ALC'05 Program (Final version, 28 Oct.)

December 4, 2005 (Sunday)

Room A: K2~K4

Tutorial

10:30~11:20

04TU01 The history and development of photoelectron diffraction –holography *(Invited)*
Y.Nihei

11:20~12:10

04TU02 Electronically induced surface chemistry: Localized bond breaking vs. delocalization *(Invited)*
D.Menzel

--- LUNCH ---

14:00~14:50

04TU03 Modern alchemy to turn gold into excellent catalysts *(Invited)*
M.Haruta

14:50~15:40

04TU04 Aberration correction in electron microscopy *(Invited)*
H.Rose

16:10~17:00

04TU05 The development of the scanning electron microscope *(Invited)*
F.Pease

18:00~20:00

Mixer

December 5, 2005 (Monday)

Room A: K2~K4
08:30~09:00
Opening Ceremony

Plenary
09:00~09:40
05PL01 Characterizing surfaces, buried interfaces, nanostructures and complex materials with synchrotron radiation techniques: some new directions *(Invited)*
C.S.Fadley

09:40~10:20
05PL02 A right right light light device -nano and quantum structures in vertical cavity surface emitting laser-*(Invited)*
K.Iga

--- BREAK ---

Room A: K2~K4
Magnetism
10:50~11:20
05MA01 Spin-polarization and magnetic anisotropy of nanostructures at surfaces *(Invited)*
H.Brune

11:20~11:50
05MA02 Inelastic scattering of electrons from spin-flip excitations at surfaces *(Invited)*
H.Ibach, R.Etzkorn and J.Kirschner

11:50~12:10
05MA03 Measuring electronic spin-pression in magnetic thin films by spin-polarized low-energy electron microscopy
C.Klein, J.Spence and A.K.Schmid

Room B: K1
SIMS 1
10:50~11:20
05MB01 Interaction of keV monoatomic and fullerene ions with organic materials: experiments and simulations *(Invited)*
A.Delcorte

11:20~11:50
05MB02 Particle scattering off surfaces: application in space science *(Invited)*
P.Wurz, J.Scheer and M.Wieser

11:50~12:10
05MB03 Dynamic SIMS analysis of thin metal oxide films and multilayers
K.E.Prince, P.J.Evans, G.Triani, D.R.G.Mitchell and J.Bartlett

--- LUNCH ---

Room B: K1
Workshop: Rapidly Developing High-performance/High-resolution AFM
14:00~14:40
05WS01 Higher-harmonic atomic force microscopy *(Invited)*
F.J.Giessibl

14:40~15:10
05WS02 Site-specific spectroscopy and atom manipulation by AFM *(Invited)*
S.Morita, Y.Sugimoto, N.Oyabu, M.Abe and O.Custance

15:10~15:40
05WS03 Subnanometer-resolution imaging of molecules in liquid by AFM *(Invited)*
H.Yamada

15:40~16:00
05WS04 Atomic force microscopy with subAngstrom amplitudes
H.Kawakatsu, S.Kawai, F.Rose, S.Nishida, T.Sakurada, D.Kobayashi and S.Kitamura

Sponsored Session
16:30~17:00
Elemental analysis at high spatial resolution by SIMS and Atom Probe
by CAMECA
17:00~17:30
by ULVAC-PHI

--- DINNER ---

Room A: K2~K4
Low dimensional 1
19:30~20:00
05EA01 Ballistic, diffusive, and polaronic electrical conduction in organic and inorganic nanowires observed by multiple-probe scanning tunneling microscopes *(Invited)*
M.Aono

20:00~20:30
05EA02 Atomic-level characterization of fluctuating atomic wires on Si *(Invited)*
H.W.Yeom

20:30~21:00
05EA03 Boron nitride layers on transition metal surfaces and their spontaneous nanostructuring *(Invited)*
T.Greber, M.Corso, M.Morscher, P.Blaha and J.Osterwalder

21:00~21:20
05EA04 Atomic-scale observation of inhomogeneities and fluctuations in the surface quasi-one dimensional system
G.Lee, J.Guo and E.W.Plummer

21:20~21:40
05EA05 Electronic structure and stability of atomic-scale-height Ag islands on Si(111)-(7×7) surfaces: An in-situ scanning tunneling spectroscopy study
K.Bhattacharjee,D.K.Goswami and B.N.Dev

Room B: K1
Holography and New Techniques
19:30~20:00
05EB01 Resonant X-Ray spectro-holography: Imaging magnetic nanostructures *(Invited)*
J.Luning

20:00~20:20
05EB02 Electron holography studies of the effect of resistance at the wire-wire contact in resistivity measurement of nanowires formed by electron beam induced deposition
M.Takeguchi, M.Shimojo, M.Tanaka, R.Che, W.Zhang and K.Furuya

20:20~20:40
05EB03 Stable Multi-Wall Carbon Nanotube Field emitter operating in Low Vacuum
H.Suga, H.Abe, M.Tanaka, T.Ohno, Y.Nishioka, H.Tokumoto and T.Shimizu

20:40~21:00
05EB04 Structural studies of silicon surfaces by reflection high-energy positron diffraction at total reflection conditions
A.Ichimiya, A.Kawasuso, Y.Fukaya and K.Hayashi

December 6, 2005 (Tuesday)

Room A: K2~K4

Special Session: Coherent Electron, Electron correlation, Fundamentals on electron probe

08:30~09:00

06SP01 Which atom is where? Which fields are around? Answers offered by electron holography *(Invited)*
H.Lichte

09:00~09:30

06SP02 Emission properties of demountable single-atom electron source and their applications *(Invited)*
C.Oshima

09:30~10:00

06SP03 Recent applications of electron biprism interferometry to fundamental questions of quantum theory and –statistics *(Invited)*
F.Hasselbach, H.Kiesel and P.Sonnentag

10:00~10:30

06SP04 Direct recovery of surface structure from low energy electron diffraction experiment *(Invited)*
S.Y.Tong and H.S.Wu

Short Presentation of Student Award Winners (5min each, no discussion)

06P01 Direct MS/MS analysis in mammalian tissue sections using MALDI-QIT-TOFMS and chemical inkjet technology (Student Award)
S.Shimma, M.Furuta, K.Ichimura, Y.Yoshida and M.Setou

06P09 Cesium/Xenon co-sputtering and ToF-SIMS depth profiling: A fundamental survey through the periodic table (Student Award)
J.Brison and L.Houssiau

06P17 High sensitive ion imaging system using direct combination of stacked-type solid-state imager and microchannel plate driven by LabVIEW software (Student Award)
N.Sakamoto and H.Yurimoto

06P23 Dependence of depth resolution on primary energy of ions in sputter depth profiling (Student Award)
T.Bungo, T.Nagatomi and Y.Takai

06P66 Surface modification in metals by the low-energy ion irradiation in discharge plasma (Student Award)
V.V.Abidzina, I.V.Tereshko, V.V.Glushchenko, A.M.Tereshko, I.E.Elkin and S.Stoye

--- BREAK ---

Room A: K2~K4

Ion Beam

11:30~12:00

06MA01 Interactions of slow highly charged ions with surfaces: From hollow atoms to novel applications *(Invited)*
F.Aumayr

12:00~12:30

06MA02 The transient sputtering of an amorphous Si surface by sub-keV O_2^+ ion bombardment *(Invited)*
H.J.Kang, H.-I.Lee and D.W.Moon

Room B: K1

Surface Phenomena I

11:30~12:00

06MB01 Interaction between ionic liquid and metal surface alloys *(Invited)*

U.Bardi, S.Caporali, S.P.Chenakin, A.Lavacchi, I.Perissi and A.Tolstoguzov

12:00~12:30
06MB02 TEM observation of Au particles supported on metal oxides *(Invited)*
T.Akita, S.Ichikawa, M.Okumura, K.Tanaka, M.Kohyama and M.Haruta

--- LUNCH ---

Room B: K2~K4
Workshop: SEM
14:00~14:30
06WS01 Low voltage microscopy and microanalysis *(Invited)*
D.C.Joy

14:30~15:00
06WS02 Imaging of single-walled carbon nanotubes by low voltage scanning electron microscopy *(Invited)*
Y.Homma and D.Takagi

15:00~15:30
06WS03 CD-SEM -Progress of measurement technology and scope of future prospect- *(Invited)*
T.Otaka

19:30~22:00
Poster Session I (Blue: Student Award)
06P01 Direct MS/MS analysis in mammalian tissue sections using MALDI-QIT-TOFMS and chemical inkjet technology (Student Award)
S.Shimma, M.Furuta, K.Ichimura, Y.Yoshida and M.Setou

06P02 Mass spectroscopic and theoretical studies on the fragmentation mechanism of protonated molecules and molecular cations of organometallic compounds with Si-Si, Ge-Ge and Si-Ge bonds
T.Takeuchi, Y.Shirai, Y.Matsumura, K.Iwai, T.Matsutani, J.Ohshita and A.Naka

06P03 Dual beam system for the sector typed nano-beam SIMS
M.Nojima, A.Maekawa, T.Yamamoto, Y.Ishizaki, R.Tanaka, M. Owari and Y.Nihei

06P04 Analysis of transparent conductive films by nano-beam SIMS
K.Nakamura, Y.Ishikawa, K.Utsumi, H.Iigusa, R.Tanaka, Y.Ishizaki, T.Yamamoto, A.Maekawa, M.Nojima, M.Owari and Y.Nihei

06P05 Development of 3D nano analysis using shave-off depth profiling by FIB-SIMS
A.Maekawa, T.Yamamoto, Y.Ishizaki, R.Tanaka, T. Sakamoto, M. Owari, M.Nojima and Y.Nihei

06P06 Study of three-dimensional microanalysis of biotissue
T.Iwanami, Y.J.Liu, M.Okazaki, M.Nojima, T.Sakamoto and M.Owari

06P07 Shave-off depth profiling of dendritic short-circuit growth caused by ion migration
T.Yamamoto, A.Maekawa, Y.Ishizaki, R.Tanaka, M.Owari, M.Nojima and Y.Nihei

06P08 Very low energy implantation of single atomic ions into surface adsorbed fullerenes: The formation and emission of the endohedral complex $Cs@C_{60}^{+}$
E.Kolodney, A.Kaplan, Y.Manor, A.Bekkerman and B.Tsipinyuk

06P09 Cesium/Xenon co-sputtering and ToF-SIMS depth profiling: A fundamental survey through the periodic table (Student Award)
J.Brison and L.Houssiau

06P10 An application of the cesium-xenon co-sputtering: quantitative study of the Pd-Rh interdiffusion by ToF-SIMS
J.Brison, R.Hubert, S.Lucas and L.Houssiau

06P11 Clarification of fragmentation mechanism of fullerene by ion bombardment: Using TOF-SIMS measurement and quantum chemical calculation
N.Kato and M.Kudo

06P12 An application of TOF-SIMS mapping for biotissue
M.Okazaki, T.Iwanami, Y.Morita, M.Nojima, T.Sakamoto, and M.Owari

06P13 Clean-up of n-alkanes by means of supercritical CO_2 extraction for TOF-SIMS sample preparation
T.Sakamoto, A.Yamamoto, M.Owari and Y.Nihei

06P14 Enhanced peptide molecular imaging by sodium salt aqueous droplet
M.Komatsu, Y.Murayama, K.Kuge and H.Hashimoto

06P15 Improvement of SIMS depth profiling of multi thin layers by surrounding-free preparation technique
S.Seki, H.Tamura, K.Ohmuro and Y.Wada

06P16 High depth resolution analysis of As implanted in Si(100) with MEIS and SIMS -MEIS as depth standard for SIMS-
T.Yasue, A.Karen, T.Hasegawa and T.Koshikawa

06P17 High sensitive ion imaging system using direct combination of stacked-type solid-state imager and microchannel plate driven by LabVIEW software (Student Award)
N.Sakamoto and H.Yurimoto

06P18 Production of water cluster ions and their irradiation effects on solid surfaces
G.H.Takaoka, K.Nakayama, H.Noguchi and M.Kawashita

06P19 Characteristics of multiphoton ionization of atoms and molecules by a femtosecond laser at 790 nm
R.Mibuka, S.Kurihara, N.Vasa, K.Uchino, H.Yurimoto, M.Higashigaki and M.Ishihara

06P20 High-rate sputtering and chemical modification of silicon surfaces irradiated by alcohol cluster ion beams
G.H.Takaoka, H.Noguchi, K.Nakayama and M.Kawashita

06P21 Unstable SiO molecule emission by using laser vaporization coupled to supersonic jet
S.Hayashi, T.Suzuki, S.Ishiuchi and M.Fujii

06P22 High-density plasma assisted sputtering for GaN epitaxy
T.Matsumoto and M.Kiuchi

06P23 Dependence of depth resolution on primary energy of ions in sputter depth profiling (Student Award)
T.Bungo, T.Nagatomi and Y.Takai

06P24 Monte Carlo simulation of slow-ion depth profiling as applied to GaAs/GaAsAl-reference sample
H.Bando, M.Inoue and R.Shimizu

06P25 A novel negative fullerene ion source and interactions of fullerene ion beams with surfaces: From basic science to applications and nanotechnology tools
E.Kolodney, Y.Manor, A.Bekkerman, A.Kaplan and B.Tsipinyuk

06P26 Development of a cluster ion source using metal cluster complexes
Y.Fujiwara, K.Kondou, Y.Teranishi, H.Nonaka, T.Fujimoto, A.Kurokawa and S.Ichimura

06P27 Optical nonlinearrity and the dispersion of metal nanoparticle composites fabricated by negative ion implantation
Y.Takeda, O.A.Plaksin, J.Lu and N.Kishimoto

06P28 Low temperature deposition of tin dioxide films on polymer using ion-beam induced chemical vapor deposition with tetramethyltin
T.Matsutani, Y.Fujikawa, M.Kiuchi and T.Takeuchi

06P29 Effect of Preferential Sputtering on Auger depth profiling of a GaAs/AlAs Superlattice Sample by Low Energy Ion Sputtering
M.Inoue, H.Bando and R.Shimizu

06P30 Initial growth process of Au clusters on single crystal NiO(001)
T.Okazawa, T.Akita, M.Kohyama, M.Fujiwara and Y.Kido

06P31 Atomic and electrical structure of Ni deposited on Si(111) at room temperature and epitaxially grown B-type $NiSi_2$(111) on Si(111)
T.Nishimura, J.Takeda, Y.Asami, Y.Hoshino and Y.Kido

06P32 Coaxial impact-collision ion scattering and scanning tunneling spectroscopy study of the ZnO(0001) surface
S.Fujii, M.Kishida, Y.Murata, Y.Michishita, D.Maeda, N.Miyamae, H.Suto, H.Okado, S.Honda, M.Katayama and K.Oura

06P33 Small angle X-ray scattering of fine particles of different iron oxides prepared in aqueous media
S.Suzuki, S.Suzuki, M.Sakurai, E.Matsubara, S.-K.Kwon, K.Kanie, A.Muramatsu, M.Okui, S.Fukushima and Y.Waseda

06P34 Estimation of crystal grain size nearby surface using X-ray scattering at small glancing angle of incidence
Y.Fujii and T.Nakayama

06P35 X-Ray photoelectron diffraction by display type spherical mirror analyzer and application on layered transition metal dichalcogenides
F.-Z.Guo, T.Matsushita, F.Matui, Y.Kato, T.Kinoshita and H.Daimon

06P36 Dependence of photoelectron and Auger electron angular distribution on surface effects for glancing incidence of X-rays
Z.M.Zhang, Z.J.Ding, R.Shimizu, H.Yoshikawa and T.Koshikawa

06P37 Highly angular resolved photoelectron diffraction study on semiconductor surface phase transition
K.Amano, H.Mochiduki, M.Nojima, Y.Nihei and M.Owari

06P38 Sulfur Chemical state depending on 1990 – 1996 model vehicles analyzed by X-ray absorption
S.Matsumoto, Y.Tanaka, H.Ishii, T.Tanabe, Y.Kitajima and J.Kawai

06P39 X-ray absorption spectroscopy with a battery-powered X-ray generator
S.Mitsuya, H.Ishii and J.Kawai

06P40 XAFS analysis of sintering inhibited platinum supported on ceria-based oxide in automotive catalysts
K.Dohmae, Y.Nagai, I.Tajima, Y.Seno, T.Hirabayashi, N.Takagi, T.Minami and S.Matsumoto

06P41 Individual particle analysis for the risk assessment induced by TiO_2 photocatalytic particles
H.Ishii, S.Matsumoto, Y.Matsui, Y.Terada, T.Tanabe, I.Uchiyama and J.Kawai

06P42 Basic properties of AlN-film developed for high power soft X-ray source
T.Matsutani, K.Honjyo, M.Kiuchi, K.Shirouzu, R.Shimizu and S.Takahashi

06P43 Monte Carlo simulation program by C++ language for optimum designing of X-ray source of high brightness
Y.Yamaguchi and R.Shimizu

06P44 Development of low power and highly brilliant X-ray source system
M.Doi, N.Kawahara, K.Tsukamoto, H.Niimi and K.Asakura

06P45 Formation of iron silicide nano-rods on Si substrates by electron-beam induced chemical vapor deposition
M.Tanaka, F.Chu, M.Shimojo, M.Takeguchi, K.Mitsuishi and K.Furuya

06P46 Mechanical and electronic properties of dichalcogenide based nanowire
A.Hassanien, A.Mrzel, G.Lientschnig, H.Kataura and M.Tokumoto

06P47 Mono- and multi-affine SiC nanowires
H.Kohno and H.Yoshida

06P48 Study on QPC magnetic sensor materials using silver nanopoint contacts
S.Ueno, E.Rokuta, Y.Mashita, J.Tajima, T.Ishikawa and C.Oshima

06P49 Thermo-modulated optical absorption of Cu nanocluster composites
O.A.Plaksin, Y.Takeda, N.Umeda, H.Amekura, K.Kono and N.Kishimoto

06P50 withdrawn

06P51 Photoluminescence characterization of sub-surface defects in silicon wafers
K.Tanahashi and H.Yamada-Kaneta

06P52 Enhanced diffusion of boron and oxygen in silicon by laser irradiation
H.Yamada-Kaneta, K.Tanahashi and K.Kakimoto

06P53 Influence of steps on GaAsN grown on GaAs(001) vicinal surfaces
H.Suzuki, K.Nishimura, H.Lee, Y.Oshita, N.Kojima and M.Yamaguchi

06P54 In, Sn and K on CuPc: chemistry, diffusion and electronic properties of metal-organic semiconductor interfaces
V.Yu.Aristov, O.V.Molodtsova, V.M.Zhilin, D.V.Vyalikh and M.Knupfer

06P55 Characterization of semiconductors by ion beam and positron annihilation techniques
P.Pusa, T.Ahlgren, S.Väyrynen, O.Koskelo, J.Räisänen, E.Rauhala, I.Riihimäki, F.Tuomisto and K.Saarinen

06P56 Characteristics of metal gate GOI-MOSFET with high-*k* gate dielectric fabricated by Ge condensation method
M.Park, J.Bea, H.Choi, T.Fukushima and M.Koyanagi

06P57 A core level and valence band photoemission study of ultra thin nitrided hafnium silicate
N.Barrett, F.Calvat, R.Daloz, V.Fouquet, M.-J.Guittet, M.Gauthier, O.Renault, J.P.Barnes, Y.Le Tiec and F.Martin

06P58 High-temperature diffusion barriers from Si-rich silicon-nitride
G.Bilger, A.Strohm, T.Voss and T.Schlenker

06P59 Electronic structure in ultrathin SiO_2/SiON/Si interface
H.Jin, S.K.Oh and H.J.Kang

06P60 Surface energy band of highly phosphorous-doped epitaxial CVD diamond

S.Kono, K.Mizuochi, T.Goto, T.Abukawa, A.Namba, Y.Nishibayashi and T.Imai

06P61 Characterization of the diamond-like carbon film synthesized on AISI 304 austenite stainless steel using plasma immersion ion implantation and deposition
J.H.Liang, M.H.Chen, W.F.Tsai, S.C.Lee and C.F.Ai

06P62 Direct mapping on two-dimensional band structure of HOPG(0001)
A.Maruyama, D.Sakai, D.Miura, T.Ishikawa and C.Oshima

06P63 A simulation of electron irradiation damages in single-walled carbon nanotube
M.Yasuda, K.Tada, Y.Kimoto, H.Mori, S.Akita, Y.Nakayama and Y.Hirai

06P64 Vertical growth of carbon nanotubes on metal tips
T.Koizumi, D.Takagi and Y.Homma

06P65 withdrawn

06P66 Surface modification in metals by the low-energy ion irradiation in discharge plasma (Student Award)
V.V.Abidzina, I.V.Tereshko, V.V.Glushchenko, A.M.Tereshko, I.E.Elkin and S.Stoye

December 7, 2005 (Wednesday)

Room A: K2~K4

Special Session for 30th Anniversary of 141 Committee: A History of Instrumental Development –EPMA-

08:30~09:00

07SP01 Development of Electron Probe Instrumentation in Early 1960's in Japan *(Invited)*
R.Shimizu

09:00~09:30

07SP02 Hitachi's pioneering history on microanalysis - from XMA to HD series - *(Invited)*
N.Osakabe (Hitachi, Ltd.)

09:30~10:00

07SP03 Development of EPMA in JEOL *(Invited)*
S.Notoya, M.Takakura and M.Saito (JEOL, Ltd.)

10:00~10:30

07SP04 The spatial resolving power and the state analysis, forty years ago and now *(Invited)*
H.Soejima (Shimadzu Corp.)

Short Presentation of Student Award Winners (5min each, no discussion)

08P06 Sb on In/Si(111) processes with dynamically observable LEEM, selected area LEED and chemically analyzed SR-XPEEM (Student Award)
A.Nakaguchi, F.-Z.Guo, M.Hashimoto, M.Ueda, T.Yasue, T.Kinoshita, K.Kobayashi and T.Koshikawa

08P13 *In-situ* scanning electron microscopy of single-walled carbon nanotube growth (Student Award)
D.Takagi, Y.Homma, S.Suzuki and Y.Kobayashi

08P28 Field emission from a single-atom tip: Apex structure dependences of field emission properties (Student Award)
T.Itagaki, E.Rokuta, K.Nomura, T.Ishikawa, B.-L.Cho, H.-S.Kuo, T.T.Tsong and C.Oshima

08P33 A novel approach to derive escape depth of secondary electrons as applied to Ti and TiO_2 (Student Award)
T.Iyasu, M.Inoue, H.Yoshikawa and R.Shimizu

08P53 Surface structural analysis of *h*-BN/Ni(111) by X-ray photoelectron diffraction excited by Al-Kα line and Cr-Kα line (Student Award)
H.Mochizuki, K.Amano, M.Nojima, M.Owari and Y.Nihei

--- BREAK ---

Room A: K2~K4

SIMS 2

11:30~12:00

07MA01 Development of a high performance TOF-SIMS system using multi-turn TOF mass analyzer *(Invited)*
M.Ishihara

12:00~12:30

07MA02 Development of MS microscope *(Invited)*
M.Setou, S.Shimma, M.Toyoda., Y.Hoshikawa., M.Suzuki, T.Nirasawa, I.Katakuse, K.Nagayama and Y.Yoshida

Room B: K1

Alloy surface

11:30~12:00

07MB01 Study of molecular reaction on titanium oxide by the scanning atom probe *(Invited)*

M.Taniguchi, O.Nishikawa, S.Komata and S.Watanabe

12:00~12:30

07MB02 Formation and reduction of surface oxides studied on atomic scale *(Invited)*
P.Varga

18:00~21:30

Banquet

18:00~ Welcome drink served
18:30~ Call to Dinner
19:00~ Dinner served
19:30~ Dinner Show
20:30~ End of Show
21:30~ End of Music

December 8, 2005 (Thursday)

Room A: K2~K4

Electron Microscopy 1

08:30~09:00

08MA01 Monte Carlo simulation study of SEM image for complex structures *(Invited)*
Z.J.Ding, H.M.Li and Z.M.Zhang

09:00~09:30

08MA02 Development of high-resolution bio phase transmission electron microscope *(Invited)*
Y.Takai, T.Nomaguchi, M.Hayashida and Y.Kimura

09:30~09:50

08MA03 Mapping elemental distributions by SEM/X-ray spectrometry at output count rates above 100 kHz with the silicon drift detector (SDD)
D.E.Newbury

09:50~10:10

08MA04 Influence of thermal diffuse scattering and local stress on the precise measurement of $Si_{1-x}Ge_x$ composition by convergent beam electron diffraction
S.Takeno, M.Koike, H.Tanaka, T.Kinno and M.Tomita

--- BREAK ---

Electron Microscopy 2

10:40~11:10

08MA05 Novel aberration corrected electron microscopes for atomic level characterization *(Invited)*
M.Haider and H.Müller

11:10~11:40

08MA06 Single atom imaging and spectroscopy by aberration-corrected scanning transmission electron microscopy *(Invited)*
S.J.Pennycook, M.F.Chisholm, A.R.Lupini, A.Borisevich, M.Varela, Y.Peng, K.Van Benthem and M.P.Oxley

11:40~12:00

08MA07 Quantitative X-ray analysis of materials by spherical-aberration corrected analytical electron microscopes
D.B.Williams and M.Watanabe

12:00~12:20

08MA08 Light emission by surface plasmon on metal particle arrays induced by high energy electrons
N.Yamamoto, M.Shiokawa, T.Suzuki and F.J. García de Abajo

Room B: K1

Surface Phenomena II

08:30~09:00

08MB01 Amplification of chirality in two-dimensional molecular lattices *(Invited)*
K.-H.Ernst

09:00~09:30

08MB02 Interactions of molecules with metal-oxide single atom defects *(Invited)*
G.Thornton

09:30~09:50

08MB03 Characterization of ZrB_2(0001) heteroepitaxy on Si(111) and Si(001) for III-nitride applications

I.S.T.Tsong

09:50~10:10
08MB04 Spectroscopic analysis of the process dependent microstructure of ultra-thin high-*k* gate dielectric film systems
P.S.Lysaght, J.Barnett, B.Foran, M.Quevedo-Lopez, P.D.Kirsch, G.Bersuker, M.Gardner, B.-H.Lee and L.Larson

--- BREAK ---

Low Dimensional 2
10:40~11:10
08MB05 Physics at nanostructured surfaces *(Invited)*
W.-D.Schneider

11:10~11:40
08MB06 Probing magnetic properties of atoms with STM *(Invited)*
A.Heinrich, C.Lutz and C.Hirjibehedin

11:40~12:00
08MB07 Surprising one-dimensional quantum confinement on Pt-modified Ge(001)
H.J.W.Zandvliet, N.Oncel, A.van Houselt, J.Huijben and B.Poelsema

12:00~12:20
08MB08 Novel silicon quantum stripes and nanowires formed on silver (110) surfaces
G.Le Lay, H.Sahaf, L.Masson, B.Aufray, C.Girardeaux, L.Köver and W.Drube

--- LUNCH ---

Room B: K2
Workshop: in situ Electron Microscopy of Nano-catalyst Processes
14:00~14:30
08WS01 Formation of nanocatalysts for the growth of silicon nanowires *(Invited)*
S.Takeda, J.Kikkawa and K.Torigoe

14:30~15:00
08WS02 Recent advancement in atomic resolution characterization of nanostructured heterogeneous catalysts *(Invited)*
J.Liu

15:00~15:30
08WS03 Carbon-nanopillar tubulization caused by liquidlike iron catalyst nanoparticles *(Invited)*
T.Ichihashi

15:30~16:00
08WS04 Understanding the growth mechanisms of carbon nanotubes by *in situ* observations using environmental transmission electron microscope *(Invited)*
R.Sharma

Sponsored Session
16:30~17:00
“ ”
by SII Nano Technology, Inc.
17:00~17:30
“Three-dimensional characterization using a linkage of FIB cross-sectioning and TEM/STEM/SEM observations”
by Hitachi High-Technologies Corp.

--- DINNER ---

19:30~22:00

Poster Session II (Blue: Student Award)

08P01 Mirror electron microscope for inspecting of nanometer-sized defects on semiconductor device patterns
M.Hasegawa, H.Murakoshi and H.Shinada

08P02 Abnormal contrast of PEEM images on Cu/W(110)
H.Shimizu, A.Nakaguchi, T.Yasue, E.Bauer and T.Koshikawa

08P03 Energy-filtered PEEM imaging of polycrystalline Cu surfaces with work function contrast and high lateral resolution
O.Renault, R.Brochier, N.T.Barrett, B.Krömker and D.Funnemann

08P04 withdrawn

08P05 Surface chemical analysis on the selected area of In/Si(111) by means of LEEM, LEED and SR-XPEEM
H.Shimizu, F-Z.Guo, A.Nakaguchi, T.Yasue, T.Kinoshita, K.Kobayashi, E.Bauer and T.Koshikawa

08P06 Sb on In/Si(111) processes with dynamically observable LEEM, selected area LEED and chemically analyzed SR-XPEEM (Student Award)
A.Nakaguchi, F.-Z.Guo, M.Hashimoto, M.Ueda, T.Yasue, T.Kinoshita, K.Kobayashi and T.Koshikawa

08P07 Observation of XPEEM image of insulator surface by electric field shield mode
H.Yasufuku, H.Yoshikawa, M.Kimura, K.Tamura, S.Fukushima, R.Shimizu and H.Nakazawa

08P08 Stroboscopic PEEM-imaging of fast remagnetization processes and spinwave eigen-modes with picosecond time resolution
F.Wegelin, A.Krasyuk, H.J.Elmers, S.A.Nepijko, A.Oelsner, C.M.Schneider and G.Schönhense

08P09 Switching between continuous and discontinuous spin-reorientation transition in Ni film grown on Cu(100)
C.Klein, R.Ramchal, A.K.Schmid and M.Farle

08P10 Ga nanodot fabrication studied by low energy electron microscope (LEEM)
F.-Z.Guo, R.Buckmaster, T.Yao, T.Kinoshita and K.Kobayashi

08P11 Phase transition and equilibrium structures in Bi/Cu(111): a combined LEEM/SXRD investigation
R.van Gastel, D.Kaminski, E.Vlieg and B.Poelsema

08P12 Dynamic observation of structure change on double layer Cu/W(110) by means of LEEM and selected area LEED
H.Shimizu, A.Nakaguchi, T.Yasue, E.Bauer and T.Koshikawa

08P13 *In-situ* scanning electron microscopy of single-walled carbon nanotube growth (Student Award)
D.Takagi, Y.Homma, S.Suzuki and Y.Kobayashi

08P14 Nano-scale characterization of interface effect in gold catalysts by electron holography
S.Ichikawa, T.Akita, K.Okazaki, K.Tanaka and M.Kohyama

08P15 Electron nanobiprism interference fringes
A.Ohshita, S.Waki, C.Matsuya, K.Hata, K.Iida, B.Cho, T.Ishikawa and C.Oshima

08P16 Surface morphology and atomic diffusion of magnesium alloys
M.Takeda, T.Tanabe and J.Kawai

08P17 A microcalorimeter EDS system suitable for a low voltage analysis
K.Tanaka, A.Odawara, A.Nagata, M.Ikeda, Y.Baba and S.Nakayama

08P18 Optimum 3rd and 5th order spherical aberration for high contrast imaging of single carbon atoms in spherical aberration controlled TEM
M.Hibino, R.Iiyoshi and T.Kitamura

08P19 Improvement of HAADF-STEM image quality by using 3-fold astigmatism corrector
K.Tanaka, T.Akita, K.Ishizuka, T.Tomita, M.Naruse and T.Honda

08P20 Development of an aberration-free phase imaging system in STEM using a multidetector array
M.Taya, T.Ikuta, H.Saito, K.Ogai, T.Tanaka and Y.Takai

08P21 Influence of spherical aberration in imaging system using annular pupils
T.Ikuta

08P22 Optimization of three-dimensional Fourier filtering parameters as applied to aberration-free phase observation under low dose conditions
T.Nomaguchi, Y.Kimura and Y.Takai

08P23 Development of the low dose system in TEM
M.Hayashida, Y.Kimura and Y.Takai

08P24 Development of coincidence transmission electron microscope - Observation of coincidence image using waveform measurement system
K.Nishinaka, Y.Kimura and Y.Takai

08P25 Novel optical properties of twin boundaries in AlGaAs revealed by polarized cathodoluminescence spectroscopy in a transmission electron microscope
Y.Ohno, K.Shoda, S.Takeda and N.Yamamoto

08P26 Analysis of charge distribution in insulators under electron beam irradiation
Y.Kainuma, M.Yasuda, H.Kawata and Y.Hirai

08P27 Numerical study on emission characteristics of a point cathode electron gun: determination of space charge using random emitting conditions
R.Iiyoshi

08P28 Field emission from a single-atom tip: Apex structure dependences of field emission properties (Student Award)
T.Itagaki, E.Rokuta, K.Nomura, T.Ishikawa, B.-L.Cho, H.-S.Kuo, T.T.Tsong and C.Oshima

08P29 Effects of oxygen atmosphere on surface properties of Sc-O/W(100) system as Schottky emitter at high temperature
Y.Nakanishi, T.Nagatomi and Y.Takai

08P30 A novel magnetic field immersion type field emission gun as an electron source of very high brightness
K.Tamura, R.Shimizu and M.Ichihashi

08P31 Measurements and comparison of electron inelastic mean paths in 13 elemental solids in the 100eV to 5000eV energy range by elastic-peak electron spectroscopy
S.Tanuma, T.Shiratori, K.Goto, S.Ichimura and J.C.Powell

08P32 Determination of inelastic mean free path and surface excitation parameter by analysis of absolute reflection electron energy loss spectra

T.Nagatomi and K.Goto

08P33 A novel approach to derive escape depth of secondary electrons as applied to Ti and TiO_2 (Student Award)
T.Iyasu, M.Inoue, H.Yoshikawa and R.Shimizu

08P34 Electron beam induced light emission by surface plasmon on one-dimensional metal gratings
T.Suzuki and N.Yamamoto

08P35 Anomalous enhancement of light emission by Au adsorption on a Si(001) vicinal surface
H.Minoda and N.Yamamoto

08P36 Low-energy ion induced X-ray emission from insulator targets
M.Song, K.Mitsuishi, M.Takeguchi, K.Furuya and R.C.Birtcher

08P37 Low energy ion induced X-ray emission measurement for organic and insulating materials
R.C.Che, M.Song, J.C.Rao, M.Takeguchi and K.Furuya

08P38 Spectroscopic analysis of low-energy ion induced X-ray emission from insulating materials
M.Takeguchi, M.Song, K.Furuya, T.Kitamura, M.Kawai, K.Miyazaki and H.Soejima

08P39 DC bias influence on characteristic X-ray emission from Al_2O_3 single crystal bombarded with 30 keV Ga^+ ions
J.C.Rao, M.Song, R.C.Che, M.Takeguchi and K.Furuya

08P40 Scanning tunneling microscopy (STM) and low-energy electron diffraction (LEED) characterization of NiP(0001)
Md.G.Moula, S.Suzuki, W.-J.Chun, T.Oyama and K.Asakura

08P41 STM study of the structure BC_3 film on NbB_2(0001) substrate
A.Ueno, T.Fujita, M.Matsue, F.Patthey, H.-C.Ploigt, W.-D.Schneider and C.Oshima

08P42 Local spectroscopy and atomic structure of CoO and MnO thin films on metal substrates: low- and variable-temperature STM studies
W.Widdra, S.Großer, Ch.Hagendorf and H.Neddermeyer

08P43 The initial process of halogen adsorption studied with scanning tunneling microscope and surface differential reflectance
Y.Owa, M.Koma, S.Ohno, K.Shudo and M.Tanaka

08P44 Te and Er growth processes on Si(111) by means of STM
Y.Kanai, T.Yasue and T.Koshikawa

08P45 Single electron tunneling and the effect of quantum capacitance in Ag quantum dot (QD) structures on Si(111)-(7×7)
D.K.Goswami, K.Bhattacharjee, A.M.Jayannavar and B.N.Dev

08P46 Formation of BC_3 film on NbB_2(0001) substrate through the ion implantation and segregation
M.Matsue, T.Fujita, A.Ueno, C.Oshima and S.Otani

08P47 Amplitude and frequency modulation NC-AFM using quality factor control of a cantilever in vacuum
T.Sato, M.Shibata, T.Kuba and S.Kitamura

08P48 RHEED rocking curve analysis of Si(111) $\sqrt{3}\times\sqrt{3}$-Ag surface phase transition at low temperature
H.Nakahara, T.Oya, A.Ichimiya and Y.Saito

08P49 Surface reconstruction during halogen-etching of Si(111) surface at high-temperature

K.Shudo, Y.Koike, Y.Owa, M.Koma, S.Ohno and M.Tanaka

08P50 Indication of an unexpected surface metallicity of a new Si(100)2×1 structure, observed below 10K by PES and LEED
G.Le Lay, V.Yu.Aristov and A.N.Chaika

08P51 Modification of Cl/Si(100)-(2×1) surface by photon or electron: Selective desorption and replacement of adsorbates
S.Moon, C.Jeon, H.Hwang, C.-C.Hwang, H.J.Song, H.-J.Shin and C.-Y.Park

08P52 *Ab initio* study of Si-rich 6H-SiC(000-1)-2×2 surfaces
S.Tanaka, Y.Hoshino, T.Tamura, S.Ishibashi, Y.Kido and M.Kohyama

08P53 Surface structural analysis of *h*-BN/Ni(111) by X-ray photoelectron diffraction excited by Al-Kα line and Cr-Kα line (Student Award)
H.Mochizuki, K.Amano, M.Nojima, M.Owari and Y.Nihei

08P54 Adsorbed hydrogens and their behaviour on Ni(111) surface studied by slow positron beam
I.Kanazawa, Y.Oishi, K.Hirota, K.Fukutani, K.Nozawa and F.Komori

08P55 Thermal desorption analysis of implanted deuterium from tungsten surface
T.Ahlgren, K.Heinola, E.Vainonen-Ahlgren, J.Likonen, A.Hallen and J.Keinonen

08P56 Adsorption properties of decyl thiocyanate and decanethiol on platinum substrates
Y.Sartenaer, C.Humbert, C.Volcke, G.Tourillon, P.Louette, A.Peremans, P.Thiry and L.Dreesen

08P57 ARUPS study of transition-metal diborides: NbB_2, TaB_2 and ZrB_2
S.Kumashiro, H.Tanaka, Y.Kawamata, K.Momose, G.Nakamura, C.Oshima and S.Otani

08P58 A Comparison of electron-stimulated desorption of positive ions from NaCl-type alkali chlorides thin films
L.Markowski

08P59 Atomic and Electronic Structures of Pt Cluster Supported on Graphen
K.Okazaki-Maeda, Y.Morikawa, T.Akita, S.Tanaka and M. Kohyama

08P60 Experimental evaluation of electron back-scattering volume in Auger analysis using cross-sectioned GaAs/AlAs superlattice
M.Suzuki, N.Urushihara, S.Iida, N.Sanada, D.F.Paul, J.S.Hammond and A.Yamamoto

08P61 Production and preservation of ozone-formed SiO_2 thin film to improve the thickness standards
A.Kurokawa, K.Odaka, T.Fujimoto and S.Ichimura

08P62 Improvement of a method for reconstructing the three-dimensional atom probe (3DAP) data
T.Chiba, M.Nojima and M.Owari

08P63 Fabrication of hard magnetic nanostructures by electron beam induced deposition and postdeposition alloying process
W.Zhang, R.Che, M.Takeguchi, M.Shimojo and K.Furuya

08P64 Analysis of surface films formed on ferritic stainless steels in the atmospheric exposure
N.Makiishi, S.Okada, K. Ishii and K. Sato

08P65 Observation of pyramid and pillar-shaped silicon with the scanning atom probe
Y.Goto, M.Fukuda, M.Taniguchi and O.Nishikawa

08P66 Observation of surface photovoltage by EUV excited photoelectron spectroscopy, EUPS, with a

laser-produced plasma source and development of a system having a sub-micron spatial resolution
T.Tomie, H.Moriwaki, T.Kasai, Sarjono, N.Miyata, and H.Yashiro

08P67 Ion beam analysis of dependence of the D-H replacement speed on trivalent impurity concentration in D-implanted oxide ceramics exposed to H_2O vapor at room temperature
K.Morita, B.Tsuchiya, S.Nagata and K.Katahira

December 9, 2005 (Friday)

Room A: K2~K4

Special Session (sponsored by Grant-in-Aid for Creative Scientific Research): LEEM/PEEM)

08:30~09:00

09SP01 Microscopy of low-dimensional magnetic systems with slow electrons *(Invited)*
E.Bauer, R.Belkhou, S.Cherifi, R.Hertel, S.Heun, A Locatelli, A.Pavlovska, H.Wang and R.Zdyb

09:00~09:20

09SP02 Magnetic nanostructures: *in-situ* assembly and exploration of low-dimensional systems by spin-polarized low-energy electron microscopy
N.Rougemaille, A.K.Schmid, M.Portalupi, A.Lanzara, P.Biagioni, A.Brambilla, F.Finazzi and L.Duò

09:20~09:50

09SP03 Dynamic measurement of ultra thin film growth by using LEEM/PEEM *(Invited)*
T.Koshikawa

09:50~10:20

09SP04 PEEM with high time resolution -imaging of transient processes and novel concepts of chromatic and spherical aberration correction *(Invited)*
G.Schönhense

--- BREAK ---

10:50~11:20

09SP05 SMART: first results with the aberration corrected spectromicroscope *(Invited)*
Th.Schmidt, H.Marchetto, U.Groh, R.Fink and E.Umbach

11:20~11:50

09SP06 Self organization of ultra-thin Au and Au-Pd films on a Rh model catalyst *(Invited)*
A.Locatelli, T.O.Mentes, F.Z.Guo and M.Kiskinova

11:50~12:20

09SP07 Low energy electron microscopy of atomic step motion in growth and decay at surfaces *(Invited)*
M.S.Altman

12:20~12:40

09SP08 Anomalous step contrast in LEEM during growth of Pb on W(110)
T.Yasue, R.Amakawa, H.Shimizu, A.Nakaguchi, E.Bauer and T.Koshikawa

12:40~13:00

09SP09 Observation of magnetic domain structure in Gibeon iron meteorite using PEEM
M.Kotsugi, T.Wakita, T.Taniuchi, K.Ono, M.Suzuki, N.Kawamura, M.Takagaki, T.Nakamura, M.Taniguchi, K.Kobayashi, M.Oshima, N.Ishimatsu and H.Maruyama

13:00~13:10

Closing remarks