surface-Modified Substrates during Methane-Assisted Thermal Reduction

Muhammad Zikri Bin Dzukarnain, H. Imai, T. Takami and T. Ogino (*Yokohama National University*)

28p-P-34 Theoretical Study of the Thermoelectric Performance of Strained-Phosphorene

Satoru Konabe and T. Yamamoto (*Tokyo University of Science*)

28p-P-35 Differential Conductance Mapping of Silicene Nanoribbons on Ag(110)

Noriharu Nakashima, R. Omura, M. Shigehara, R. Kuga, H. Tabata, N. Mori, O. Kubo and M. Katayama (*Osaka University*)

28p-P-36 Electronic Characterization of Silicon Nanosheet Formed on MoS₂

M. Shigehara, R. Kuga, N. Nakashima, H. Tabata, O. Kubo and M. Katayama (*Osaka University*)

28p-P-37 DFT Calculation for the Surface of WX₂(X=S,Se)

Akihiro Ohama, K. Nakada and A. Ishii (*Tottori University*)

28p-P-38 Effect of Doping via Surface Adsorption in Atomically Thin Transition Metal Dichalcogenides

Kazuki Osada, S. Ohno, M. Tanaka and T. Suzuki (*Yokohama National University*)

28p-P-39 Fabrication of MoS₂ Nanopatterns using Oxidative Etching Assisted by Ag Particles

Masaru Kuroiwa and T. Ogino (*Yokohama University*)

28p-P-41 Ribbon-like Nanopattern Formed on Nitrogen-Adsorbed Vicinal Cu(001)

Masamichi Yamada, N. Kawamura, K. Nakatsuji and F. Komori (*University of Tokyo*)

28p-P-42 Analysis of the Surface State of Iron Silicide Islands by Scanning Tunneling Spectroscopy

Shotaro Shimizu, T. Narisige, S. Ohno, M. Tanaka, K. Sagisaka, T. Kusawake and D. Fujita (*Yokohama National University*)

28p-P-43 High Resolution Imaging of LaAlO₃(100) using Non-Contact Atomic Force Microscopy

Daiki Katsube, Y. Takase, H. Yamashita, S. Abo, F. Wakaya and M. Abe (*Osaka University*)

28p-P-44 Ligand Effect on Magnetic Anisotropy and Kondo Effect of 3d β -Diketonates

Hironari Isshiki, J. Chen and W. Wulfhekel (*Karlsruhe Institute of Technology*)

28p-P-45 Magnetic Property of Co/Ni Multilayer Observed by XMCD

Tsuneo Yasue, M. Suzuki, T. Nakagawa, Y. Takagi, T. Yokoyama and T. Koshikawa (*Osaka Electro-Communication University*)

28p-P-46 The Slow-Relaxation of the Spin Excited by Optical Pulse in Diluted Magnetic Semiconductors in Quasi-Two Dimensional Geometry

T. Sasaki and I. Kanazawa (*Tokyo Gakugei University*)

28p-P-47 Development of Micro-Photoelectron Diffraction and Mobile Sample Chamber for Investigation of Graphite Intercalated Compounds

Kenji Sugita, S. Nishiyama, E. Uesugi, R. Eguchi, N. Maejima, H. Nishikawa, T. Matsushita, Y. Kubozono and F. Matsui (*Nara Institute of Science and Technology*)

28p-P-48 Separation of Surface- and Bulk-Specific Ti L-Edge XANES Spectra of Rutile and Anatase Surfaces

Hiroshi Ota, H. Matsui, T. Matsushita and F. Matsui (*Nara Institute of science and Technology*)

28p-P-49 Atomic Image Reconstruction from Atomic Resolution Holography using L1-Regularized Linear Regression

Tomohiro Matsushita (*Japan synchrotron radiation research institute*)

28p-P-50 X-Ray Fluorescence Holographic Study on High-Temperature Superconductor $\text{FeSe}_{0.4}\text{Te}_{0.6}$

Yuki Ideguchi, K. Kamimura, K. Kimura, S. Hosokawa, N. Happo, K. Hayashi, Y. Ebisu, T. Ozaki, J.R. Stellhorn, M. Suzuki, H. Okazaki, A. Yamashita and Y. Takano (*Kumamoto University*)

28p-P-51 Local Structure of Ni-Fe Invar Alloy: An X-Ray Fluorescence Holography Study

Y. Ideguchi, K. Kamimura, Koji Kimura, S. Hosokawa, N. Happo, K. Hayashi and K. Yubuta (*Kumamoto University*)

28p-P-52 Characterization of the $\text{LiMn}_2\text{O}_4/\text{Na}_x\text{MnO}_2$ Interface by Scanning Transmission Electron Microscopy

Mitsunori Kitta, T. Akita and M. Kohyama (*National Institute of Advanced Industrial Science and Technology*)

28p-P-53 Determination of Ledge Energies and Domain Wall Energy Based on a Lattice Model for Si(111) Step Bunching near (1×1)-(7×7) Phase Transition

Noriko Akutsu, H. Hibino and T. Yamamoto (*Osaka Electro-Communication University*.)

28p-P-54 Adsorption of Copper Phthalocyanine on Surfaces of Nano-Pyramid Grown via Nobel Metal Surface Diffusion

H. Asai, S. Kumagai, D. Asai, S. Kato, H. Murata, E. Rokuta and C. Oshima (*Meijo University*)

28p-P-55 Potential-Dependent Adsorption and Reaction of Cysteine Molecules on Gold Surfaces in Electrolyte Solution by Surface Reflectance Spectroscopy

Shinya Ohno, I. Sakurada, Y. Fujimori, N. Ninomiya, Y. Noda, K. Ohno, T. Sekiya and M. Tanaka (*Yokohama National University*)

28p-P-56 New Method for Analyzing the Second Harmonic Generation Phase from the Interface between Indium Tin Oxide and Organic Layer

Muhammad Samir Ullah, S.Z. Ngah Demon, K. Matsumoto, K.T.T. Hien, G. Mizutani and H. Rutt (*Japan Advanced Institute of Science and Technology*)

28p-P-57 Hydrogen Desorption Kinetics from H-Si (111) Surfaces Studied by Sum Frequency Generation and Second Harmonic Generation

Md. Abdus Sattar, K.T.T. Hien, Y. Miyauchi and G. Mizutani (*Japan Advanced Institute of Science and Technology*)

28p-P-58 Up-Conversion Luminescence of Bi^{3+} -Doped $\text{AYb}_{1-x}(\text{WO}_4)_2$ ($A = \text{Li}, \text{Na}$)

Tkuya Shimemura, N. Sawaguchi and M. Sasaki (*Muroran Institute of Technology*)

28p-P-60 An Ultrathin Corrosion-Resistant Film on a Steel Surface Formed by Dipping in a Tungstate Solution

Tomohiro Aoyama, E. Hamada, M. Nagoshi, S. Tachibana and K. Shiotani (*JFE Steel*)

Corporation)

28p-P-61 Ion Conductivity at Solid-Electrolyte/Electrode Interface in All-Solid-State Batteries

Susumu Shiraki, M. Haruta, T. Suzuki, R. Shimizu, H. Kawasoko and T. Hitosugi
(*Tohoku University*)

28p-P-62 Non-Destructive Interface States Measurement Method

Masaaki Furuta, K. Shimizu and H. Kubota (*Kumamoto University*)

28p-P-63 Multi Electrode System for Non-Destructive and Contactless Wafer Evaluation

Kojiro Shimizu, M. Furuta, M. Nagano, K. Kobayashi and H. Kubota (*Kumamoto University.*)

28p-P-64 Three-Dimensional Atomic Distribution in a Bimetallic Nanoparticle Evaluated by an Iterative EXAFS Analysis

Yusaku F. Nishimura, T. Hamaguchi, S. Yamaguchi, H. Takagi, K. Dohmae, T. Nonaka and Y. Nagai (*Toyota Central Research and Development Laboratories*)

October 29, 2015 (Thursday)

Room A

Special Lecture

29a-A-1 (9:00–10:00)

Group III Nitride Semiconductors as Future Key Materials for Energy Saving and Energy Harvesting

Hiroshi Amano, T. Yamamoto, A. Tamura, G. Ju, M. Deki and Y. Honda (*Nagoya University*)

Tutorial

29a-A-2 (10:20–11:20) – *tutorial* –

Electronic Stopping of Charged Particles in Matter

Peter Bauer (*Johannes Kepler University Linz*)

Conference Photo (11:20–11:40)

October 30, 2015 (Friday)

Room A

Transmission electron microscopy

30a-A-1 (9:00–9:30) – *invited* –

Low-Voltage Coherent Electron Imaging Based on a Single-Atom Electron Source

Ing-Shouh Hwang, W.-T. Chang, C.-Y. Lin and W.-H. Hsu (*Academia Sinica*)

30a-A-2 (9:30–10:00) – *invited* –

Lower-Voltage Electron Microscopy for Material Characterization

Koji Kimoto, S. Yamashita, S. Koshiya, J. Kikkawa, T. Nagai and K. Ishizuka (*National Institute for Materials Science*)

30a-A-3 (10:00–10:20)

Microstructure of Nano-Crystalline Globules Embedded in an Amorphous Matrix in Immiscible Alloys

Takeshi Nagase and Y. Umakoshi (*Osaka University*)

30a-A-4 (10:20–10:40)

Atomic Resolution STEM Imaging of Uranium Dioxide

Rongguang Zeng, Y. Zhao, D. Ren and Z. Ding (*Science and Technology on Surface Physics and Chemistry Laboratory*)

– Break –

Scanning probe-based techniques

30a-A-5 (11:00–11:30) – *invited* –

Ultra-Fast Simultaneous SPM and Raman Spectroscopy Approach for Characterizing Nano-Level Material

Nobuyuki Naka (*HORIBA,Ltd.*)

30a-A-6 (11:30–11:50)

Identification of Individual Si and Ge Atoms by AFM

Jo Onoda, K. Niki and Y. Sugimoto (*The University of Tokyo*)

30a-A-7 (11:50–12:10)

Force Components in XANAM Measurements for Surface Chemical Analysis

Shushi Suzuki, S. Mukai, W.-J. Chun, M. Nomura and K. Asakura (*Nagoya University*)

Closing Ceremony (12:20–12:40)

Room B

Current status and future trends in standardization for surface chemical analysis and microbeam analysis

30a-B-1 (9:00–9:30) – *invited* –

AES and Secondary Electron Emission Data Base (absolute)

Keisuke Goto and W. Kanematsu (*AIST-Chubu Center*)

30a-B-2 (9:30–10:00) – *invited* –

Standardization Activities in ISO TC 201 (Surface Chemical Analysis)

Hidehiko Nonaka (*National Institute of Advanced Industrial Science and Technology*)

30a-B-3 (10:00–10:20)

A Theoretical Method for Calculation of STEM-EELS Spectra of Nanoparticles

Kejun Zhang, B. Da and Z. Ding (*University of Science and Technology of China*)

30a-B-4 (10:20–10:40)

Development of New Global Ionizing Radiation Monitoring Network Using SrI₂(Eu)-Scintillator and Multi-Pixel Photon Counter for Gamma-Ray Spectroscopy

Shigekazu Nagai, K. Kawamura, Y. Kimura, J. Yoshii, R. Ikeda and R. Shimizu (*Mie University*)

– Break –

Post-deadline papers

30a-B-5 (11:00–11:20)

Development of the Certified Reference Material with Triple Delta-Doped Boron Nitride Layers for Surface Analysis in Depth

Akira Kurokawa, Y. Azuma, S. Terauchi, T. Takatsuka and T. Narukawa (*National Institute of Advanced Industrial Science and Technology*)

30a-B-6 (11:20–11:40)

Performance of SrI₂(Eu)-Scintillator of 1.5" ϕ \times 1.5" High with Multi-Pixel Photon Counters Attached on Both the Top- and Bottom- Surfaces for γ -Ray Spectroscopy

Ken Kawamura, Y. Kimura, S. Nagai, Y. Kamakura, J. Yoshii, R. Satoh, R. Shimizu and S. Sakuragi (*Osaka University*)

30a-B-7 (11:40–12:00)

Electronic Structures and Photoinduced Transfer Rates of CdSe Quantum Dots on TiO₂ -- the Impact of Substrate Crystal Orientation

Taro Toyoda, W. Yindeesuk, K. Kamiyama, K. Katayama, S. Hayase and Q. Shen (*The University of Electro-Communications*)

Closing Ceremony (12:20–12:40) in Room A