Symposium on Surface and Nano Science
2012

Special Symposium of The Thin Film and Surface Physics Division,
The Applied Physics Society of Japan
SSNS’12
Symposium on Surface and Nano Science 2012
Shizukuishi, January 9–12, 2012

Symposium Program
(The slot for each talk includes 3-5 min discussion after the talk.)

January 9 (Monday)
(17:00–18:20) Registration
(18:20–20:00) Opening & Welcome Dinner
Opening Remarks: Hiroshi DAIMON

Session A (20:00–22:00) Chair: Wolf-Dieter SCHNEIDER
A-1 (20:00–20:20)
Maki KAWAI (University of Tokyo) (Invited)
“Lesson from the Action of Individual Molecules - Single Molecular Spectroscopy at Surfaces -”
A-2 (20:20–20:50)
Geoff HORNTON (University College London) (Invited)
“CO orientation and ordering on supported Pd nanoparticles on TiO₂(110)”
A-3 (20:50–21:10)
Chuhei OSHIMA (Waseda University) (Invited)
“BCx Layer with Honeycomb Lattices on NbB₂ (0001) Surface”
A-4 (21:10–21:30)
Tadashi ABUKAWA (Tohoku University) (Invited)
“Streak-camera RHEED for time resolved surface crystallography”
A-5 (21:30–22:00)
Matthias Scheffler (Max-Planck-Gesellschaft) (Invited)
“Role of van der Waals Interactions in Adsorption and at Inorganic/Organic Interfaces”

January 10 (Tuesday)

Session B (8:00–9:20), Chair: Masaharu OSHIMA
B-1 (8:00–8:30)
Ernst BAUER (Arizona State University) (Invited)
“Ferromagnetic nanostructures on ZnS(100)”
B-2 (8:30–8:50)
Takanori KOSHIKAWA (Osaka Electro-Communication University) (Invited)
“Dynamic investigation of [CoNi]y multi-layer magnetic domains with novel high brightness and high spin-polarized SPLEEM”

B-3 (8:50-9:20)

Michael ALTMAN (Hong Kong Univ. of Science and Technology) (Invited)
“Spin Polarized Vacuum Tunneling from Ferromagnetic Film-Coated Tungsten Tips”

(9:20–16:00) Free Discussion and Lunch

Session C (16:00–17:40), Chair: Thomas GREBER

C-1 (16:00-16:30)

Peter VARGA (Vienna Univ. of Tech. & Brno Univ. of Tech.) (Invited)
“Ion-beam induced magnetic nanostructures in Fe/Cu(100)”

C-2 (16:30-16:50)

Toyokazu YAMADA (Chiba University) (Invited)
“Spin-polarized STM of single magnetic atoms, single organic molecules, and single magnetic nano-clusters”

C-3 (16:50-17:10)

Tadahiro KOMEDA (Tohoku University) (Invited)
“Spin detection of radical molecules adsorbed on Au(111) surface by STM”

C-4 (17:10-17:40)

Wolf-Dieter SCHNEIDER (Ecole Polytech. Fédérale de Lausanne) (Invited)
“Growth and characterization of fullerene nanocrystals on NaCl/Au(111)”

(17:40–17:50) Break

Session D (17:50–18:50), Chair: Yuji KUWAHARA

D-1 (17:50-18:10)

Takashi UCHIHASHI (National Institute for Materials Science) (Invited)
“Macroscopic Supercurrent through a Metal-Induced Silicon Surface Reconstruction: Si(111)- (√7×√3)-In”

D-2 (18:10-18:30)

Shuji HASSEGAWA (University of Tokyo)
“Monolayer superconductivity measured by a UHV sub-kelvin micro-four-point-probe system under high magnetic field”

D-3 (18:30-18:50)

Kazushi MIKI (National Institute for Materials Science) (Invited)
“High-density G-centers, light-emitting point defects in silicon crystal”

(18:50–20:40) Dinner
Session E (20:40–22:15), Chair: Wolf WIDDRA

E-1 (20:40-21:00)

Tadaaki NAGAO (National Institute for Materials Science) (Invited)
“Nanogap Au island Ensembles for Label-free Broadband Antenna Sensing”

E-2 (21:00-21:15)

Kazuhiro NISHIDA (Tokyo University of Science, Homma Lab.)
“Analysis of Atomic Hydrogen Behavior on Carbon Nanotube Cap by Field Emission Microscopy”

E-3 (21:15-21:30)

Tomohiro SAKATA (Nara Institute of Science and Technology, Daimon Lab.)
“Effect of the flash annealing on the electronic structure and the impurity concentration”

E-4 (21:30-21:45)

Katsuhiro TAKAHASHI (Tokyo University of Science, Homma Lab.)
“In Situ Scanning Electron Microscopy of Graphene Growth on Polycrystalline Ni Substrate”

E-5 (21:45-22:00)

Aya FUJIKI (Osaka University, Kuwahara Lab.)
“Circularly polarized luminescence from Chiral-PTCDI thin films”

E-6 (22:00-22:15)

Masaru IRITA (Tokyo University of Science, Homma Lab.)
“On the Interference Pattern Observed in Field Emission Images of Carbon Nanotubes”
January 11 (Wednesday)

Session F (8:00-9:30), Chair: Masakazu ICHIKAWA

F-1 (8:00-8:30)
Thomas GREBER (Universität Zürich) (Invited)
“The corrugation of graphene on ruthenium”

F-2 (8:30-8:50)
Masaharu OSHIMA (University of Tokyo) (Invited)
“Soft X-ray Nano-Spectroscopy for Green-Nano Devices at SPring-8 UT Outstation”

F-3 (8:50-9:10)
Kazuyuki SAKAMOTO (Chiba University) (Invited)
“Nontrivial Rashba spins on a semiconductor surface”

F-4 (9:10-9:30)
Toru HIRAHARA (University of Tokyo) (Invited)
“Ultrathin topological insulator films: Dimension crossover from 3D to 2D”

(9:30–16:00) Free Discussion and Lunch

Session G (16:00-17:30), Chair: Geoff THORNTON

G-1 (16:00-16:30)
Franz J. HIMPSEL (University of Wisconsin Madison) (Invited)
“Single Atom Wires of Au on Silicon”

G-2 (16:30-16:50)
Sakura N. TAKEDA (Nara Institute of Science and Technology) (Invited)
“Electronic Structure of Strained Silicon”

G-3 (16:50-17:10)
Masakazu ICHIKAWA (University of Tokyo) (Invited)
“Hetero-epitaxial growth of thin films on Si substrates by nanocontact epitaxy”

G-4 (17:10-17:30)
Yasuhisa SANO (Osaka University) (Invited)
“Fabrication technology for atomically flat SiC surfaces”

(17:30–17:40) Break

Session H (17:40-18:50), Chair: Chuhei OSHIMA

H-1 (17:40-18:10)
Wolf WIDDRA (MartinLuther Univ. & Max Planck Inst.) (Invited)
“Timeresolved twophoton photoelectron spectroscopy on NiO(100) ultrathin films”
H-2 (18:10-18:30)
Iwao ATSUDA (University of Tokyo) (Invited)
“Hydrogen-induced surface metallization of SrTiO₃(001)”

H-3 (18:30-18:50)
Yuji KUWAHARA (Osaka University) (Invited)
“Charge transport properties in molecular nanosystems observed by STM-based techniques”

(18:50–20:40) Dinner

Session I (20:40-22:00), Chair: Peter VARGA
I-1 (20:40-21:00)
Kouichi HAYASHI (Tohoku University) (Invited)
“Internal detector electron holography”

I-2 (21:00-21:20)
Toshiaki MUNAKATA (Osaka University) (Invited)
“Electronic Excitation at Molecule/Substrate Interfaces”

I-3 (21:20-21:40)
Megumi AKAI-KASAYA (Osaka University) (Invited)
“Nonlinear transport in two-dimensional polymer monolayer”

I-4 (21:40-22:00)
Ayahiko ICHIMIYA (Japan Women’s Univ. & Nagoya Univ.) (Invited)
“Silver Growth on the Si(111)√3×√3-Ag and 7×7 surfaces”

Closing Remarks Shuji HASEGAWA

January 12 (Thursday)
(10:00) Checkout & Departure