

Program

May 17 (Wednesday), 2017

Session WeA Chair: M. Miles (*University of Bristol, U.K.*)

9:30 **Opening Address**

T. Takahashi [General Chair]
University of Tokyo (Japan)

9:40 WeA-1PL (Plenary)

High-speed Atomic Force Microscopy and Its Future Prospects

T. Ando
Kanazawa University (Japan)

10:20 WeA-2I (Invited)

Ultrafast Time Resolution in AFM Measurements of Charge Transport in Sustainable Energy Materials

P. Grütter
McGill University (Canada)

10:45 WeA-3

Formation of SAS-6 Protein Assembly Imaged by High-speed Off-resonance Tapping Atomic Force Microscopy

A.P. Nievergelt, N. Banterle, J.D. Adams, N. Hosseini and G.E. Fantner
Federal Institute of Technology in Lausanne [EPFL] (Switzerland)

11:00 WeA-4

High Speed Atomic Force Microscopy Imaging on Condensin

J.K. Ryu¹, A. Katan¹, J. Eeftens¹, S. Bisht², C. Haering² and C. Dekker¹
¹*Delft University of Technology (the Netherlands)*, ²*European Molecular Biology Laboratory (Germany)*

11:15 WeA-5

Fundamental High Speed Limits in Single-molecule and Nanoscale Force Spectroscopies

C.A. Amo, M.R. Uhlig and R. Garcia
The Spanish National Research Council [CSIC] (Spain)

11:30 WeA-6

Development of High Speed AFM Operating at 1,000 Lines/s

U. Celik^{1,2}, I. Kehribar¹, Y. Uysallı³, K. Celik², H.Ö. Özer² and A. Oral^{3,1}
¹*NanoMagnetics Instruments (Turkey)*, ²*Istanbul Technical University (Turkey)*, ³*Middle East Technical University (Turkey)*

11:45 WeA-7

AFM Scan Speed Phenomena

C. Glover¹, J.P. Killgore² and R.C. Tung¹
¹*Univ. of Nevada, Reno (U.S.A)*, ²*National Institute of Standards and Technology (U.S.A)*

12:00 - 14:00 *Lunch*

12:30-13:30 *Luncheon Seminar @ Seminar Room (3F)*

Session WeB Chair: P.M. Koenraad (*Eindhoven Univ. of Technology, the Netherlands*)

14:00 WeB-1I (Invited)

Local Deep Level Transient Spectroscopy Imaging of Trap Distribution in SiC MOS Interface Based on Scanning Nonlinear Dielectric Microscopy

N. Chinone and Y. Cho

Tohoku University (Japan)

14:25 WeB-2

Atomic Resolution Imaging of MoS₂ by Noncontact Scanning Nonlinear Dielectric Microscopy

K. Yamasue and Y. Cho

Tohoku University (Japan)

14:40 WeB-3

Visualization of Nanostructures Buried in a Polymer Matrix by Scanning Thermal Noise Microscopy

S. Nosaka, K. Kimura, K. Kobayashi and H. Yamada

Kyoto University (Japan)

14:55 WeB-4

Tailoring Dynamic Stiffness for Improved Piezoresponse Force Microscopy

G. MacDonald, F.W. DelRio and J.P. Killgore

National Institute of Standards and Technology (U.S.A)

15:10 WeB-5

AFM Mode for Compositional Electromechanical Study of Biopiezoelectrics

A.S. Kalinin^{1,2}, V.V. Polyakov¹ and V.A. Bykov¹

¹*NT-MDT Spectrum Instruments (Russia)*, ²*Moscow Institute of Physics and Technology (Russia)*

15:25 WeB-6

Viscoelastic Surface Forces and the Moving Surface Model

D.B. Haviland, P-A. Thorén, R. Borgani and D. Forchheimer

KTH Royal Institute of Technology (Sweden)

15:40 - 16:10 **Session WeEX: Exhibitor Presentation**

16:10 - 16:40 *Coffee Break*

Session WeC Chair: P. Hinterdorfer (*Johannes Kepler University Linz, Austria*)

16:40 WeC-1I (Invited)

Force Spectroscopic Profiling of Phosphoinositide Interactions with Viral Proteins and Small Molecule Inhibitors

S.-O. Kim¹, J.A. Jackman^{1,2}, S.-J. Cho³, J.S. Glenn² and N.-J. Cho¹

¹*Nanyang Technological University (Singapore)*, ²*Stanford University (USA)*, ³*Seoul National University (Korea)*

17:05 WeC-2

AFM Study of Hydrodynamics around Micro- and Nanofibers

J.D. de Baubigny¹, M. Benzaquen², C. Mortagne¹, C. Devailly³, S. Kosgodagan³, A. Steinberger³, J.-P. Salvetat⁴, J.-P. Aime⁴ and T. Ondarçuhu¹

¹*University of Toulouse (France)*, ²*Ecole Polytechnique (France)*, ³*University of Lyon (France)*, ⁴*University of Bordeaux (France)*

17:20 WeC-3

SICM and SICM Based SECM Development for Biomedical Applications

G.-E. Jung¹, M.-H. Choi¹ and S.-J. Cho²

¹*Park Systems (Korea)*, ²*Seoul National University (Korea)*

17:35 WeC-4

Imaging of Two-dimensional Crystal Growth of Streptavidin Injected from a Glass Pipette by FM-AFM

T. Hamada, H. Kominami, M. Miyamoto, K. Kobayashi and H. Yamada
Kyoto University (Japan)

17:50 WeC-5

Imaging Friction Forces with Intermodulation Friction Force Microscopy

P.-A. Thorén, R. Borgani, D. Forchheimer and D.B. Haviland

KTH Royal Institute of Technology (Sweden)

18:05 WeC-6

3D Imaging of Hydration Structures at Step Edges of Calcite

Y. Araki, K. Kobayashi and H. Yamada

Kyoto University (Japan)

18:20 WeC-7

Precise Determination of Hamaker Constants Using Dynamic Atomic Force Spectroscopy

J. Colchero^{1,2}, J. Sánchez Lacasa¹ and M. Salmerón^{1,2}

¹*The University of Murcia (Spain)*, ²*Lawrence Berkeley National Laboratory (U.S.A.)*

18:35 WeC-8

A Novel Real-time Control System for an Atomic Force Microscope

Z. Wang, Y. Li, G. Shan, Y. Zhang and J. Qian

Beihang University (China)

19:00 - 20:30 **Session WeP: Poster Session**

May 18 (Thursday), 2017

Session ThD Chair: T.T. Perkins (*JILA, NIST & Univ. of Colorado, Boulder, U.S.A.*)

9:30 ThD-II (Invited)

Atomic Scale Contact Studied with a Functionalized Tip of High-resolution Atomic Force Microscopy

S. Kwawai

National Institute for Materials Science (Japan)

9:55 ThD-2

Controlled Switching of Single-molecule Junctions by Mechanical Motion of a Phenyl Ring

H. Okuyama, Y. Kitaguchi, H. So, S. Hatta and T. Aruga

Kyoto University (Japan)

10:10 ThD-3

Contrast Mechanisms on Nanoscale Subsurface Imaging Using Ultrasonic Atomic Force Microscopy

H.J. Sharahi¹, G. Shekhawat², V. Dravid², S. Park¹, P. Egberts¹ and S. Kim¹

¹*University of Calgary (Canada)*, ²*Northwestern University (U.S.A.)*

10:25 ThD-4

Simultaneous Nanopatterning and Imaging Using Dual-frequency Resonant Frequency Tracking

K. Maturova¹, A.K. Janbahan^{1,2}, M.S. Tamer^{1,2}, J.J. Biemond¹, V. Navarro¹ and H.S. Marnani¹

¹*Netherlands Organization for Applied Scientific Research [TNO] (the Netherlands)*,

²*University of Delft (the Netherlands)*

10:40 ThD-5

Molecular-scale Investigations of Hydration Structures of Alkanethiol Self-assembled Monolayers of Different Functional Groups by FM-AFM

A. Fujita, K. Kobayashi and H. Yamada

Kyoto University (Japan)

10:55 - 11:15 *Coffee Break*

Session ThE Chair: P. Grütter (*McGill University, Canada*)

11:15 ThE-II (Invited)

Magnetic Interactions in Artificially Created Mn Assemblies in a GaAs (110) Surface

D. Grossi¹, P. Koenraad¹, F. Islam², R. Mahani³, C. Canali² and M. Flatté⁴

¹*Eindhoven University of Technology (the Netherlands)*, ²*Linnaeus University (Sweden)*,

³*KTH Royal Institute of Technology (Sweden)*, ⁴*University of Iowa (U.S.A.)*

11:40 ThE-2

Atomic Scale Defects on KBr(001) Created by Low Temperature Plasma and Investigated by ncAFM

A. Hinaut¹, B. Eren², S. Freund¹, R. Jöhr¹, R. Steiner¹, T. Glatzel¹, L. Marot¹, S. Kawai³ and E. Meyer¹

¹*University of Basel (Switzerland)*, ²*Lawrence Berkeley National Laboratory (U.S.A.)*,

³*National Institute for Materials Science (Japan)*

11:55 ThE-3

Image States and Energy Dissipation on Bi₂Te₃ Surface

D. Yildiz, M. Kisiel and E. Meyer

University of Basel (Switzerland)

12:10 ThE-4

Sub-20 nm Patterning of Thin Layer WSe₂ by Scanning Probe Lithography

A.I. Dago, Y.K. Ryu and R. Garcia

The Spanish National Research Council [CSIC] (Spain)

12:25 ThE-5

Molecular Adsorption on Anatase TiO₂(101) Studied by Submolecular AFM Imaging Using Silicon Cantilevers as Force Sensors

M. Todorovic¹, O. Stetsovyh², R. Perez¹, T.K. Shimizu² and O. Custance²

¹*Universidad Autonoma de Madrid (Spain)*, ²*National Institute for Materials Science (Japan)*

12:40 - 18:30 *Free Time*

18:30 - 20:30 **Banquet** @ *Kyoto Modern Terrace*

May 19 (Friday), 2017

Session FrF Chair: R. Garcia (*The Spanish National Research Council [CSIC], Spain*)

9:30 FrF-II (Invited)

What Can We Do by Optical Pump-probe STM?

H. Shigekawa

Tsukuba University (Japan)

9:55 FrF-2

How to Identify Lipid Vesicles by AFM-IR and Multi-frequency AFM?

E. Lesniewska¹, N. Pocholle¹, E. Bourillot¹, M.J. Virolle², A. Deniset² and A. Dazzi²

¹*University Bourgogne Franche-Comté (France)*, ²*University Paris-Sud (France)*

10:10 FrF-3

Local Charge Injection and Extraction on Nanocomposite Insulators

R. Borgani, P.-A. Thorén, D. Forchheimer and D.B. Haviland

KTH Royal Institute of Technology (Sweden)

10:25 FrF-4

Micro-second Time-resolved Electrostatic Force Microscopy

K. Araki, Y. Ie, Y. Aso, H. Oyama and T. Matsumoto

Osaka University (Japan)

10:40 FrF-5

Scanning Probe Electrospray Ionization (SPESI) for Surface Chemical Analysis - the Fast Derivatization of Steroid -

Y. Otsuka¹, K. Kobayashi², T. Kohigashi², R. Arakawa² and T. Matsumoto¹

¹*Osaka University (Japan)*, ²*Kansai University (Japan)*

10:55 - 11:15 *Coffee Break*

Session FrG Chair: S. Kawai (*National Institute for Materials Science, Japan*)

11:15 FrG-II (Invited)

Scanning Probe Lithography and Its Application to Directed Self-assembly of Block Co-polymers

F. Perez-Murano

The Spanish National Research Council [CSIC] (Spain)

11:40 FrG-2

Visualization of microRNA in a Nerve Cell

J.W. Park

Pohang University of Science and Technology (Korea)

11:55 FrG-3

Identification and Characterization of Lantibiotic Activity in the *Populus* Microbiome

M.J. Doktycz^{1,2}, S. Hasim^{1,2}, B. Mendez¹, P. Blair¹, B.P. Mohr^{1,2}, M. Land¹, D. Pelletier¹, S.T. Retterer^{1,2} and D.P. Allison^{1,2}

¹*Oak Ridge National Laboratory (U.S.A.)*, ²*The University of Tennessee (U.S.A.)*

12:10 FrG-4

Investigating the Mechanism of Action of a Novel Antimicrobial Peptide on Live *E. coli* Cells

A. Pyne^{1,2}, M.-P. Pfeil^{1,3}, I. Bennett², J. Ravi¹, B. Lamarre¹, B.W. Hoogenboom² and M.G. Ryadnov¹

¹*National Physical Laboratory (U.K.)*, ²*University College London (U.K.)*, ³*University of Oxford (U.K.)*

12:25 FrG-5

Time-resolved Nanomechanical Rheology of a Single Cell under the Depolymerization of the Actin Cytoskeleton

P.D. Garcia, C.R. Guerrero and R. Garcia

The Spanish National Research Council [CSIC] (Spain)

12:40 - 14:15 *Lunch*

Session FrH Chair: J.W. Park (*Pohang University of Science and Technology, Korea*)

14:15 FrH-1I (Invited)

Hidden Dynamics in the Unfolding of a Membrane Protein Revealed by 1- μ s Resolution Force Spectroscopy

T.T. Perkins

JILA / National Institute of Standards and Technology / University of Colorado, Boulder (U.S.A.)

14:40 FrH-2

A Mucosal Pellicle Modifies the Physical Properties of Epithelial Cells

E.N. Aybeke, M. Brule, B. De Fonseca, S. Ployon, M. Morzel, E. Bourillot, E. Lesniewska and F. Canon

University Bourgogne Franche-Comté (France)

14:55 FrH-3

An AFM Approach to Target and Destroy Antifungal Resistant Microbes

S. Hasim², D.P. Allison^{1,2}, S.T. Retterer¹, M.J. Doktycz^{1,2} and T.B. Reynolds²

¹*Oak Ridge National Laboratory (U.S.A.)*, ²*University of Tennessee (U.S.A.)*

15:10 FrH-4

Forces between Dopamine Transporter (DAT) and Its Substrates

R. Zhu¹, S.H. Suh¹, M. Bindl¹, M. Holy², V. Kumar³, A. Ebner¹, H.J. Gruber¹, M. Freissmuth², A.H. Newman³, H.H. Sitte² and P. Hinterdorfer¹

¹*Johannes Kepler University Linz (Austria)*, ²*Medical University of Vienna (Austria)*,

³*National Institute on Drug Abuse (U.S.A.)*

15:25 FrH-5

High-resolution Imaging and Surface Charge Measurement of Right-handed and Left-handed DNA by FM-AFM in Aqueous Solution

H. Kominami, K. Kobayashi and H. Yamada

Kyoto University (Japan)

15:40 FrH-6

Characterizing the Effect of the Polymyxin B Antibiotics to Lipopolysaccharide on *Escherichia coli* Surface Using AFM

Y.J. Oh¹, B. Plochberger², M. Rechberger² and P. Hinterdorfer¹

¹*Johannes Kepler University Linz (Austria)*, ²*University of Applied Sciences Upper Austria (Austria)*

15:55 FrH-7

Investigation of Biotin-binding Proteins Attached to DNA Origami Using FM-AFM in Aqueous Solutions

Y. Yamamoto, H. Kominami, K. Kobayashi and H. Yamada

Kyoto University (Japan)

16:10 FrH-8

Ideal Atomic Force Microscopy Imaging of Heterogeneous Biological Samples in Liquids: Topography and Chemical Information

J. Colchero and L. Almonte

The University of Murcia (Spain)

16:25 FrH-9

Combined AFM and FTIR: A Versatile Tool to Decipher the Molecular Mechanism of Antimicrobial Action toward to Bacterial Biofilms

F. Quilès^{1,2} and G. Francius^{1,2}

¹University of Lorraine (France), ²CNRS, Laboratory of Physical Chemistry and Microbiology for the Environment (France)

16:40 **Closing Remarks**

T. Takahashi¹ and T. Ushiki²

¹The University of Tokyo (Japan), ²Niigata Univeristy (Japan)

Poster Program

May 17 (Wednesday), 2017

19:00 - 20:30

- WeP-01 **Introducing the New Cypher VRS Video-Rate Atomic Force Microscope**
I. Revenko, H. Sugawara, M. Viani, M. Kocun, T. Limpoco and S. Hohlbauch
Oxford Instruments Asylum Research (U.S.A.)
- WeP-02 **Scan Speed Linear Self-adjusting Mechanism for Reducing Imaging Time of Atomic Force Microscope**
Y. Zhang¹, Y. Li¹, G. Shan¹, Z. Wang¹, B. Yin² and J. Qian¹
¹*Beihang University (China)*, ²*Chinese Academy of Science (China)*
- WeP-03 **Nonlinear Electrical Properties of Ru Binuclear Complex Monolayer by Conductive Probe AFM**
T. Takagi¹, Y. Otsuka¹, H. Ozawa², M. Haga² and T. Matsumoto¹
¹*Osaka University (Japan)*, ²*Chuo University (Japan)*
- WeP-04 **Theoretical Prediction of Nonlinear Frequency Response for Sensing Tiny Tip Mass on Cantilevered Carbon Nanotube**
I.K. Kim and S.I. Lee
University of Seoul (Korea)
- WeP-05 **Vibration Analysis of AFM Microcantilevers Using Equivalent Stiffness Element Model**
D.H. Han, I.K. Kim and S.I. Lee
University of Seoul (Korea)
- WeP-06 **Structural Observation of Electron Emitting Tip Using UHV STM**
K. Noda, M. Tanaka, N. Watanabe, T. Kubo and T. Shimizu
National Institute of Advanced Industrial Science and Technology (Japan)
- WeP-07 **Parallel Atomic Force Microscope with Automated Cantilever Exchange and Alignment**
H. Sadeghian, R. Herfst, B. Dekker and J. Winters
Netherlands Organization for Applied Scientific Research [TNO] (the Netherlands)
- WeP-08 **Intermodulation Products in Ultra High Vacuum AFM**
D. Forchheimer^{1,2}, C. Wagner³, D. Platz^{1,4} and D.B. Haviland¹
¹*KTH Royal Institute of Technology (Sweden)*, ²*Intermodulation Products AB (Sweden)*,
³*Forschungszentrum Jülich (Germany)*, ⁴*Max-Planck Institute for the Physics of Complex Systems (Germany)*
- WeP-09 **In-situ, Correlative Atomic Force and Scanning Electron Microscopy**
J.D. Adams¹, A. Lieb¹, M. Winhold² and C. Schwalb²
¹*Nanosurf AG (Switzerland)*, ²*GETec Microscopy GmbH (Austria)*
- WeP-10 **Atomic Force Microscopy for Education**
S.H. Lee
Andong National University (Korea)

- WeP-11 **Design and Control of Dynamic Mode AFM based on Optical Pick-up Unit Probe Head**
M.A. Cruz, S.H. Jang, J.H. Lee and S.H. Lee
Andong National University (Korea)
- WeP-12 **Development of a Scanning Nanopipette Probe Microscope for Atmospheric Pressure Plasma Jet Fine Processing**
F. Iwata, D. Morimatsu, A. Nakamura, A. Ogino and M. Nagatani
Shizuoka University (Japan)
- WeP-13 **Investigation of Streptavidin-biotin Interactions by Static/dynamic-mode AFM**
K. Sugimoto, M. Miyamoto, H. Kominami, K. Kobayashi and H. Yamada
Kyoto University (Japan)
- WeP-14 **Modeling of Asymmetric Hysteresis in Large-scale AFM with an Optimized Prandtl-Ishlinskii Model Based on Fermi-Dirac Distribution**
G. Shan, Y. Li, Y. Zhang, Z. Wang and J. Qian
Beihang University (China)
- WeP-15 **Probing Electronic Alignment between Organic Dye Molecule and Gold Film Interface by Kelvin Probe Force Microscopy**
M. Yamada, K. Araki, Y. Otsuka and T. Matsumoto
Osaka University (Japan)
- WeP-16 **Single Crystal Doped Diamond Tips for Enhanced Nano-Electrical Characterization**
P. De Wolf¹, J. Kilpatrick^{2,3}, C. McManamon² and H. Cavazos²
¹*Bruker Nano Surfaces (U.S.A.)*, ²*Trinity College Dublin (Ireland)*, ³*University College Dublin (Ireland)*
- WeP-17 **Protein Synthesis in Growth Cones of Rat Dorsal Root Ganglion Neurons in Relation to the Three-dimensional Structure**
O. Hoshi¹, Y. Cho¹ and N. Takei²
¹*Tokyo Medical and Dental University (Japan)*, ²*Niigata University (Japan)*
- WeP-18 **Quantification down to Few Copies of Chronic Myeloid Leukemia (CML) Specific Biomarker without Amplification onto Locked Nucleic Acid (LNA)-based Sensing Platform: Towards Enhanced Sensitivity and Specificity**
S. Mishra¹, Y. Lee² and J.W. Park¹
¹*Pohang University of Science and Technology (Korea)*, ²*Columbia University (U.S.A.)*
- WeP-19 **Observation of Interaction between IEC-6 and Vanillin by AFM in Liquid**
H. Shimonishi, M. Nanto and T. Yoshino
Prefectural University of Hiroshima (Japan)
- WeP-20 **Movement of Oral Carcinoma Cells Investigated by Scanning Ion Conductance Microscopy**
Y. Mizutani, Y. Yamada, Y. Mikami and T. Ushiki
Niigata University (Japan)

- WeP-21 **Imaging Technique without Surface Charge Influence Using Scanning Ion Conductance Microscopy with a Theta Nanopipette**
T. Shirasawa¹, Y. Eguchi¹, Y. Mizutani², T. Ushiki² and F. Iwata¹
¹Shizuoka University (Japan), ²Niigata University (Japan)
- WeP-22 **Effect of pH on Two-dimensional Crystal Formation of Streptavidin on Mica**
Z. Cui¹, K. Kobayashi¹, Y. Hirata² and H. Yamada¹
¹Kyoto University (Japan), ²National Institute of Advanced Industrial Science and Technology (Japan)
- WeP-23 **Observation of Silver Nanoparticles-doped DNA Nanofibers Bonding YOYO-1 by Scanning Near-field Optical/Atomic Force Microscopy**
M. Nanto¹, H. Nakao² and T. Yoshino¹
¹Prefectural University of Hiroshima (Japan), ²National Institute for Materials Science (Japan)
- WeP-24 **Cation-mediated Self-assembled Monolayer of Cucurbit[7]uril on Mica Studied with Atomic Force Microscopy**
Y. Bae¹, I. Hwang², I. Kim¹, K. Kim^{1,2} and J.W. Park¹
¹Pohang University of Science and Technology (Korea), ²Institute for Basic Science (Korea)
- WeP-25 **Phase Separation and Structural Transition in Hydrogen-Bonded Networks Containing Melamine on Au(111) from Solutions**
A. Okada¹, Y. Nakata¹, M. Yoshimura² and K. Kadono¹
¹Kyoto Institute of Technology (Japan), ²Toyota Technological Institute (Japan)
- WeP-26 **Reactions of Atomic Defect on the Surface of Titanium Dioxide**
T. Minato^{1,2}, T. Nakayama³, M. Kawai^{4,5} and Y. Kim¹
¹RIKEN (Japan), ²Kyoto University (Japan), ³Chiba University (Japan), ⁴Institute for Molecular Science (Japan), ⁵The University of Tokyo (Japan)
- WeP-27 **Observation of Interface between Organic Solvent and Solid Materials by Liquid Frequency Modulation Atomic Force Microscopy**
T. Minato¹, Y. Araki^{1,2} and H. Onishi²
¹Kyoto University (Japan), ²Kobe University (Japan)
- WeP-28 **GaN Initial Growth on β -Ga₂O₃ ($\bar{2}01$) Surface Studied by Scanning Tunneling Microscopy: Some Preliminary Results**
L. Chen, A. Okada, R.A. Ferreyra, D. Ueda and K. Kadono
Kyoto Institute of Technology (Japan)
- WeP-29 **Photovoltaic Measurements on Cu(In,Ga)Se₂ Solar Cells by Photo-assisted KFM under Various Illumination Conditions**
H. Yong¹, T. Minemoto² and T. Takahashi¹
¹The University of Tokyo (Japan), ²Ritsumeikan University (Japan)
- WeP-30 **Photothermal Measurements by AFM on Cu(In,Ga)Se₂ Materials**
R. Komatsu¹, Y. Hamamoto¹, T. Minemoto² and T. Takahashi¹
¹The University of Tokyo (Japan), ²Ritsumeikan University (Japan)

- WeP-31 **STM Study of NO Exposed β -FeSi₂(100) Islands on Si(001) Substrate**
H. Yang, K. Tanimoto, S. Takemoto, K. Hattori and H. Daimon
Nara Institute of Science and Technology (Japan)
- WeP-32 **An Investigation of Crystal Growth of Metal-organic Frameworks by AFM**
Z. Wang, H.-Y. Nie and Y. Huang
The University of Western Ontario (Canada)
- WeP-33 **Li⁺ Ion Insertion Behavior on LTO/ionic-liquid-electrolyte Interfaces Investigated by FM-AFM**
Y. Takara¹, M. Kitta², T. Ichii¹, T. Utsunomiya¹ and H. Sugimura¹
¹*Kyoto University (Japan)*, ²*National Institute of Advanced Industrial Science and Technology (Japan)*
- WeP-34 **Investigation of KBr (100) and KBr (111) in Ionic Liquid by Frequency Modulation Atomic Force Microscopy**
H.P. Mungse¹, S. Okudaira¹, M. Yamauchi², T. Ichii¹, T. Utsunomiya¹, S. Maruyama², Y. Matsumoto² and H. Sugimura¹
¹*Kyoto University (Japan)*, ²*Tohoku University (Japan)*
- WeP-35 **Structural Determination of Rutile TiO₂ (011)-(nx1) Structures**
T. Kubo
National Institute of Advanced Industrial Science and Technology (Japan)

Exhibitor Presentation

**May 17 (Wednesday), 2017
15:40 - 16:10**

Chair: F. Iwata (*Shizuoka University, Japan*)

- WeEX-01 **Bruker Corporation**
- WeEX-02 **JPK Instruments AG**
- WeEX-03 **NT-MDT Spectrum Instruments**
- WeEX-04 **Asylum Research, Oxford Instruments K.K.**
- WeEX-05 **Research Institute of Biomolecule Metrology Co., Ltd.**
- WeEX-06 **UNISOKU Co., Ltd.**