

Monday, August 10

Satellite Workshop on Casimir Forces and Their Measurement

8:50 *Opening Remarks*

Session I

Chair: W.-J. Kim

9:00 *Non-retarded and retarded interactions between dielectric cylinders*
Rudi Podgornik

9:30 *Casimir Forces from Scattering Theory*
Noah Graham

9:55 *Multiple Scattering Casimir Force Calculations between Layered and Corrugated Materials*
Kimball Milton

10:20 Coffee Break

Session II

Chair: R. Podgornik

10:50 *Drude corrections to Casimir force calculations in liquids*
Raul Esquivel-Sirvent

11:15 *Dispersive Casimir interactions between atoms and surfaces*
Diego Dalvit

11:40 *Van der Waals with a twist: how nanotube chirality impacts interaction strength*
Rick Rajter

12:05 *Using Casimir and capillary forces to model adhesion of MEMS cantilevers*
Maarten de Boer

12:30 Lunch Break

Session III

Chair: A. Parsegian

14:30 *Measuring "Virtual Photon" Forces with "Real Photon" Forces*
Hong Tang

14:55 *Near-field radiative heat transfer*
Alessandro Siria

15:20 *Near-field radiative transfer measurements and implications for Casimir force measurements*
Arvind Narayanaswamy

15:45 Coffee Break

Monday, August 10

Satellite Workshop on Casimir Forces and Their Measurement (cont.)

Session IV

Chair: D. Dalvit

- 16:15 *Tricks and facts in a high precision measurement of the Casimir force with transparent conductors*
Sven de Man
- 16:40 *Measurements of the Casimir force gradient by AFM for Different Materials*
Gauthier Torricelli
- 17:05 *Measuring the topological dependence of the Casimir force on nanostructured silicon surfaces*
Ho Bun Chan
- 17:30 *Short range Casimir force measurements under ambient conditions and liquid environments*
Peter van Zwol
- 17:55 *Contact potential difference in a Casimir force measurement: How do we deal with it?*
Woo-Joong Kim

Welcome Reception with Dinner (18:30-20:30)

Tuesday, August 11

9:00 Opening Remarks

Liquids I

Chair: H. Hölscher

- 9:20 *3D Scanning Force Microscopy at Solid/Liquid Interface*
T. Fukuma, Y. Ueda
- 9:40 *Anisotropic Hydration of Biological Molecules Visualized by Three-Dimensional Scanning Force Microscopy*
H. Asakawa, Y. Ueda, T. Fukuma
- 10:00 *Experimental and Theoretical Studies on 3D Hydration Structures on Muscovite Mica Surfaces in Aqueous Solution*
N. Oyabu, K. Kimura, S. Ido, K. Suzuki, K. Kobayashi, T. Imai, H. Yamada
- 10:20 *Theory of Tip-Sample Interaction Force Mediated by Water*
M. Tsukada, M. Harada, K. Tagami
- 10:40 Coffee Break

Force Spectroscopy I

Chair: F. J. Giessibl

- 11:20 *Dynamic Force Spectroscopy of Single Chain-like Molecules*
D. Ebeling, H. Fuchs, F. Oesterhelt, H. Hölscher
- 11:40 *Spatial force fields above a single atom defect*
A. Schirmeisen, D. Weiner
- 12:00 *Simultaneous measurement of force and tunneling current*
D. Sawada, Y. Sugimoto, K.-I. Morita, M. Abe, S. Morita
- 12:20 *Atom Manipulation on Cu(110)-O Surface with LT-AFM*
Y. Sugawara, Y. Kinoshita, Y. J. Li, Y. Naitoh, M. Kageshima
- 12:40 Lunch Break

Electronic, Photonic, & Casimir Forces

Chair: S. Morita

- 14:30 *Water, Ions, Membranes, Real Metals, Finite Temperature: Is there ever a pure Casimir force? (Invited)*
Adrian Parsegian
- 15:10 *Short and medium range electrostatic forces analyzed by Kelvin probe force microscopy*
Th. Glatzel, S. Kawai, S. Koch, A. Baratoff, E. Meyer
- 15:30 *The Effective Quality Factor in Dynamic Force Microscopes with Fabry-Perot Interferometer Detection*
H. Hölscher, P. Milde, U. Zerweck, L. M. Eng, R. Hoffmann

Poster Session I (15:50 – 18:00)

Chair: A. Oral

Wednesday, August 12

Oxides

Chair: A. Schwarz

- 9:00 *Imaging Single Atoms on Oxide Surfaces – Gold on Alumina/NiAl(110)*
[M. Heyde](#), G. H. Simon, Th. König, H.-J. Freund
- 9:20 *Site-specific force spectroscopy on TiO₂ (110) surface at low-temperature*
[A. Yurtsever](#), A. Pratama, Y. Sugimoto, M. Abe, S. Morita
- 9:40 *Character of the short-range interaction between a silicon based tip and the TiO₂(110) surface: a DFT study*
C. Gozalez, P. Jelínek, [R. Pérez](#)
- 10:00 *True atomic resolution imaging on an application-oriented system: Understanding photocatalytic reactivity of transition-metal doped TiO₂*
[R. Bechstein](#), M. Kitta, J. Schütte, H. Onishi, A. Kühnle
- 10:20 *Local surface photovoltage spectroscopy of molecular clusters using Kelvin probe force microscopy*
[S. Sadewasser](#), M. Ch. Lux-Steiner
- 10:40 Coffee Break

Carbon-based Materials

Chair: M. Reichling

- 11:20 *Why is Graphite so Slippery? Gathering Clues from Three-Dimensional Lateral Forces Measurements*
[U. D. Schwarz](#), M. Z. Baykara, T. C. Schwendemann, B. J. Albers, N. Pilet, E. I. Altman
- 11:40 *Theoretical DFT simulations of the STM/AFM atomic scale imaging on graphite*
V. Rozsival, M. Ondráček, [P. Jelínek](#)
- 12:00 *Atomic-Resolution Damping Force Spectroscopy on Nanotube Peapods with Different Tube Diameters*
[M. Ashino](#), R. Wiesendanger, A. N. Khlobystov, S. Berber, D. Tománek
- 12:20 *Theoretical study of the forces and atomic configurations of NC-AFM experiments on low-dimension carbon materials*
[P. Pou](#), R. Perez
- 12:40 Lunch Break

Molecules on Insulators

Chair: R. Perez

- 14:30 *Anchoring highly polar molecules onto an ionic crystal*
J. Schütte, R. Bechstein, M. Rohlfing, M. Reichling, [A. Kühnle](#)
- 14:50 *Steering the formation of molecular nanowires and compact nanocrystallites on NaCl(001)*
S. Fremy, [A. Schwarz](#), K. Laemmle, R. Wiesendanger, M. Prosenc
- 15:10 *2-Dimensional growth of phenylenediboronic acid assisted by H-bonding*
R. Pawlak, L. Nony, F. Bocquet, M. Sassi, V. Oison, J.-M. Debierre, [Ch. Loppacher](#), L. Porte
- 15:30 *Molecular scale dissipation in oligothiophene monolayers measured by dynamic force microscopy*
[C. J. Gómez](#), N. F. Martínez, W. Kamiński, C. Albonetti, F. Biscarini, R. Perez, R. Garcia

Poster Session II (15:50 – 18:00)

Chair: Y. Sugawara

Conference Banquet (18:30 – 22:00)

Thursday, August 13

Force Spectroscopy II

Chair: P. Grütter

- 9:00 *Dependence of the atomic scale image of a Si adatom on the tip apex termination: a DFT study*
[A. Campbell](#), P. Pou, R. Pérez, P. Klapetek, P. Jelínek
- 9:20 *AFM probe tips with a small front atom*
T. Hofmann, J. Welker, M. Ternes, C. P. Lutz, A. J. Heinrich, [F. J. Giessibl](#)
- 9:40 *Intramolecular features of organic molecules characterized by force field spectroscopy: The case of PTCDA on Cu and Ag*
[G. Langewisch](#), D.-A. Braun, D. Weiner, B. Such, H. Fuchs, A. Schirmeisen
- 10:00 *Analysis of bimodal and higher mode small-amplitude near-contact AFM and energy dissipation*
S. Kawai, [A. Baratoff](#), Th. Glatzel, S. Koch, B. Such, E. Meyer
- 10:20 *Adhesion-induced energy dissipation and atom-tracked tip changes*
[S. Kawai](#), Th. Glatzel, S. Koch, B. Such, A. Baratoff, E. Meyer
- 10:40 Coffee Break

Forces & Charges

Chair: H. Onishi

- 11:20 *Combined Qplus-AFM and STM imaging of the Si(100) surface: Activating the c(4x2) to p(2x1) transition with subnanometre oscillation amplitudes*
[A. Sweetman](#), S. Gangopadhyay, R. Danza, P. Moriarty
- 11:40 *Measuring Atomic Charge States by nc-AFM*
[L. Gross](#), F. Mohn, P. Liljeroth, J. Repp, F. J. Giessibl, G. Meyer
- 12:00 *Mechanism of Dissipative Interaction by Tunneling Single-Electrons*
[Y. Miyahara](#), L. Cockins, S. D. Bennett, A. A. Clerk, S. A. Studenikin, P. Poole, A. Sachrajda, P. Grütter
- 12:20 *Controlling electron transfer processes on insulating surfaces with the NC-AFM*
[Th. Trevelyan](#), A. Shluger
- 12:40 *NC-AFM imaging with atomic resolution in a temperature range between 5 K and 1083 K*
[A. Bettac](#), A. Feltz
- 13:00 Lunch Break

Guided Yale Campus Walking Tours (14:00-15:30/16:00-17:30)

Chair: A. Schirmeisen

Method Development

- 9:00 *Atomic scale elasticity mapping of Ge(001) surface by multifrequency FM-AFM*
Y. Naitoh, Z. Ma, Y. Li, M. Kageshima, Y. Sugawara
- 9:20 *Small amplitude atomic resolution NC-AFM imaging and force spectroscopy experiments using a stiff piezoelectric force sensor*
S. Torbrügge, J. Rychen, O. Schaff
- 9:40 *Determination of the Optimum Spring Constant and Oscillation Amplitude for Atomic/Molecular-Resolution FM-AFM*
Y. Hosokawa, K. Kobayashi, H. Yamada, K. Matsushige
- 10:00 *Visualization of Anisotropic Conductance in Polydiacetylene Crystal by Two-probe FM-AFM/KFM*
E. Tsunemi, K. Kobayashi, K. Matsushige, H. Yamada
- 10:20 *Scattering Scanning Near-Field Optical Microscopy performed by NC-AFM*
U. Zerweck, S. C. Schneider, M. T. Wenzel, H.-G. von Ribbeck, S. Grafström, R. Jacob, S. Winnerl, M. Helm, L. M. Eng
- 10:40 Coffee Break

Chair: T. Fukuma

Liquids II

- 11:20 *Atomic resolution dynamic lateral force microscopy in liquid*
S. Nishida, D. Kobayashi, N. Okabe, H. Kawakatsu
- 11:40 *Molecular-scale Investigations of Biomolecules in Liquids by FM-AFM*
S. Ido, N. Oyabu, K. Kobayashi, Y. Hirata, M. Tsukada, K. Matsushige, H. Yamada
- 12:00 *Bimodal AFM imaging of antibodies and chaperonins in liquids*
E. T. Herruzo, C. Dietz, J. R. Lozano, R. Garcia
- 12:20 *Redox-state Dependent Reversible Change of Molecular Ensembles in Water Solution by Electrochemical FM-AFM*
K.-I. Umeda, Y. Yokota, K.-I. Fukui
- 12:40 *Closing Remarks*

POSTER Session I (Tuesday)

Chair: A. Oral

Force Spectroscopy

- P.I-01 *Force and Tunneling Current Measurements on the Semiconductor Surface*
D. Sawada, Y. Sugimoto, K.-I. Morita, M. Abe, S. Morita
- P.I-02 *Force Map of Atomic Force Microscopy on Si(111)-(5x5)-DAS Surface*
A. Masago, M. Tsukada
- P.I-03 *From non-contact to atomic scale contact between a Si tip and a Si surface analyzed using an nc-AFM and nc-AFS based instrument*
T. Arai, K. Kiyohara, T. Sato, S. Kushida, M. Tomitori
- P.I-04 *Improved atomic-scale contrast via bimodal dynamic force microscopy*
S. Kawai, Th. Glatzel, S. Koch, B. Such, A. Baratoff, E. Meyer
- P.I-05 *Static cantilever deflection in dynamic force microscopy*
S. Kawai, Th. Glatzel, S. Koch, B. Such, A. Baratoff, E. Meyer
- P.I-06 *Resonance frequency shift due to tip-sample interaction in the thermal oscillations regime*
G. Malegori, G. Ferrini
- P.I-07 *Influence of thermal noise on measurements of chemical bonds in UHV-AFM*
P. M. Hoffmann
- P.I-08 *Atomic force microscope cantilever resonance frequency shift based thermal metrology*
A. Narayanaswamy, C. Canetta, N. Gu

Kelvin Probe Microscopy

- P.I-09 *Contact potential difference on the atomic-scale probed by Kelvin Probe Force Microscopy: an imaging scenario*
L. Nony, A. Foster, F. Bocquet, Ch. Loppacher
- P.I-10 *Self-assembled Boronitride Nanomesh on Rh(111) Investigated by Means of Kelvin Probe Force Microscopy*
S. Koch, M. Langer, J. Lobo-Checa, Th. Brugger, S. Kawai, B. Such, E. Meyer, Th. Glatzel
- P.I-11 *Kelvin probe force microscopy in application to organic thin films: frequency modulation, amplitude modulation, and hover mode KPFM*
B. Moores, F. Hane, L. M. Eng, Z. Leonenko
- P.I-12 *Resolution enhanced multifrequency electrostatic force microscopy under ambient conditions*
X. D. Ding, J. B. Xu, J. X. Zhang
- P.I-13 *Deconvolution and Tip Geometry Effects in Atomic- and Nanoscale Kelvin probe Force Microscopy*
G. Elias, Y. Rosenwaks, A. Boag, E. Meyer, Th. Glatzel
- P.I-14 *Kelvin Force Microscopy Dynamic Behavior and Noise Propagation*
H. Diesinger, D. Deresmes, J.-P. Nys, Th. Mélin
- P.I-15 *Charge transfer from doped silicon nanocrystals*
Ł. Borowik, Th. Nguyen-Tran, P. Roca i Cabarrocas, K. Kusiaku, D. Theron, H. Diesinger, D. Deremes, Th. Mélin

Poster Session I cont. (Tuesday)

Instrumentation

- P.I-16 *Open source scanning probe microscopy control and data analysis software package Gxsm*
[P. Zahl](#)
- P.I-17 *2nd generation Dynamic Nanostencil AFM/DFM/STM for in-situ (UHV) resistless patterning of nanostructures*
[P. Zahl](#), [P. Sutter](#)
- P.I-18 *Design of a Variable Temperature Variable Magnetic Field Noncontact Scanning Force Microscope for the Characterization of Nanoscale Electronic and Magnetic Phenomena*
[P. Staffier](#), [M. Liebmann](#), [J. Falter](#), [N. Pilet](#), [Ch. Ahn](#), [U. D. Schwarz](#)
- P.I-19 *An Active Q Control System in Scanning Force Microscopy*
[J. Kim](#), [M. Zech](#), [J. E. Hoffman](#)
- P.I-20 *Besocke style quartz tuning fork FM-AFM/STM for use in UHV and low temperatures*
[S. M. Huston](#), [R. T. Port](#), [K. M. Andrews](#), [Th. P. Pearl](#)
- P.I-21 *Design of a Low Temperature Noncontact Atomic Force Microscope Combined with a Field Ion Microscope*
[J. Falter](#), [D.-A. Braun](#), [H. Hölscher](#), [U. D. Schwarz](#), [A. Schirmeisen](#), [H. Fuchs](#)
- P.I-22 *A homebuilt low-temperature STM / tuning fork AFM combination*
[M. Lange](#), [J. Schaffert](#), [N. Wintjes](#), [R. Möller](#)
- P.I-23 *Development of quartz force sensors for noncontact atomic force microscopy/spectroscopy*
[K. Hori](#), [T. Arai](#), [M. Tomitori](#)
- P.I-24 *High-Speed Frequency Modulation Atomic Force Microscopy using Wideband Digital Phase-Locked Loop Detector*
[T. Fukuma](#), [Y. Mitani](#)

Method Development

- P.I-25 *Recent Advances in Multi-Spectral Atomic Force Microscopy*
[S. Jesse](#), [N. Balke](#), [P. Maksymovych](#), [O. Ovchinnikov](#), [A.P. Baddorf](#), [S.V. Kalinin](#)
- P.I-26 *Deciphering Nanoscale Interactions: Artificial Neural Networks and Scanning Probe Microscopy*
[M. Nikiforov](#), [S. Jesse](#), [O. Ovchinnikov](#), [S. V. Kalinin](#)
- P.I-27 *NC-AFM study of a cleaved InAs (110) surface using modified Si probes under ambient atmospheric pressure*
[Y. Jeong](#), [M. Hirade](#), [R. Kokawa](#), [H. Yamada](#), [K. Kobayashi](#), [N. Oyabu](#), [H. Yamatani](#), [T. Arai](#), [A. Sasahara](#), [M. Tomitori](#)
- P.I-28 *Dual-Frequency-Modulation AFM Spectroscopy*
[G. Chawla](#), [C. A. Wright](#), [S. D. Solares](#)
- P.I-29 *Theory of Multifrequency Method in FM-AFM*
[Z. Ma](#), [Y. Naitoh](#), [Y. Li](#), [M. Kageshima](#), [Y. Sugawara](#)
- P.I-30 *Internal Resonances and Spatio-Temporal Instabilities in Nonlinear Multi-mode NC-AFM Dynamics*
[O. Gottlieb](#), [S. Hornstein](#), [W. Wu](#), [A. Shavit](#)

Poster Session I cont. (Tuesday)

- P.I-31 *Frequency Noise in Frequency Modulation Atomic Force Microscopy*
[K. Kobayashi](#), H. Yamada, K. Matsushige
- P.I-32 *Relation between lateral forces and dissipation in FM-AFM*
[M. Klocke](#), D. E. Wolf
- P.I-33 *Experimental Study of Dissipation Mechanisms in AFM Cantilevers*
[F. Zypman](#)

Nanolithography

- P.I-34 *Ultrasonic Nanolithography on Hard Substrates*
[M. T. Cuberes](#)
- P.I-35 *Silicon nanowire transistors with a channel width of 4 nm fabricated by atomic force microscope nanolithography*
[J. Martinez](#), R. V. Martinez, R. Garcia
- P.I-36 *Contacting self-ordered molecular wires by nanostencil lithography*
L. Gross, R. R. Schlittler, G. Meyer, [Th. Glatzel](#), S. Kawai, S. Koch, E. Meyer

Post-Deadline Posters

- P.I-37 *An ultrahigh vacuum atomic force microscope for a high resonance frequency small cantilever*
[K. Nakagawa](#), D. Hirayama, D. Kobayashi, S. Nishida, S. Kawai, G. Hashiguchi H. Kawakatsu
- P.I-38 *The use of flexural and torsional mode for atomic resolution dynamic force microscopy in liquid*
[N. Okabe](#), D. Kobayashi, S. Nishida, H. Kawakatsu
- P.I-39 *FM-AFM Observation on Algorithmically Assembled DNA Structures in Liquid*
[S. Tanaka](#), M. Tagawa, K. Suzuki, S. Kitamura, K. Fujimoto, A. Suyama

POSTER Session II (Wednesday)

Chair: Y. Sugawara

Molecules

- P.II-01 *Molecular Structures of Organic Single Crystals Investigated by Frequency Modulation Atomic Force Microscopes*
T. Minato, H. Aoki, T. Wagner, K. Itaya
- P.II-02 *Imaging of aromatic molecules by tuning-fork based LT-NC-AFM*
B. Such, Th. Glatzel, S. Kawai, S. Koch, A. Baratoff, E. Meyer, C. H. M. Amijs, P. de Mendoza, A. M. Echavarren
- P.II-03 *One and Two Dimensional Structure of Water on Cu(110) and O/Cu(110)-(2x1) Surface*
B. Y. Choi, Y. Shi, T. Duden, M. Salmeron
- P.II-04 *Dynamical simulations of truxene molecules adsorbed on the KBr (001) surface*
T. Trevelyan, A. Shluger
- P.II-05 *Temperature-dependent growth of C₆₀ on CaF₂(111)*
F. Loske, P. Maaß, J. Schütte, A. Kühnle
- P.II-06 *Creating 1D nanostructures: Heptahelicene-carboxylic acid on Calcite*
P. Rahe, M. Nimmrich, J. Schütte, I. G. Stara, A. Kühnle
- P.II-07 *Atomic Force Microscopy Study of Cross-Linked C₃₂H₆₆ Monolayer by Low-Energy (10eV) Hyperthermal Bombardment*
Y. Liu, H.Y. Nie, D.Q. Yang, M.W. Lau, J. Yang
- P.II-08 *Towards a molecule-based Ferroelectric-OFET: surface modification of PZT mediated through functionalized thiophene derivatives*
P. Milde, K. Haubner, E. Jaehne, D. Köhler, U. Zerweck, L. M. Eng
- P.II-09 *Imaging and Detection of Single Molecule Recognition Events on Organic Semiconductor Surfaces*
N. S. Losilla, J. Preiner, A. Ebner, P. Annibale, F. Biscarini, R. Garcia, P. Hinterdorfer
- P.II-10 *Transverse conductance image of DNA probed by current-feedback noncontact AFM*
T. Matsumoto, Y. Maeda, T. Kawai
- P.II-11 *Imaging Schwann Cell NGF Receptors using Atomic Force Microscopy*
R. Williamson, Cheryl Miller

Liquids

- P.II-12 *Comparative Studies on Water Structures on Hydrophilic and Hydrophobic Surfaces by FM-AFM*
K. Suzuki, N. Oyabu, K. Kobayashi, K. Matsushige, H. Yamada
- P.II-13 *Molecular Resolution Investigation of Lysozyme Crystal in Liquid by Frequency-Modulation AFM*
K. Nagashima, M. Abe, S. Morita, N. Oyabu, K. Kobayashi, H. Yamada, R. Murai, H. Adachi, K. Takano, H. Matsumura, S. Murakami, T. Inoue, Y. Mori, M. Ohta, R. Kokawa
- P.II-14 *Noncontact Atomic Force Microscope Observation of TiO₂(110) Surface in Pure Water*
A. Sasahara, Y. Jeong, M. Tomitori
- P.II-15 *Development of Multifrequency High-speed NC-AFM in Liquid*
Y. J. Li, K. Takahashi, N. Kobayashi, Y. Naitoh, M. Kageshima, Y. Sugawara

Poster Session II cont. (Wednesday)

- P.II-16 *Frequency-Domain and Time-Domain Analyses of Soft-Matter Dynamics Using Wide-Band Magnetic Excitation AFM*
M. Kageshima, T. Ogawa, S. Kurachi, Y. Naitoh, Y. J. Li, Y. Sugawara
- P.II-17 *Noncontact observation in liquid with van der Pol-type FM-AFM*
M. Kuroda, H. Yabuno, T. Someya, R. Kokawa, M. Ohta
- P.II-18 *Development of a NC – AFM for Ambient and Liquid Environments*
H. I. Rasool, S. Sharma, J. K. Gimzewski
- P.II-19 *Cantilever Holder Design for Spurious-Free Cantilever Excitation in Liquid by Piezoactuator*
H. Asakawa, T. Fukuma

Oxides and Insulators

- P.II-20 *The different faces of the calcite (10-14) surface*
J. Schütte, L. Tröger, P. Rahe, R. Bechstein, A. Kühnle
- P.II-21 *Manipulation Mechanism of Single Cu Atoms on Cu(110)-O Surface with Low Temperature Non-Contact AFM*
Y. Kinoshita, T. Satoh, Y. J. Li, Y. Naitoh, M. Kageshima, Y. Sugawara
- P.II-22 *Simultaneous NC-AFM/STM Imaging of the Surface Oxide Layer on Cu(100) and Identification of Lattice Sites*
M. Z. Baykara, T. C. Schwendemann, E. I. Altman, U. D. Schwarz
- P.II-23 *nc-AFM Investigations of Metal Nanoclusters on α -alumina*
K. Venkataramani, M. C. R. Jensen, M. Reichling, F. Besenbacher, J. V. Lauritsen
- P.II-24 *Atom-resolved AFM studies of the polar $MgAl_2O_4$ (001) surface*
M. K. Rasmussen, J. V. Lauritsen, F. Besenbacher
- P.II-25 *Contrast formation on cross-linked (1x2) reconstructed titania (110)*
H. H. Pieper, S. Torbrügge, S. Bahr, K. Venkataramani, A. Kühnle, M. Reichling
- P.II-26 *Nano volcanoes – the surface structure of antimony-doped TiO_2 (110)*
R. Bechstein, M. Kitta, J. Schütte, H. Onishi, A. Kühnle

Electronic and Magnetic Properties

- P.II-27 *Non-contact scanning nonlinear dielectric microscopy imaging of TiO_2 (110) surfaces*
N. Kin, Y. Cho
- P.II-28 *Characterizations of Carbon Material by Non-contact Scanning Non-linear Dielectric Microscopy*
S. Kobayashi, Y. Cho
- P.II-29 *Local Dielectric Spectroscopy of Nanocomposite Materials Interfaces*
M. Labardi, D. Prevosto, S. Capaccioli, M. Lucchesi, P.A. Rolla
- P.II-30 *Probing Local Bias-Induced Phase Transitions on the Single Defect Level: from Imaging to Deterministic Mechanisms*
N. Balke, S. Jesse, P. Maksymovych, Y.H. Chu, R. Ramesh, S. Choudhury, L.Q. Chen, S.V. Kalinin
- P.II-31 *Polarization-dependent electron tunneling into ferroelectric surfaces*
P. Maksymovych, S. Jesse, P. Yu, R. Ramesh, A. P. Baddorf, S. V. Kalinin
- P.II-32 *Local ferroelectric and magnetic investigations on multiferroic thin films*
U. Zerweck, D. Köhler, P. Milde, Ch. Loppacher, S. Geprägs, S.T.B. Goennenwein, R. Gross, L.M. Eng

Poster Session II cont. (Wednesday)

- P.II-33 *Magnetic Resonance Force Microscopy in Anisotropic Systems*
[T. Fan](#), V. I. Tsifrinovich
- P.II-34 *Sub-10 nm resolution in Magnetic Force Microscopy (MFM) at ambient conditions*
Ö. Karçı, H. Atalan, M. Dede, Ü. Çelik, [A.Oral](#)
- P.II-35 *Enhancement of the Exchange-bias Effect based on Quantitative Magnetic Force Microscopy Results*
[N. Pilet](#), M.A. Marioni, S. Romer, N. Joshi, S. Özer, H.J. Hug