

## —ALC'17 Scientific Program—

**December 4, 2017 (Monday)**

**Room A (Jasmine I, II)**

**Opening ceremony (9:00 – 9:20)**

*141 Award ceremony & lecture*

**4a-A-1** (9:20-10:20) -141 award lecture-

**The Surface Science of Catalysis and More, Using Ultrathin Oxide Films as Templates: A Perspective**

\*Hans-Joachim Freund (*Fritz Haber Institute of the Max Planck Society*)

- Break -

**4a-A-2** (10:40-11:40) -141 award lecture-

**Artificially controlled graded magnonic structures on FeNi films by FIB**

J. Gloss, L. Flajšman, M. Horký, V. Křížáková, T. Šikola, M. Urbánek, \*P. Varga (*CEITEC BUT*)

*Student Award Ceremony & Short Presentations (11:40-12:20)*

**5p-P-45 Observation of spider silk by femtosecond pulse laser second harmonic generation microscopy**

\*Yue Zhao, Yanrong Li, Khuat Thi Thu Hien, Goro Mizutani, Harvey N. Rutt (*Japan Advanced Institute of Science and Technology*)

**8a-B-3 Chemical State and Stability of Nitrogen Doped in NaTaO<sub>3</sub>**

\*Akiyo Ozawa, Muneaki Yamamoto, Tomoko Yoshida (*Osaka City University*)

**7p-A-13 Aldosterone specific visualization in primary aldosteronism using imaging mass spectrometry**

\*Emi Takeo, Yuki Sugiura, Koshiro Nishimoto, Eiichiro Fukusaki, Shuichi Shimma (*Osaka University*)

**7a-B-4 The effect of anodizing potential and electrolyte composition on the ordering of nanoporous anodic alumina studied operando using GTSAXS**

\*Jonas Evertsson, Gary Harlow, Nikolay Vinogradov, Weronica Linpé, Francesco Carla, Lisa Rullik, Roberto Felici, Edvin Lundgren (*Lund University*)

**5p-P-5 Atomistic study of GaSe/Ge(111) interface formed through van der Waals epitaxy**

\*Takahiro Yonezawa, Tatsuya Murakami, Koichi Higashimine, Antoine Fleurence, Yoshifumi Oshima, Yukiko Yamada-Takamura (*Japan Advanced Institute of Science and Technology*)

**4p-P-34 Surface Structure Analysis and Atomic-sites and Valences Separation of Spinel-type Fe Oxide**

\*Yusuke Hashimoto , Munetaka Taguchi , Hiroyuki Matsuda , Fumihiko Matsui , Hiroshi Daimon (*Nara Institute of Science and Technology*)

**4p-P-50 Elementary Excitation of Secondary Electron in Graphene on Nickel**

\*Kota Shihommatsu, Junro Takahashi, Hiroki Kato, Yoshikazu Homma (*Tokyo University of Science*)

- Lunch -

*Electron and optical spectroscopy*

**4p-A-1** (14:10-14:40) –invited–

**Parameterization of quantitative applications of electron spectroscopies**

\*Aleksander Jablonski (*Institute of Physical Chemistry, Polish Academy of Sciences*)

**4p-A-2** (14:40-15:00)

**Surface Action Spectroscopy with Rare Gas Messenger Atoms**

Zongfang Wu, Agata Plucienik, Felix E. Feiten, Matthias Naschitzki, Walter Wachsmann, Sandy Gewinner, Wieland Schöllkopf, \*Helmut , Kühlenbeck, Hans-Joachim Freund (*Fritz Haber Institute of the Max Planck Society*)

**4p-A-3** (15:00-15:20)

**Cathodoluminescence imaging for detecting non-metallic inclusions in steel**

\*Susumu Imashuku, Koichiro Ono, Kazuaki Wagatsuma (*Tohoku University*)

**4p-A-4** (15:20-15:40) –sponsored session–

*FOCUS GmbH*

- Break -

*Surface modifications of 2D materials*

**4p-A-5** (16:10-16:40) –invited–

**Femtosecond electronic response of graphene to the strong and localized electric field of a highly charged ion**

\*Friedrich Aumayr (*TU Wien*)

**4p-A-6** (16:40-17:00)

**Alternate field evaporation by changing laser pulsing and voltage pulsing dynamically for atom probe analysis**

\*Masahiro Taniguchi , Osamu Nishikawa (*Kanazawa Institute of Technology*)

**4p-A-7** (17:00-17:20)

**Scanning Electrochemical Cell Microscopy for Visualization of Lithium-ion (De)intercalation Process in Lithium-ion Batteries Electrodes**

\*Akichika Kumatani, Yasufumi Takahashi, Hirokazu Munakata, Hitoshi Shiku, Kiyoshi Kanamura, Tomokazu Matsue (*Tohoku University*)

**4p-A-8** (17:20-17:40)

**Rectification Properties of Boron Nitride Heterojunctions to Silicon**

\*Kungen Teii, Manabu Ishida, Rina Takahashi, Seiichiro Matsumoto (*Kyushu University*)

## Room B (Jasmine III)

*Advanced material –cosmic & enviromental–*

**4p-B-1** (14:10-14:40) –invited–

**First 10 million years of the solar system revealed by micro-analyses of primitive meteorites using SIMS**

\*Kazuhide Nagashima, Gary R. Huss, Alexander N. Krot (*University of Hawaii at Manoa*)

**4p-B-2** (14:40-15:10) –invited–

**Research for the Energy System of the Future**

\*Wolfgang Eberhardt (*DESY*)

**4p-B-3** (15:10-15:30)

**Electron Injection on Metal/n-doped Polymer Semiconductor**

\*Shin Sakiyama, Akane Yasukochi, Takahiro Iwashta, Katsuhiko Fujita (*Kyushu University*)

**4p-B-4** (15:30-15:50)

**Electronic Properties of Non-Polar Surfaces of GaN, InN, and In<sub>2</sub>O<sub>3</sub>**

\*Holger Eisele, Andrea Lenz, Robert Zielinski, Celina Schulze, Michael Schnedler, Verena Portz, Zbigniew Galazka, Philipp Ebert (*Technische Universität Berlin*)

- Break -

*Operand measurements*

**4p-B-5** (16:10-16:40) –invited–

**Synchrotron radiation-based X-ray characterization of Li-ion battery**

\*Takamasa Nonaka (*Toyota Central R&D Labs., Inc.*)

**4p-B-6** (16:40-17:10) –invited–

**Ambient Secondary Ion Mass Analysis with MeV-energy Heavy Ion**

\*Toshio Seki, Kenta Ishii, Masakazu Kusakari, Takaaki Aoki, Jiro Matsuo (*Kyoto University*)

**4p-B-7** (17:10-17:30)

**The structure of the SnO<sub>2</sub>(110)-(4x1) reconstruction**

L. R. Merte, M. Jørgensen, K. Pussi, J. Gustafson, M. Shipilin, A. Schaefer, C. Zhang, J. Rawle, C. Nicklin, G. Thornton, R. Lindsay, B. Hammer, \*E Lundgren (*Lund University*)

**4p-B-8** (17:30-17:50)

**Direct observation of bias-dependence potential distribution in metal/HfO<sub>2</sub> gate stack structures by operando hard x-ray photoelectron spectroscopy**

\*Yoshiyuki Yamashita, Hideki Yoshikawa, Toyohiro Chikyow (*National Institute for Materials Science*)

## Poster Session (Orchid, Orchid foyer)

- 4p-P-1 Preparation and Characterizations of Thrombin Surface-Modified Poly(Lactic-co-Glycolic Acid) by Argon Plasma Treatment, and Its Hemostatic Effect**  
\*Heung Jae Chun, Dae Hyeok Yang, Su Jung You, Jae Kwang Kim, Chun Ho Kim  
(*The Catholic University of Korea*)
- 4p-P-2 Preparation and Characterizations of Hydroxyapatite/BMP-2 Surface-Modified Poly-L-Lactic Acid Disc for Dental and Orthopedic Applications**  
\*Dae Hyeok Yang, Su Jung You, Jae Kwang Kim, Chun Ho Kim, Heung Jae Chun  
(*The Catholic University of Korea*)
- 4p-P-3 Structural evaluations of Fe/boron-doped carbon/Fe<sub>3</sub>Si spin-valve junctions**  
\*Kazuki Kudo, Satoshi Takeichi, Kazutoshi Nakashima, Ken-ichiro Sakai, Masahiko Nishijima, Tsuyoshi Yoshitake (*Kyushu University*)
- 4p-P-4 Effects of N-type doping in Bulk heterojunction layer**  
\*Akane Yasukochi, Yoshinori Kimoto, Katsuhiko Fujita (*Kyushu University*)
- 4p-P-5 Preparation and surface reduction behavior of CeO<sub>2</sub> nanoparticles layer on several crystal substrates**  
\*Takashi Hattori, Masakuni Ozawa, Masatomo Hattori (*Nagoya University*)
- 4p-P-6 Energy materials, Li-ion batteries, Solid state NMR**  
\*Minsoo Ji , Youngil Lee (*University of Ulsan*)
- 4p-P-7 Observation of reaction distribution in electrodes of lithium-ion battery using laser-induced breakdown spectroscopy**  
\*Hiroyuki Taguchi, Susumu Imashuku, Shunsuke Kashiwakura, Kazuaki Wagatsuma, Shun Fujieda, Toru Kawamata, Shigeru Suzuki (*Tohoku University*)
- 4p-P-10 Plasma Deposition of Boron Nitride Films Using Low-Energy Ion Bombardment**  
Yuma Kamimura , Masataka Torigoe , \*Kungen Teii , Seiichiro Matsumoto (*Kyushu University*)
- 4p-P-11 Magnetoresistance effects in spin-valves comprising N-doped carbon interlayers**  
\*Kazuki Kudo, Satoshi Takeichi, Kazutoshi Nakashima, Ken-ichiro Sakai, Tsuyoshi Yoshitake (*Kyushu University*)
- 4p-P-12 Quantitative analysis of dopant site occupancies in Zn-doped W-type ferrite magnets using extended statistical ALCHEMI method**  
\*Yoshihiro Anan, Yoshinori Kobayashi, Masahiro Ohtsuka, Shunsuke Muto  
(*Hitachi, Ltd.*)

- 4p-P-14 Atomic-Orbital Analysis of Possible High Temperature Superconducting Material  $\text{Sr}_{2-x}\text{La}_x\text{IrO}_4$  by Linearly-Polarized-Light Two-Dimensional Photoelectron Spectroscopy**  
\*Rie Horie, Yosuke Kishimoto, Masru Takizawa, Hiroshi Daimon, Jun Akimitsu  
(*Okayama University*)
- 4p-P-15 Electronic state analysis of Li-compounds by synchrotron-radiation photoelectron spectroscopy**  
\*Ryo Ihara, Kei Mitsuhara, Masaru Takizawa (*Ritsumeikan University*)
- 4p-P-16 Atomic scale characterization of brownmillerite oxides: A combined study using STEM-EELS and first-principles calculation**  
\*Yuji Kunisada, Genki Saito, Kazuki Hayami, Takahiro Nomura, Norihito Sakaguchi  
(*Hokkaido University*)
- 4p-P-17 Calibration and Application of the Fe/O based Spin Detector FERRUM**  
Matthias Escher, \*Michael Merkel, Nils Bernhard Weber, Stephan Borek, Jürgen Braun, Jan Minár, Hubert Ebert, Chanyong Hwang, Christian Datzler, Christian Thiede, Markus Donath (*FOCUS GmbH*)
- 4p-P-18 Development of an environmental RHEED and its applications to CVD growth monitoring**  
\*Hitoshi Nakahara, Yoshimi Horio, Yahachi Saito (*Nagoya University*)
- 4p-P-19 Multiway site/element selective chemical analysis of combined X-ray emission/electron energy-loss hyperspectral data using incident electron beam-rocking method**  
\*Masahiro Ohtsuka, Shunsuke Muto, Jakob Spiegelburg, Yoshihiro Anan, Yoshinori Kobayashi (*Nagoya University*)
- 4p-P-20 Stability of single-atom termination at a nanometer scale pyramidal apex of an Ir-coated W (111) tip**  
\*Chuhei Oshima, Masahiko Tomitori, Tatsuya Shimoda, Anto Yasaka, Hirotaka Asai, Eiji Rokuta (*Waseda University*)
- 4p-P-21 Molecular dynamics study of structural changes in single-layer MoS<sub>2</sub> under electron irradiation**  
\*Kazuhiro Tada, Yuya Miyashita, Shuichi Yamada, Masaaki Yasuda (*National Institute of Technology, Toyama College*)
- 4p-P-22 Lithium analysis in Li-ion battery materials by SEM-based approach**  
\*Noboru Taguchi, Hikari Sakaebe, Shingo Tanaka (*National Institute of Advanced Industrial Science and Technology*)
- 4p-P-23 Quantitative evaluation of vacuum deposited glycine by resonant elastic scattering of**

$^{12}\text{C}(\text{p}, \text{p})^{12}\text{C}$

\*Yasuhito Gotoh , Noriaki Nyuba , Yuki Haneji , Chikasa Nishimura , Hiroshi Tsuji (*Kyoto University*)

**4p-P-24 Study on novel biomarker imaging using high-resolution TOF-SIMS for the diagnosis of cancer cell malignancy**

\*Keita Kanenari, Masato Morita, Masatoshi Kakihana, Naohiro Kajiwara, Tatsuo Ohira, Norihiko Ikeda (*Kogakuin University*)

**4p-P-25 Chemical Structural Analysis of Organosilanes with Bi Cluster TOF-SIMS**

Megumi Fukuta , Rie Shishido , \*Shigeru Suzuki (*Tohoku University*)

**4p-P-28 New Decomposition Methods for Chemical Structure Analysis of Huge Synthetic Polymers**

\*Makiko Fujii (*Yokohama National University*)

**4p-P-29 In-situ atom-probe analysis of field induced chemical etching of tungsten with oxygen and nitrogen**

\*Shigekazu Nagai , Minoru Wakamoto , Kazuki Ohtani , Tatsuo Iwata , Koichi Hata (*Mie University*)

**4p-P-30 Temperature Measurement of an Individual Suspended Single-Walled Carbon Nanotube by Photoluminescence Imaging Spectroscopy**

\*Kazuma Nagano, Kazuki Yoshino, Tateki Hanashima, Shohei Chiashi, Yoshikazu Homma (*Tokyo University of Science*)

**4p-P-31 Investigation of Water Encapsulated in Single-walled Carbon Nanotubes by Photoluminescence Spectroscopy**

\*Yuta Saito, Takashi Kato, Kazuki Yoshino, Shohei Chiashi, Yoshikazu Homma (*Tokyo University of Science*)

**4p-P-32 Polarization Property of Raman Scattering from Suspended Single-walled Carbon Nanotubes**

\*Yuichiro Tanaka, Takashi Kato, Kazuki Yoshino, Shohei Chiashi, Yoshikazu Homma (*Tokyo University of Science*)

**4p-P-33 New investigation method on surface roughness correlation function with the use of X-ray reflectivity**

\*Yoshikazu Fujii (*Kobe University*)

**4p-P-34 Surface Structure Analysis and Atomic-sites and Valences Separation of Spinel-type**

**Fe Oxide**

\*Yusuke Hashimoto , Munetaka Taguchi , Hiroyuki Matsuda , Fumihiko Matsui , Hiroshi Daimon (*Nara Institute of Science and Technology*)

**4p-P-36 Development of a portable high resolution  $\gamma$ -ray spectrometer using SrI<sub>2</sub>(Eu)/MPPC/Raspberry Pi for global radiation monitoring network**

\*Y. Kimura, S. Nagai, Y. Kamakura, J. Yoshii, R. Shimizu, V. N. Gluchsenko (*Osaka University*)

**4p-P-38 XANES analysis of oxygenated graphitic carbons**

\*Yasuji Muramatsu , Yuki Ota (*University of Hyogo*)

**4p-P-39 Surface characterization and physical properties of cross-linked polymer thin films**

\*Yuki Nohara , Mina Matsuo , Shigeaki Oyama , Masashi Ohno , Katsumi Chikama (*Nissan Chemical Industries, Ltd*)

**4p-P-40 Chemical state modification of 4H-SiC by ultraviolet-ray aided machining**

\*Masaru Takizawa , Akihiro Hata , Kei Mitsuhara , Takeshi Tanaka (*Ritsumeikan University*)

**4p-P-41 The electric potential in organic thin film transistor including the buried interfaces observed by operando hard X-ray photoemission spectroscopy measurement**

\*Takeshi Watanabe, Satoshi Yasuno, Noriyuki Yoshimoto, Ichiro Hirosawa (*Japan Synchrotron Radiation Research Institute*)

**4p-P-42 Fabrication of Rh-Pd(PVP) nanoparticle and characterization by NEXAFS and XPS**

\*Shinya Yagi, Takeshi Kodera, Chie Tsukada, Eiji Ikenaga, Satoshi Ogawa (*Nagoya University*)

**4p-P-43 XPS spectral changes of DLC thin films obtained by argon ion sputtering**

\*Kenji Yamada, Takahiro Imai, Yushi Iijima, Toru Harigai, Yoshiyuki Suda, Hirofumi Takikawa (*National Institute of Technology, Ishikawa College*)

**4p-P-44 Surface characterization of silicon spheres for density determination by XPS**

\*Lulu Zhang, Naoki Kuramoto, Akira Kurokawa, Kenichi Fujii (*National Institute of Advanced Industrial Science and Technology*)

**4p-P-45 Scintillation properties of Nd-doped lutetium yttrium aluminum oxide perovskite single crystals doped with different Nd concentrations**

\*Masaki Akatsuka, Yuki Usui, Daisuke Nakauchi, Naoki Kawano, Go Okada, Noriaki Kawaguchi, Takayuki Yanagida (*Nara Institute of Science and Technology University*)

**4p-P-46 Auger-free luminescence of BaF<sub>2</sub> Transparent Ceramic**

\*Takumi Kato, Naoki Kawano, Go Okada, Noriaki Kawaguchi, Kentaro Fukuda, Takayuki Yanagida (*Nara Institute of Science and Technology*)



**4p-P-47 Probe electrospray ionization of mixture solutions using metal needles with different tip conditions**

\*Satoshi Ninomiya, Shunpei Iwamoto, Lee Chuin Chen, Kenzo Hiraoka (*University of Yamanashi*)

**4p-P-48 Flash desorption mass spectrometry of solid materials using a pre-heated knife-edge filament**

\*Satoshi Ninomiya, Dilshadbek T. Usmanov, Kenzo Hiraoka (*University of Yamanashi*)

**4p-P-49 Redox Phenomena Induced by X-rays in KBr:Sm**

\*Go Okada, Yutaka Fujimoto, Naoki Kawano, Noriaki Kawaguchi, Safa Kasap, Takayuki Yanagida (*Nara Institute of Science and Technology*)

**4p-P-50 Elementary Excitation of Secondary Electron in Graphene on Nickel**

\*Kota Shihommatsu, Junro Takahashi, Hiroki Kato, Yoshikazu Homma (*Tokyo University of Science*)

**4p-P-51 Scintillation of neodymium doped multi component garnet crystals**

\*Takayuki Yanagida, Hiroki Sato, Naoki Kawano, Go Okada, Noriaki Kawaguchi (*Nara Institute of Science and Technology*)

**4p-P-52 Sum frequency generation investigation of the orientation of 3-Aminopropyltriethoxysilane on the Si(111) substrates**

\*Khuat Thi Thu Hien, Phan Trong Tue, Goro Mizutani, Harvey N. Rutt (*Japan Advanced Institute of Science and Technology*)

**4p-P-53 Development of an ion beam source for SIMS in atmospheric pressure**

\*Haruka Koreeda, Tetsuo Sakamoto (*Kogakuin University*)

**4p-P-54 Hard Coating of Ultrananocrystalline Diamond/Nonhydrogenated amorphous Carbon Composite Films on Cemented Carbide**

\*Tsuyoshi Yoshitake, Mohamed Egiza, Koki Murasawa, Mohamed Ali, Hiroshi Naragino, Aki Tominaga, Yasuo Fukui, Hidenobu Gonda, Masatoshi Sakurai (*Kyushu University*)

**4p-P-55 Characterization of Electrical Double Layer (EDL) at Solid/Liquid Interface using Medium Energy Ion Scattering (MEIS)**

\*Heejin Lim, KangWon Jung, DaeWon Moon (*Daegu Gyeongbuk Institute of Science, Technology*)

**4p-P-56 Ambient Mass Spectrometry for Monitoring Microbial Volatile Metabolites from Solid-derived Fungi Using a DART Ion Source**

\*Takae Takeuchi, Yuri Tanaka, Tohru Yamagaki, Motoshi Sakakura (*Nara Women's University*)

**December 5, 2017 (Tuesday)**

**Room A (Jasmine I, II)**

*Plenary Lectures*

**5a-A-1** (9:00-9:50) -plenary-

**New trends in atomic level characterization with synchrotron radiation and free electron lasers**

\*Tetsuya Ishikawa (*RIKEN*)

**5a-A-2** (9:50-10:40) -plenary-

**Big-Data Routes for Atomic-Level Characterization of Novel Materials**

\*Matthias Scheffler (*Fritz-Haber-Institut der Max-Planck-Gesellschaft*)

- Break -

*Characterization by photon*

**5a-A-3** (11:00-11:30) –invited–

**Introduction of Cathodoluminescence spectroscopy and its Applications**

Yoshiteru Yasuda, Seiji Higuchi (*Horiba*)

**5a-A-4** (11:30-11:50)

**Local control of the magnetic anisotropy by photon and electron beam induced CO dissociation**

Francesca Genuzio, Pietro Genoni, Tevik Onur Menteş, Benito Santos, Alessandro Sala,  
\*Andrea Locatelli (*Elettra - Sincrotrone Trieste S.C.p.A.*)

**5a-A-5** (11:50-12:10)

**Establishment of technological infrastructures for the creation of CNF/CNT hybrid nanostructures**

\*Yoichi Ogata, Hajime Sasaki, Bunshi Fugetsu, Ichiro Sakata (*The University of Tokyo*)

**5a-A-6** (12:10-12:30) –sponsored session-

*Scienta Omicron, Inc.*

- Lunch -

*3D atomic visualization and characterization of functionally active site*

**5p-A-1** (14:10-14:40) –invited–

**Determining atomic and electronic structure in complex materials and heterostructures with element- and site- specificity**

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

**5p-A-2** (14:40-15:10) –invited–

**Principles of Atomic Resolution Holography and New Atomic Image Reconstruction Algorithm**

\*Tomohiro Matsushita (*Japan Synchrotron Radiation Research Institute*)

**5p-A-3** (15:10-15:30)

**A valence selective x-ray fluorescence holography study of an yttrium oxide thin film**

\*Jens Ruediger Stelhorn, Shinya Hosokawa, Naohisa Happo, Hiroo Tajiri, Tomohiro Matsushita, Kenichi Kaminaga, Tomoteru Fukumura, Tetsuya Hasegawa, Kouichi Hayashi  
(*Kumamoto University*)

**5p-A-4** (15:30-15:50)

**Time-Resolved Local Structure Imaging by Micro-Photoelectron Holography and Photoemission Electron Microscopy at SPring-8**

\*Toyohiko Kinoshita (*Japan Synchrotron Radiation Research Institute (JASRI)*)

- Break -

*3D atomic visualization and characterization of functionally active site*

**5p-A-5** (16:10-16:40) –invited–

**Atomic level structure of the interface between titanium oxides and liquid water**

\*Geoff Thornton (*UCL*)

**5p-A-6** (16:40-17:10) –invited–

**Local dopant site structure analysis in perovskite titanates**

\*M. Lippmaa (*University of Tokyo*)

**5p-A-7** (17:10-17:30)

**3D structures of atomically dispersed metals on a TiO<sub>2</sub>(110) surface premodified with a functional organic molecule studied by polarization- dependent total reflection fluorescence (PTRF)-XAFS**

\*Satoru Takakusagi, Kiyotaka Asakura (*Hokkaido University*)

**5p-A-8** (17:30-17:50)

**Application of X-ray fluorescence imaging to protein crystals**

\*Ayana Sato-Tomita, Naoya Shibayama, Naohisa Happo, Tomohiro Matsushita, Kouichi Hayashi, Yuji. C. Sasaki (*Jichi Medical University*)

## Room B (Jasmine III)

### *LEEM & PEEM*

**5a-B-1** (11:00-11:30) –invited–

**Oxide Thin Film Growth for Application in Au Nanoparticle Catalysis**

Zichun Miao , Ka Man Yu , \*Michael Altman (*Hong Kong University of Science and Technology*)

**5a-B-2** (11:30-11:50)

**Surface characterization of an industrial aluminum alloy by XPEEM, XPS, and XRR during heat treatment**

\*Lisa Rullik, Florian Bertram, Yuran R. Niu, Jonas Evertsson, Jan-Olov Nilsson, Alexei A. Zakharov, Anders Mikkelsen, Edvin Lundgren (*Lund University*)

**5a-B-3** (11:50-12:10)

**Nucleation, morphology and structure of sub-nm thin ceria islands on Rh(111)**

\*Jens Falta, Jan Höcker, Sanjaya D. Senanayake, Jerzey T. Sadowski, Jan Ingo Flege (*University of Bremen*)

**5a-B-4** (12:10-12:30)

**Reactive diffusion dynamics of quasi-free-standing silicide monolayer with high surface conductivity**

\*Zheng Wei, Lin Zhu, Guodong Shi, Xiaodong Yang, Meng Li, Lei Yu, Bo Shang, Rei Hobara, Nakamura Tomonori, Shuji Hasegawa, Wen-Xin Tang (*Chongqing University*)

- Lunch -

### *Time-resolved measurements and imaging*

**5p-B-1** (14:10-14:40) –invited–

**Subfemtosecond Dynamics of Orbital Angular Momentum in Nanoplasmonic Spirals**

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

**5p-B-2** (14:40-15:10) –invited–

**Imaging and tailoring chiral magnetism in epitaxial multilayers**

\*Andreas Schmid, Gong Chen (*Lawrence Berkeley National Lab*)

**5p-B-3** (15:10-15:30)

**Simulation-based Feasibility Assessment of an Electron-Beam Array made with Multi-hole Permanent Magnets**

\*Takeharu Goji Etoh, Kazuhiro Shimonomura, Katsushige Tsuno, Kazuki Hiraoka (*Ritsumeikan University*)

**5p-B-4** (15:30-15:50)

**3D imaging of change in the hydration structure at phyllosilicate crystal-electrolyte solution interfaces by FM-AFM**

\*Yuki Araki, Kei Kobayashi, Hirofumi Yamada (*Kyoto University*)

- Break -

*Time-resolved measurements and imaging*

**5p-B-5** (16:10-16:40) –invited–

**Optically excited structural transition in atomic wires on surfaces at the quantum limit: a femtosecond ultrafast surface electron diffraction study**

\*Michael Horn von Hoegen (*Universität Duisburg-Essen*)

**5p-B-6** (16:40-17:10) –invited–

**Progress on developing Ultrafast Spin-Polarized Low Energy Electron Microscopy**

Lei Yu, Weishi Wan, Lin Zhu, Xiaodong Yang, Zheng Wei, Jefferson Zhe Liu, Jun Feng, Kai Kunze, Oliver Schaff, Yoshihiro Arai, Yasue Tsuneo, Takanori Koshikawa, Ruud Tromp, \*Wen-xin Tang (*Chongqing University*)

**5p-B-7** (17:10-17:30)

**Temperature dependent local atomic structures in the traditional Fe<sub>65</sub>Ni<sub>35</sub> Invar alloy by x-ray fluorescence holography**

Yuki Ideguchi, Jens R. Stellhorn, \*Shinya Hosokawa, Naohisa Happo, Tomohiro Matsushita, Kunio Yubuta, Koji Kimura, Koichi Hayashi (*Kumamoto University*)

**5p-B-8** (17:30-17:50)

**In plane local atomic configuration of Mg-Zn-Y long period stacking ordered alloys studied by X-ray fluorescence holography**

\*Koji Kimura, Takumi Nishioka, Kouichi Hayashi, Koji Hagihara, Hitoshi Izuno, Naohisa Happo, Yuta Yamamoto, Eiji Abe, Shinya Hosokawa, Motohiro Suzuki (*Nagoya Institute of Technology*)

## Poster Session (Orchid, Orchid foyer)

- 5p-P-1 Theoretical study of electric power generation using valley indices in TMDCs**  
\*Satoru Konabe, Takahiro Yamamoto (*Tokyo University of Science*)
- 5p-P-2 Spin polarization of field-emitted electrons from graphene edges**  
\*Shigekazu Nagai, Hiromu Ikemizu, Kazuya Kunoh, Koichi Hata, Yudai Watanabe, Toru Hoshino, Masaru Irita, Hitoshi Nakahara, Yahachi Saito (*Mie University*)
- 5p-P-3 Electronic and chemical state analyses of oxidizing graphene**  
\*Kota Takaoka, Shiro Entani, Seiji Sakai, Kei Mitsuhara, Masaru Takizawa (*Ritsumeikan University*)
- 5p-P-4 SPM imaging of DNA on Graphene surface**  
\*Hiroyuki Tanaka, Masateru Taniguchi (*Osaka University*)
- 5p-P-5 Atomistic study of GaSe/Ge(111) interface formed through van der Waals epitaxy**  
\*Takahiro Yonezawa, Tatsuya Murakami, Koichi Higashimine, Antoine Fleurence, Yoshifumi Oshima, Yukiko Yamada-Takamura (*Japan Advanced Institute of Science and Technology*)
- 5p-P-6 Study of the solid-liquid interface for a lithium-metal secondary battery application**  
\*Mitsunori Kitta, Masahiro Shikano, Hikaru Sano (*AIST*)
- 5p-P-7 Observation of Second Harmonic Generation from the Stepped Au/TiO<sub>2</sub>(320) Interface**  
\*Haque MD Ehasanul, Daiki Kobayshi, Yuki Tomatsu, Khuat Thi Thu Hien, Goro Mizutani, Harvey N. Rutt (*Japan Advanced Institute of Science and Technology*)
- 5p-P-9 Study of surface orientation of polyimide chains giving high and low pretilt angle using optical second harmonic generation**  
\*Yousuke Inomata, Shinya Asakura, Khuat Thi Thu Hien, Goro Mizutani, Yoshitaka Murakami, Takashi Okada (*Japan Advanced Institute of Science and Technology, JSR Co., Ltd.*)
- 5p-P-10 Atomic-scale friction phenomena on polymer surface: Molecular dynamics study**  
\*Akinori Iwai, Kazuhiro Tada, Hiroaki Kawata, Yoshihiko Hirai, Masaaki Yasuda (*Osaka Prefecture University*)
- 5p-P-11 Structural analysis and suppression of Jahn-Teller distortion of Cu-ferrite nanoparticles surrounded by amorphous SiO<sub>2</sub> for medical application**  
\*Koki Fujiwara, Shinji Kimura, Shunta Miyano, Taisei Ide, Yoshiyuki Hosokai, Akihito

Usui, Yoshio Machida, Haruo Saito, Yuko Ichianagi (*Yokohama National University*)

**5p-P-12 Ferromagnetic behavior and electronic characterization of ZnO nanoparticles for imaging probes**

\*Taisei Ide, Kiminori Hyodo, Koki Fujiwara, Tatsuya Hashimoto, Daiki Aihara, Akito Oshima, Kouhei Kanda, Yuko Ichianagi (*Yokohama National University*)

**5p-P-13 Study of carbon-nanotube-composite papers aiming to materialize "paper antenna" for IoT**

\*Yuki Ikezoe, Takahide Oya (*Yokohama National University*)

**5p-P-14 Electronic state and growth mode analysis of Cu nanoparticles on rutile TiO<sub>2</sub>(110)**

\*Kei Mitsuhashi, Toshitaka Aoki, Masaru Takizawa (*Ritsumeikan University*)

**5p-P-15 Bulk synthesis of linear carbon-chains confined inside single-wall carbon nanotubes by vacuum discharge**

Satoshi Toma, Koji Asaka, Masaru Irita, \*Yahachi Saito (*Nagoya University*)

**5p-P-16 Magnetism of magnetic molecule absorbed on metal surfaces**

\*Susumu Shiraki (*Nippon Institute of Technology*)

**5p-P-17 Electrochemical properties of Li<sub>4</sub>Ti<sub>5</sub>O<sub>12</sub> and LiTi<sub>2</sub>O<sub>4</sub> epitaxial thin films synthesized with pulsed laser deposition**

\*Susumu Shiraki, Yoshitaka Takagi, Ryota Shimizu, Taro Hitosugi (*Nippon Institute of Technology*)

**5p-P-18 Effects of hydrogenation on thermal transport in ultrananocrystalline diamond/amorphous carbon composite films**

\*Satoshi Takeichi, Takashi Nishiyama, Mitsuru Tabara, Shuichi Kawawaki, Masamichi Kohno, Koji Takahashi, Tsuyoshi Yoshitake (*Kyushu University*)

**5p-P-19 Photodetection properties of heterojunction diodes comprising boron-doped ultrananocrystalline diamond films prepared by coaxial arc plasma deposition and n-type silicon substrates**

\*Satoshi Takeichi, Naofumi Nishikawa, Yuki Katamune, Tsuyoshi Yoshitake (*Kyushu University*)

**5p-P-20 Surface chemical states of gold nanoparticles prepared by solution plasma in CsCl aqueous solution**

\*Chie Tsukada, Hikaru Yoshida, Satoshi Ogawa, Akitaka Yoshigoe, Shinya Yagi, Tsuyoshi Yaita (*Nagoya University*)

**5p-P-21 Fabrication of coherent electron sources made with reservoirs of palladium oxide.**

\*Hirofumi Asai, Ryota Kawai, Fumiya Matsubara, Hidekazu Murata, Eiji Rokuta, Chuhei Oshima (*Meijo University*)

- 5p-P-22 Nitriding of gallium oxide photocatalysts for visible light response**  
\*Yuma Kato, Muneaki Yamamoto, Akiyo Ozawa, Yu Kawaguchi, Tomoko Yoshida (*Osaka City University*)
- 5p-P-23 Effects of the crystalline structure of Ga<sub>2</sub>O<sub>3</sub> on the photocatalytic activity for CO<sub>2</sub> reduction with water**  
\*Yu Kawaguchi, Muneaki Yamamoto, Akiyo Ozawa, Yuma Kato, Tomoko Yoshida (*Osaka City University*)
- 5p-P-24 Observation of self-standing films of binary 8CB/7AB7 liquid crystals by using low energy SEM**  
\*Fumiya Matsubara, Shin-ya Sugisawa, Natsumi Sasaki, Hiroataka Asai, Hidekazu Murata, Eiji Rokuta, Chuhei Oshima, Yuka Tabe (*Meijo University*)
- 5p-P-25 Investigation on the structural, dielectric and impedance analysis of lanthanum substituted lithium cobalt oxide**  
\*Misbah Mumtaz, M.A. Rafique, M.M. Hasan (*Pakistan Institute of Engineering and Applied Sciences*)
- 5p-P-26 The Observation of Catalytic Reaction Products with Atom Probe Tomography Apparatus**  
\*Takumi Suzuki, Yun Kim, Takuya Egawa, Masanori Owari (*The University of Tokyo*)
- 5p-P-27 Si Doping Effects on Mechanical Properties of Ultrananocrystalline Diamond/Amorphous Carbon Composite Films Deposited on Cemented Carbide Substrates by Coaxial Arc Plasma Deposition**  
\*Tsuyoshi Yoshitake, Mohamed Egiza, Koki Murasawa, Mohamed Ali, Hiroshi Naragino, Aki Tominaga, Yasuo Fukui, Hidenobu Gonda, Masatoshi Sakurai (*Kyushu University*)
- 5p-P-28 Electron scattering simulation to design Faraday cup**  
\*Takatoshi Donga, Yuka Ito, Masatoshi Kotera (*Osaka Institute of Technology*)
- 5p-P-29 Development of a voltage applying and heating specimen holder for observation of solid oxide fuel cell's reactions in environmental TEM**  
\*Takafumi Ishida, Hideto Hiroshima, Kimitaka Higuchi, Takayoshi Tanji, Masahiro Tomita, Koh Saitoh (*Nagoya University*)
- 5p-P-30 Measurement of the flare electron current distribution with various accelerating voltage in scanning electron microscope**  
\*Yoshifumi Hagiwara, Kentaro Morimoto, Yuka Ito, Masatoshi Kotera (*Osaka Institute of Technology*)
- 5p-P-31 Contribution of flare electrons on enormous large areal positive charging**  
\*Shota Nishimura, Takuya Kawamoto, Hideaki Mizuno, Masaki Moriyama, Masatoshi Kotera (*Osaka Institute of Technology*)



**5p-P-32 Robustness Calculation of Magnetic Sectors for SEM/LEEM/PEEM**

\*Yasuhiro Shirasaki, Momoyo Enyama (*Hitachi, Ltd.*)

**5p-P-33 Scanning confocal electron microscopy (SCEM) using 4D-dataset acquisition**

\*Masaki Takeguchi, Takumi Hamaoka, Kazutaka Mitsuishi, Ayako Hashimoto (*National Institute for Materials Science*)

**5p-P-34 Three-dimensional trajectory simulation of scattered electrons in scanning electron microscope specimen chamber**

\*Kazumasa Terada, Yoshifumi Hagiwara, Masatoshi Kotera (*Osaka Institute of Technology*)

**5p-P-36 Observation of the Gas Adsorption on the Surface of Catalytic Materials by Atom Probe Tomography**

\*Takuya Egawa, Yun Kim, Takumi Suzuki, Masanori Owari (*The University of Tokyo*)

**5p-P-38 Development of Multi-color Ti:Sa Lasers for Micro-imaging of "Difficult-to-Analysis" Nuclides by means of Resonant Laser SNMS**

\*Masato Morita, Keita. Kanenari, Kosuke Saito, Toshihide Kawai, Takeo Okumura, Volker Sonnenschein, Hideki Tomita, Tetsuo Sakamoto (*Kogakuin University*)

**5p-P-39 Chromosome imaging by TOF-SNMS**

\*Kosuke Nagata, Ken-ichi Bajo, Chie Takeuchi, Hideyuki Mitomo, Tomoya Kotani, Kuniharu Ijro, Hisayoshi Yurimoto (*Hokkaido University*)

**5p-P-41 Emission trajectory calculation of ions from Shave-off cross section for realization of 3D Shave-off method**

\*Yuto Takagi, Kang Sohee, Takeki Azuma, Kohei Matsumura, Bunbunoshin Tomiyasu, Masanori Owari (*University of Tokyo*)

**5p-P-42 Compact nano-resolution X-ray microscope based on carbon nanotube FE-SEM**

\*Masaru Irita, Shintarou Yamazaki, Hitoshi Nakahara, Yahachi Saito (*Nagoya University*)

**5p-P-43 Influence of Shot Peening on Hot Work Tool Steel**

\*Sachin Vishwas Patil, Valmik Bhavar, Prakash Kattire, Sandeep Thakare, P.P.Date, R. K. P. Singh, (*Kalyani Center for Technology , Innovation (KCTI)*)

**5p-P-44 Microscopic MALDI-imaging mass spectrometry reveals specific distribution of phytochemicals in *Zingiberaceae***

\*Shuichi Shimma, Takehito Sagawa (*Osaka University*)

**5p-P-45 Observation of spider silk by femtosecond pulse laser second harmonic generation microscopy**

\*Yue Zhao, Yanrong Li, Khuat Thi Thu Hien, Goro Mizutani, Harvey N. Rutt (*Japan Advanced Institute of Science and Technology*)

**5p-P-46 Experimental Investigations on Electron Beam Welding of SAE 15B41 Steel**

\*Sandeep Thakare, Valmik Bhavar, Prakash Kattire, Sachin V. Patil, Vinayak Pawar, Dr. R. K. P. Singh (*Bharat forge limited*)

**5p-P-47 Initial growth of PTCDI-C8 molecular layers on Si(110)**

Katarzyna Lament , Piotr Mazur , Miłosz Grodzicki , Radosław Wasielewski , Wojciech Kaminski , \*Antoni Ciszewski (*University of Wroclaw*)

**5p-P-48 The imaging contrasts of anatase-TiO<sub>2</sub> (001) (1×4) surface using non-contact atomic force microscopy**

\*Daiki Katsube, Yuji Miyato, Hayato Yamashita, Satoshi Abo, Masayuki Abe (*Osaka University*)

**5p-P-49 Frequency modulation atomic force microscopy (FM-AFM) observation of adsorbed films on diamond-like carbon (DLC) surfaces**

\*Hikaru Okubo, Sasaki Shinya (*Tokyo University of Science*)

**5p-P-50 Effect of pH on two-dimensional crystal formation of streptavidin**

Zipeng Cui, Kei Kobayashi, Yoshiki Hirata, \*Hirofumi Yamada (*Kyoto University*)

**5p-P-51 Room temperature 2D Fermi surface of SrTiO<sub>3</sub>**

\*Nicholas Barrett, Claire Mathieu, Sara Gonzalez, Vitaliy, Claus Schneider (*CEA Saclay*)

**5p-P-52 Linear and non-linear optical spectroscopy of monolayer transition-metal dichalcogenides under a microscope**

\*Yuhei Kikuchi, Yoshihiro Miyauchi, Takanori Suzuki, Masatoshi Tanaka, Shinya Ohno (*Yokohama National University*)

**5p-P-53 Mapping micro- and nano-scale structures at Graphite surface by photoelectron diffraction**

\*Fujita Yoshiki, Yasunori Senba, Yoshinori Kotani, Takayuki Muro, Tomohiro Matsushita, Fumihiko Matsui (*Nara Institute of Science and Technology*)

**5p-P-54 Impurity positions and lattice distortions in a Mn doped Bi<sub>2</sub>Te<sub>3</sub> topological insulator studied by x-ray fluorescence holography**

\*Shinya Hosokawa, Jens R. Stello, Tomohiro Matsushita, Naohisa Hoppo, Koji Kimura, Koichi Hayashi, Mamoru Kitaura, Minoru Sasaki (*Kumamoto University*)

**5p-P-55 Local structural analysis of In doped Bi<sub>2</sub>Se<sub>3</sub> topological insulator using X-ray fluorescence holography**

\*Koji Kimura, Kouichi Hayashi, Lada V. Yashina, Naohisa Hoppo, Yoshihiro Ebisu,

Takumi Nishioka, Yuta Yamamoto, Toru Ozaki, Shinya Hosokawa, Hiroo Tajiri (*Nagoya Institute of Technology*)

**5p-P-56 PESCATORA: Projector for ESCA to Real Space Analysis**

\*Fumihiko Matsui, Hiroshi Ota, Yoshiki Fujita, Takuya Shimano, Yoshinori Yoshida, Daisuke Take, Kenji Sugita, Yoshiki Oyama, Takuya Kishimoto, Hiroaki Nishikawa, Hiroyuki Matsuda (*Nara Institute of Science and Technology*)

**5p-P-57 Atomic scale analyses of As doped in Si by soft X-ray photoelectron spectroscopy and spectro-photoelectron holography**

\*Kotaro Natori, Tatsuhiro Ogawa, Takuya Hoshii, Tomohiro Matsushita, Takayuki Muro, Toyohiko Kinoshita, Yoshitada Morikawa, Kuniyuki Kakushima, Fumihiko Matsui, Kouichi Hayashi, Hitoshi Wakabayashi, Kazuo Tsutsui (*Tokyo Institute of Technology*)

**5p-P-58 Local dopant structure of Ag-doped Bi<sub>2</sub>Se<sub>3</sub> topological insulator by photoelectron diffraction**

\*Takuya Shimano, Fumihiko Matsui, Kaya Kobayashi, Teppei Ueno, Eri Uesugi, Yoshihiro Kubozono (*Nara institute of science and technology*)

**December 6, 2017 (Wednesday)**

**Room A (Jasmine I, II)**

*Tutorial*

**6a-A-1** (9:00-10:00) –tutorial-  
**Extreme-high-vacuum technology and high-energy-resolution electron spectroscopy**  
\*Chuhei Oshima (*Waseda University*)

*Plenary lecture*

**6a-A-2** (10:00-10:50) –plenary-  
**Field Emission from carbon nanotube and graphene: Its Application and Related Phenomena**  
Yahachi Saito (*Nagoya University*)

-Break-

*141 award lecture*

**6a-A-3** (11:10-12:10) -141 award lecture-  
**A small world**  
Wolf-Dieter Schneider (*Fritz-Haber-Institute of the Max-Planck-Society*)

-Break-

**6a-A-4** (12:20-12:50) -invited-  
**Bottom-Up Construction and Atomic-Level Characterization of Spin Chains on Superconducting Substrates for Topological Quantum Computation**  
\*Roland Wiesendanger (*University of Hamburg*)

**Room B (Jasmine III)**

**6a-B-1** (12:20-12:50) -invited-  
**A new spin on photoemission**  
\*C.M. Schneider (*Research Center Juelich*)

*Conference Photo* (12:50-13:10)

**December 7, 2017 (Thursday)**

**Room A (Jasmine I, II)**

*Transmission electron microscopy*

**7a-A-1** (9:00-9:30) -invited-

**Development of a New Cs-Corrector with Electrostatic Field formed by Annular and Circular Electrodes**

\*Tadahiro Kawasaki, Ryuji Yoshida, Takeharu Kato, Tsunenori Nomaguchi, Shunichi Motomura, Toshihide Agemura, Tetsuji Kodama, Masahiro Tomita, Takashi Ikuta (*Japan Fine Ceramics Center*)

**7a-A-2** (9:30-10:00) -invited-

**Prospects and Results of Aberration-Corrected Low-Voltage Electron Microscopy – the SALVE Project**

\*Harald Rose (*University of Ulm*)

**7a-A-3** (10:00-10:20)

**Development of a Real-Time Wave Field Reconstruction System for Environmental TEM Observation**

Takahiro Tamura, Yoshihide Kimura, \*Yoshizo Takai (*Osaka University*)

**7a-A-4** (10:20-10:40)

**Development of a High Speed Electron Beam Blanking System for TEM**

\*Yukari Watanabe, Yoshihide Kimura, Yoshizo Takai (*Osaka University*)

-Break-

*Transmission electron microscopy*

**7a-A-5** (11:00-11:30) -invited-

**New visions by high voltage electron holography**

\*Toshiaki Tanigaki (*Hitachi, Ltd.*)

**7a-A-6** (11:30-12:00) -invited-

**Analytical and in-situ applications using aberration corrected scanning transmission electron microscope**

\*Ichiro Ohnishi (*JEOL Ltd.*)

**7a-A-7** (12:00-12:20)

**In situ observation of the Fe<sub>2</sub>O<sub>3</sub> and Si or SiO<sub>2</sub> reaction in TEM**

\*Nobuhiro Ishikawa, Tadashi Mitsui, Masaki Takeguchi, Kazutaka Mitsuishi (*National Institute for Materials Science*)

**7a-A-8** (12:20-12:40) –sponsored session-

*JEOL Ltd.*

- Lunch -

*Biological material*

**7p-A-1** (14:10-14:40) –invited–  
**Reductionism converged into artificial intelligence: mass spectrometry based-diagnosis of cancer**  
\*Sen Takeda (*University of Yamanashi*)

**7p-A-2** (14:40-15:10) –invited–  
**Quantum Technology based Life Science**  
\*Mitsutoshi Setou (*International Mass Imaging Center*)

**7p-A-3** (15:10-15:30)  
**Quantification of Carbon Nanotubes Uptaken by Macrophage Cells Using Optical Absorption Method**  
\*Minfang Zhang, Mei Yang, Masako Yudasaka, Toshiya Okazaki (*AIST*)

**7p-A-4** (15:30-15:50) –sponsored session–  
*SHIMADZU CORP.*

- Break -

*Biological material*

**7p-A-5** (16:10-16:40) –invited–  
**Fluorine Incorporated Amorphous Carbon nano-coatings for Artificial Heart (Ventricular Assist Device)**  
Terumi Hasebe (*Tokai University*)

**7p-A-6** (16:40-17:00)  
**Development of sugar chains in rice seeds studied by confocal SFG microscopy**  
\*Akira Matsubara, Sharmin Sultana, Wataru Kouyama, Khuat Thi Thu Hien, Goro Mizutani, Yasunori Nakamura (*Japan Advanced Institute of Science and Technology*)

-Dinner-

*Ion beam*

**7p-A-7** (18:30-19:00) –invited–  
**Electronic stopping of protons in metals and in metal oxides**  
Dietmar Roth, Barbara Bruckner, Marcos Vicinius Moro, Daniel Primetzhofer, \*Peter Bauer (*Johannes Kepler University Linz*)

**7p-A-8** (19:00-19:30) –invited–  
**Nano-Scale Ion Beam Analysis and Applications to Biological Systems**  
Vachislav Manichev, Leonard C. Feldman, \*Torgny Gustafsson (*Rutgers University*)

**7p-A-9** (19:30-19:50)  
**Low Energy Ion Scattering Studies of Topological Insulator Surfaces**

\*Jory A. Yarmoff, Weimin Zhou, Haoshan Zhu (*University of California, Riverside*)

**7p-A-10** (19:50-20:20) –invited–

**Application of atom probe tomography to fundamental issues of steel materials**

\*Jun Takahashi (*Nippon Steel , Sumitomo Metal Corporation*)

**7p-A-12** (20:20-20:40)

**Ultra-high-speed CCD image sensors for Imaging TOF MS**

\*Kazuhiro Shimonomura, Anh Quang Nguyen, Kohsei Takehara, Luc Haspeslagh, Paul Goetshalckx, Piet De Moor, Naoki Hayashi, Yo Mitsui, Tomohiro Takahashi, Akihiko Iguchi, Tsutomu Mihara, Takeharu Goji Etoh (*Ritsumeikan University*)

**7p-A-13** (20:40-21:00)

**Aldosterone specific visualization in primary aldosteronism using imaging mass spectrometry**

\*Emi Takeo, Yuki Sugiura, Koshiro Nishimoto, Eiichiro Fukusaki, Shuichi Shimma (*Osaka University*)

## Room B (Jasmine III)

### *Characterization by X-ray*

**7a-B-1** (9:00-9:30) -invited-

**Taming 4f electrons in endohedral single molecule magnets**

\*Thomas Greber (*University of Zurich*)

**7a-B-2** (9:30-10:00) -invited-

**N and O K-edge linearly polarized X-ray absorption near edge structure of Ta-based oxynitride thin films**

\*Tetsuya Hasegawa, Daichi Oka, Fumihiko Matsui, Hideyuki Kamisaka, Tamio Oguchi, Takayuki Muro, Kouichi Hayashi, Yasushi Hirose (*The University of Tokyo*)

**7a-B-3** (10:00-10:20)

**Combining High Energy X-Ray Diffraction Techniques with Laser-Induced Fluorescence in Operando Catalysis**

\*Uta Hejral, Johan Gustafson, Stefano Albertin, Olivier Balmes, Jianfeng Zhou, Tim Wiegmann, Jakub Drnec, Sara Blomberg, Johan Zetterberg, Mikhail Shipilin, Sebastian Pfaff, Edvin Lundgren (*Lund University*)

**7a-B-4** (10:20-10:40)

**The effect of anodizing potential and electrolyte composition on the ordering of nanoporous anodic alumina studied operando using GTSAXS**

\*Jonas Evertsson, Gary Harlow, Nikolay Vinogradov, Weronica Linpé, Francesco Carla, Lisa Rullik, Roberto Felici, Edvin Lundgren (*Lund University*)

-Break-

### *Graphene & related 2D material*

**7a-B-5** (11:00-11:30) -invited-

**Helical molecules at surfaces: selective chemistry and molecular machines**

\*Karl-Heinz Ernst (*Empa, Swiss Federal Laboratories for Materials Science and Technology*)

**7a-B-6** (11:30-12:00) -invited-

**Computational study of temperature distribution in electron-irradiated graphene**

Yasuyuki Ueno, Hiroaki Kawata, Yoshihiko Hirai, \*Masaaki Yasuda (*Osaka Prefecture University*)

**7a-B-7** (12:00-12:20)

**Structures and electronic properties of perovskite quantum dots on TiO<sub>2</sub> Rutile surface**

\*Sergey Gusarov (*National Institute for Nanotechnology*)

**7a-B-8** (12:20-12:40)



**Electronically induced surface reactions of organic molecules on silicon studied by means of STM**

Gerson Mette, Marcel Reutzel, Tamam Bohamud, Alexa S. Adamkiewicz, Ulrich Höfer,  
\*M. Dürr (*Justus Liebig University Giessen*)

- Lunch -

*Characterizations of Water at Surface and Interface*

**7p-B-1** (14:10-14:40) –invited–

**Vibrational Spectroscopic Study on the Phase Transition of Water in Nanospaces and at Interfaces**

\*Hiroharu Yui (*Tokyo University of Science*)

**7p-B-2** (14:40-15:10) –invited–

**The strong effect of water on friction at the nano scale**

\*Robert W. Carpick, Kathryn Hasz, Zhijiang Ye, Ashlie Martini (*University of Pennsylvania*)

**7p-B-3** (15:10-15:30)

**Effect of water on interfacial structure of room-temperature ionic liquids**

\*Shouhei Kawada, Eri Kodama, Keisuke Sato, Hikaru Okubo, Shinya Sasaki  
(*Tokyo University of Science*)

**7p-B-4** (15:30-15:50)

**Computational Exploration of Microscopic Structures of Water on Graphene**

\*Kenji Sasaoka, Yusei Kioka, Yuki Maekawa, Takahiro Yamamoto (*Tokyo University of Science*)

- Break -

**7p-B-5** (16:10-16:40) –invited–

**Investigation of liquid interface structure with ion beam analysis**

HeeJin Kim, KwangWon Chung, \*DaeWon Moon (*DGIST*)

**7p-B-6** (16:40-17:00)

**Micorbeam hard X-ray photoelectron and ion-beam analyses of Nb hydrides formed in supercritical water**

\*Kazuo Soda, Shinya Sugiura, Kanta Yamaguchi, Masahiko Kato, Ken Niwa, Masashi Hasegawa, Kohtaku Suzuki, Tatsuya Ishigami, Eiji Ikenaga (*Nagoya University*)

-Dinner-

*Fundamental phenomena*

**7p-B-7** (18:30-19:00) –invited–

**Vacuum characteristics of low-carbon steels and its application to a field emission**

**electron gun**

Boklae Cho (*Korea Research Institute of Standards and Science*)

**7p-B-8** (19:00-19:30) –invited–

**High-brightness electron and ion sources based on thermally stable nanoemitters**

\*Ing-Shouh Hwang, Wei-Tse Chang, Hong-Shi Kuo, Tsu-Yi Fu, Chun-Yueh Lin, Jin-Long Hou, Wei-Chiao Lai, Yu-Fong Yu, Tien T. Tsong (*Academia Sinica*)

**7p-B-9** (19:30-19:50)

**Observation of dc field-evaporated ion species from transition metal nitride thin film deposited on tungsten-tip**

\*Chikasa Nishimura, Yuki Haneji, Hiroshi Tsuji, Yasuhito Gotoh (*Kyoto University*)

**7p-B-10** (19:50-20:20) –invited–

**Photoemission and Double photoemission with Femtosecond High-Harmonic Laser Radiation**

Cheng-Tien Chiang, Andreas Trützscher, Robin Kamrla, Michael Huth, Frank O. Schumann, Jürgen Kirschner, \*Wolf Widdra (*Universität Halle-Wittenberg*)

**7p-B-11** (20:20-20:40)

**Germanene: the germanium analogue of graphene**

\*Harold J.W. Zandvliet (*MESA+ Institute for Nanotechnology, University of Twente*)

**7p-B-12** (20:40-21:00)

**Application of XAFS/EELS spectroscopy to the quantitative chemical state analysis of nitrogen in titanium oxide photocatalysts**

\*Tomoko Yoshida, Muneaki Yamamoto, Akiyo Ozawa, Yuma Kato, Shinya Yagi (*Osaka City University*)

**December 8, 2017 (Friday)**

**Room A (Jasmine I, II)**

*Scanning probe microscopy*

**8a-A-1** (9:00-9:30) –invited–

**Atomic-layer superconductors**

\*Shuji Hasegawa (*University of Tokyo*)

**8a-A-2** (9:30-9:50)

**Functional visualization of biomolecules by frequency modulation AFM and 3-dimensional force mapping**

Hiroaki Kominami, Kei Kobayashi, \*Hirofumi Yamada (*Kyoto University*)

**8a-A-3** (9:50-10:10)

**One-dimensional chains of endofullerene nanomagnets**

\*Rasmus Westerström, Fabian Fritz, Christin Schleier, Alexey Popov, Carola Meyer (*Lund University*)

**8a-A-4** (10:10-10:30)

**Iron-based magnetic nanoparticles with tuned composition and crystal structure**

Calle Preger, Claudiu Bulbucan, Matthias Muntwiler, Rasmus Westerström, \*Maria E. Messing (*Lund University*)

– Break –

*Scanning probe microscopy*

**8a-A-5** (10:50-11:20) –invited–

**Influence of external forces on the vibrational modes of an adsorbed molecule**

Norio Okabayashi, Angelo Peronio, Magnus Paulsson, Toyoko Arai, \*Franz J. Giessibl (*University of Regensburg*)

**8a-A-6** (11:20-11:50) –invited–

**Development of high performance spin-polarized photocathode and its application**

\*Xiuguang Jin, Masao Suzuki, Tsuneo Yasue, Takanori Koshikawa, Yoshikazu Takeda (*High Energy Accelerator Research Organization*)

**8a-A-7** (11:50-12:10)

**Electrical Transport Measurements with atomic precision by 4-probe SPM**

\*Markus Maier, Juergen Koeble, Roland Thiel, Alexandre Priou, Dirk Stahl, Mathias Fenner, Thomas Roth (*Scienta Omicron GmbH*)

**8a-A-8** (12:10-12:30)

**Development of Application Technique of Kelvin Probe Force Microscope for Advanced Semiconductor Devices**

*\*See Kei Lee, Mitsuo Koike, Hiroki Kawai, Kazuya Matsuzawa, Hiroki Tanaka (Toshiba Corporation Corporate Research , Development Center)*

*Closing Ceremony (12:40-13:00)*

## Room B (Jasmine III)

### *Advanced material characterization*

- 8a-B-1** (9:00-9:30) –invited–  
**Microscopic distribution of different elements in stainless steels analyzed by Bi cluster TOF-SIMS**  
Rie Shishido, Masahito Uchikoshi, \*Shigeru Suzuki (*Tohoku University*)
- 8a-B-2** (9:30-9:50)  
**Study for X-ray Generation by Irradiating Pyroelectric Element with UV Laser Beam**  
\*Tomimasa Konishi, Toshiyuki Ishida (*BSR Co., LTD.*)
- 8a-B-3** (9:50-10:10)  
**Chemical State and Stability of Nitrogen Doped in NaTaO<sub>3</sub>**  
\*Akiyo Ozawa, Muneaki Yamamoto, Tomoko Yoshida (*Osaka City University, "Sakai Chemical Industry, Co., Ltd."*)
- 8a-B-4** (10:10-10:30)  
**Data acquisition electronic system for time-of-flight sputtered neutral mass spectrometer**  
\*Ken-ichi Bajo, Osamu Fujioka, Satoru Itose, Morio Ishihara, Kiichiro Uchino, H. Yurimoto (*Hokkaido University*)

- Break -

### *Advanced material characterization*

- 8a-B-5** (10:50-11:20) –invited–  
**Applications of Electron Spectroscopy to Oxide Thin Film Devices**  
\*Hee Jae Kang (*Chungbuk National University*)
- 8a-B-6** (11:20-11:50) –invited–  
**Ion-solid interaction studied by TOF-MEIS: from electronic excitations to photon and particle emission**  
Svenja Lohmann, Mauricio Sortica, Valentina Paneta, Barbara Bruckner, Peter Bauer, \*Daniel Primetzhofer (*Uppsala University*)
- 8a-B-7** (11:50-12:10)  
**Nanostructured Aluminum Oxides and Metal Electrodeposition**  
\*Gary S. Harlow, Nikolay A. Vinogradov, Jonas Evertsson, Francesco Carla, Lisa Rullik, Roberto Felici, Edvin Lundgren (*Lund University*)
- 8a-B-8** (12:10-12:30)  
**Structure of 1D Aluminum Oxyhydroxide  $\gamma$ -AlOOH (Pseudoboehmite)**  
\*Zheng Liu, Takashi Yumura, Iijima Sumio (*National Institute of Advanced Industrial*)

*Science and Technology (AIST)*

*Closing Ceremony (12:40-13:00) in Room A*