6th International Workshop on Surface Physics

IWSP 2013

Functional Materials

1 – 6 September 2013, Niemcza, Poland

Organized by the Institute of Experimental Physics
University of Wrocław

Uniwersytet Wrocławski

Preliminary Programme

Sunday, September 1, 2013

16:00 Bus departure from Wrocław

17:00-18:00 Registration in "Niemcza SPA" hotel

18:00 Supper

19:30 Get together

Monday, September 2, 2013

8:00 Breakfast

9:00-9:20 Opening of IWSP-2013

Session I Chair - Yukio Hasegawa
9:20-10:10 Karina Morgenstern (Bochum, Germany) "Properties of nanosized islands and their influence on non-adiabatic reactions"
10:10-11:00 Thierry Visart de Bocarme (Brussels, Belgium) "NO_x hydrogenation over Pd and Pt nanocrystallites: studies by field emission techniques"

11:00-11:30 Coffee break

Session II Chair - Christian Teichert
11:30-12:20 Stefan Wendt (Aarhus, Denmark) "Reactions on the rutile TiO_2(110) surface studied by high-resolution STM and TPD"
12:20-12:45 Adam Busiakiewicz (Łódź, Poland) "Structure of TiO_2 (110) and reduced TiO_2 (001) surfaces: STM, LEED and DFT studies"
12:45-13:10 Ewa Młyńczak (Cracow, Poland) "Chemical structure of the metal- oxide interfaces"

13:15 Lunch

Session III Chair - Tomáš Šikola
14:30-15:20 Suneel Kodambaka (Los Angeles, USA) "*In situ* High-Temperature STM and LEEM characterization of graphene"
15:20-16:10 Christian Teichert (Leoben, Austria) "Graphene as substrate for organic semiconductor thin films"

16:10-16:40 Coffee break

Session IV Chair - Suneel Kodambaka
16:40-17:30 Michael C. Tringides (Ames, USA) "STM studies of controlled metal growth on graphene grown on 6H-SiC(0001)"

17:30-17:55 Elwira Wachowicz (Wrocław, Poland) "First stages of 4H-SiC crystal growth: a DFT study"

18:00 Supper

Session of vacuum and surface science companies Chair – Marek Nowicki
19:00 – 19:30 Violeta Simic-Milosevic (Specs, Berlin, Germany) "Ultimate stability and productivity at variable temperatures and near ambient conditions the SPM Aarhus family"
19:30-20:00 Józef Ociepa (OCI Vacuum Microengineering Inc., London, Canada)

Tuesday, September 3, 2013

8:00 Breakfast

Session V Chair - Lyudmila Goncharova
9:00-9:50 Magdalena Załuska-Kotur (Warsaw, Poland) "Consequences of the collective particle diffusion at the surfaces of different geometries"
9:50-10:40 Roberto Otero Martin (Madrid, Spain) "Dynamical effects on the self-assembly of organic molecules on solid surfaces"

10:40-11:10 Coffee break

Session VI Chair - Ing-Shouh Hwang
11:10-11:45 Yuri Suchorski (Vienna, Austria) "Local kinetics of surface processes extracted “just by imaging” "
11:45-12:20 Mieczysław Jałochowski (Lublin, Poland) "Tunneling I-V characteristics of moving Pb atoms on Si(553)-Au surface"
12:20-12:45 Paweł Józef Dyniec (Lublin, Poland) "Structural model of Pb nanoribbons on Si(553) surface"

13:00 Lunch

Session VII Chair - Roberto Otero Martin
14:30-15:20 Lyudmila Goncharova (London Ontario, Canada) "Effects of crystallinity and interfaces in Si and Ge nanostructures"
15:20-16:10 Tomáš Šikola (Brno, Czech Republic) "Selective growth of metallic and semiconductor nanostructures at pre-patterned Si surfaces"

16:10-16:40 Coffee break

Session VIII Chair - Timo Jacob
16:40-17:05 Barbara Pieczyrak (Wrocław, Poland) "Spin-split surface states at Tl/Si(111), Pb/Si(111) and Tl/Ge(111), Pb/Ge(111) systems"
17:05-17:30 Wojciech Koczorowski (Poznań, Poland) "Ba nanostructure growth on Ge(100) as a function of coverage and temperature – an STM study"
17:30-17:55 Agnieszka Puchalska (Wrocław, Poland) "Low coverage adsorption and aggregation of Ba on Ge(001) substrate – a DFT study"

18:00 Supper

19:00-21:00 Poster session

Wednesday, September 4, 2013

8:00 Breakfast

Session IX Chair - Karina Morgenstern
9:00-9:50 Ing-Shouh Hwang (Taipei, Taiwan) "Evidence of epitaxial growth of molecular layers of dissolved gas at a hydrophobic/water interface"
9:50-10:40 Timo Jacob (Ulm, Germany) "Theoretical modeling of electrochemical interfaces"

10:40-11:10 Coffee break

Session X Chair - Armin Gölzhäuser
11:10-11:45 Toyoaki Eguchi (Kawasaki, Japan) "Electronic states and excited electron dynamics for alkanethiolate SAM"
11:45-12:20 Mathias Getzlaff (Düsseldorf, Germany) "Influence of hydrogen to rare earth metal thin films"
12:20-12:45 Avijit Kumar (Enschede, The Netherlands) "Transition voltage spectroscopy in metal-vacuum-metal junctions"

13:00 Lunch

Session XI Chair - Michael C. Tringides
14:30-15:05 Krisztian Palotas (Budapest, Hungary) "STM contrast inversion of the Fe(110) surface"
15:05-15:40 Tomasz Ossowski (Wrocław, Poland) "Vacancies and Cr additions at Fe ∑5 (210) grain boundary"
15:30-16:05 Tomasz Pabisiak (Wrocław, Poland) "Fe adsorption on Fe_3O_4(111) surfaces"
16:05-16:30 Michał Hermanowicz (Poznań, Poland) "Magnetic adsorbates on the surface of bismuth selenide"

16:30-17:00 Coffee break

Session XII Chair - Stefan Wendt
17:00-17:35 Mariusz Krawiec (Lublin, Poland) "Puckered graphene on a vicinal Si(553)-Au surface"
17:35-18:00 Agnieszka Racis (Wrocław, Poland) "Aggregation of metal adatoms induced by the benzonitrile molecule adsorbed on the Si(001) surface– A DFT study"
18:00-18:25 Marek Kopciuszyński (Lublin, Poland) "Quantum size effect in ultrathin gold films on Si(111) surface"

19:00 Workshop Dinner

Thursday, September 5, 2013

8:00 Breakfast

9:00-13:00 Free time/Excursion to Wojsławice Arboretum

13:00 Lunch

Session XIII Chair - Patricia A. Thiel
14:30-15:20 Armin Gölzhäuser (Bielefeld, Germany) "Carbon nanomembranes (CNMs): surfaces without bulk"
15:20-16:10 Yukio Hasegawa (Tokyo, Japan) "Real-space observation of superconducting proximity effect by scanning tunneling microscopy and spectroscopy"

16:10-16:40 Coffee break

Session XIV Chair – Thierry Visart de Bocarme
16:40-17:05 Jacek Brona (Wrocław, Poland) "Ultrathin Cu layers on Ru(10-10): bilayers, mesas, and (1×5) superstructure"
17:05-17:30 Ryszard Zdyb (Lublin, Poland) "Inelastic mean free path from quantum size oscillations in reflectivity of slow electrons"
17:30-17:55 Andrzej Miszczuk (Wrocław, Poland) "Properties of Cu films on Pt(111) revealed by AES, LEED, and DEPES"
17:55-18:20 Paweł Łukasik (Lublin, Poland) "Structure - resistance correlation for Pb chains on Si(553)-Au surface"

19:00 Supper/Beer party

Friday, September 6, 2013

8:00 Breakfast

Session XV Chair - Magdalena Załuska-Kotur
9:00-9:50 Patricia A. Thiel (Ames, USA) "Enhancing the dynamics of metal transport with additives: sulfur on silver"
9:50-10:25 Yaroslav Losovyj (Bloomington, USA) "s-d hybridization in gold nanoclusters"

10:25-10:30 Closing of IWSP-2013

10:50 Bus to Wrocław (via airport – around 11:45)

Poster Session

(abstracts placed NOT in alphabetical order)

P1: R. Wasielewski *(Institute of Experimental Physics, University of Wrocław, Wrocław, Poland)*:
TiO thin films growth on GaN in the context of ohmic contact formation

P2: J. Pers *(Institute of Experimental Physics, University of Wrocław, Wrocław, Poland)*:
Formation and morphology of Ni/GaN(0001) interface

P3: M. Grodzicki *(Institute of Experimental Physics, University of Wrocław, Wrocław, Poland)*:
O^+ ion implantation into GaN(0001)

P4: R. Topolnicki *(Institute of Experimental Physics, University of Wrocław, Wrocław, Poland)*:
Structural and electronic properties of ultrathin Pb overlayers on Ru(0001): a DFT study

P5: I. Morawski *(Institute of Experimental Physics, University of Wrocław, Wrocław, Poland)*:
Quantitative investigation of anisotropy of electron damping on Ru(0001)

P6: M. Jurczyszyn *(Institute of Experimental Physics, University of Wrocław, Wrocław, Poland)*:
Investigation of Pb on Ru(0001) by AES and LEED

P7: M. Nowicki *(Institute of Experimental Physics, University of Wrocław, Wrocław, Poland)*:
Identification of terrace termination of Ru(0001) by DEPES

P8: M. Mińkowski *(Institute of Physics, Polish Academy of Sciences, Warsaw, Poland)*:
Adatom diffusion over anisotropic surfaces

P9: G. Antczak *(Institute of Experimental Physics, University of Wrocław, Wrocław, Poland)*:
Surface diffusion of ad-dimers and ad-trimers on W(211) surface

P10: A. Sabik *(Institute of Experimental Physics, University of Wrocław, Wrocław, Poland)*:
Surface diffusion of CoPc on silver Ag(100)

P11: A.Dittmar-Wituski *(Institute of Mathematics and Physics, University Technology and Life Sciences in Bydgoszcz, Bydgoszcz, Poland)*:
Indium and copper phthalocyanine overlayers on InSb (100) studied by target current (TCS), LEED, XPS and UPS

P12: B. Stankiewicz *(Institute of Experimental Physics, University of Wrocław, Wrocław, Poland)*:
Cl_2 on germanium surface – process of dissociation

P13: Y. Suchorski *(Institute of Materials Chemistry, Vienna University of Technology, Vienna, Austria)*:
Cartography of the reaction fronts in the CO oxidationon individual grains of polycrystalline Pd foil

P14: Y. Suchorski *(Institute of Materials Chemistry, Vienna University of Technology, Vienna, Austria)*:
Kinetics of oxides formation on Pd and Zr surfaces: an XPS and PEEM study

P15: L. Markowski *(Institute of Experimental Physics, University of Wrocław, Wrocław, Poland)*:
On some quantum effects in ion desorption from ionic crystals

P16: F.Gołek *(Institute of Experimental Physics, University of Wrocław, Wrocław, Poland)*:
AFM image artifacts

P17: T. Siahaan *(Department of Applied Physics, Eindhoven University of Technolog,y Eindhoven, The Nederlands)*:
Seeing Buried Metallic Nanoclusters with STM

P18: A. Podsiadły-Paszkowska *(Institute of Physics, Maria Curie-Skłodowska University, Lublin, Poland)*:
Silicene structure on the Pb(111) surface

P19: A. Zdyb *(Institute of Renewable Energy Engineering***,** *Lublin University of Technology, Lublin, Poland)*:
A computational study of interfacial electron transfer in dye sensitizer molecule – TiO_2 nanoparticle assemblies

P20: Ł. Skowroński *(Institute of Mathematics and Physics, University of Technology and Life Sciences, Bydgoszcz, Poland)*:
Study of laser coloured titanium oxides coatings based on different experimental techniques

P21: Ł. Skowroński *(Institute of Mathematics and Physics, University of Technology and Life Sciences, Bydgoszcz, Poland)*:
Optical and microstructural properties of the titanium and titanium oxides coatings

P22: Ł. Skowroński *(Institute of Mathematics and Physics, University of Technology and Life Sciences, Bydgoszcz, Poland)*:
Optical and microstructural properties of the Au and Pd granular layers for DSSC

P23: Ł. Skowroński *(Institute of Mathematics and Physics, University of Technology and Life Sciences, Bydgoszcz, Poland)*:
Multivariate modelling of laser coloured titanium oxides coatings based on their X-ray diffraction patterns

P24: A. A. Wronkowska *(Institute of Mathematics and Physics, University of Technology and Life Sciences, Bydgoszcz, Poland)*:
IR-Vis-UV optical response of ultra-thin Pd films determined using spectroscopic ellipsometry

P25: K. Okulewicz *(Institute of Mathematics and Physics, University of Technology and Life Sciences, Bydgoszcz, Poland)*:
Analysis of silver surface diffusion on the tungsten substrate

P26: P.V. Galiy *(Electronics Department, Ivan Franko Lviv National University, Lviv, Ukraine)*:
Silver intercalate morphology studyon (100) surface of In_4Se_3 layered crystals

P27: P.V. Galiy *(Electronics Department, Ivan Franko Lviv National University, Lviv, Ukraine)*:
Structural studies of (100) cleavage surfaces of In_4Se_3 layered crystals using low energy electron diffraction

P28: M. Jankowski *(MESA+ Institute for Nanotechnology, University of Twente, Enschede, The Netherlands)*:
Temperature dependence of stripe phase formation on alloyed Ag/Pt(111) surface

P29: W. Kamiński *(Institute of Experimental Physics, University of Wrocław, Wrocław, Poland)*:
Molecular recognition of organic molecules on Si(111)–7×7: Energy dissipation and surface modification effects

P30: B. Pieczyrak *(Institute of Experimental Physics, University of Wrocław, Wrocław, Poland)*:
Influence of C-defect at Si(001) surface at the adsorption of Al, Ag and Pb atoms

P31: A.Racis *(Institute of Experimental Physics, University of Wrocław, Wrocław, Poland)*:
Interaction of a single isopropyl alcohol molecule with the Si(001) surface – A DFT study

P32: K. Lament *(Institute of Experimental Physics, University of Wrocław, Wrocław, Poland)*:
Thin films of PTCDI-C8 on Si(110)-(16x2) surface

P33: A. Puchalska *(Institute of Experimental Physics, University of Wrocław, Wrocław, Poland)*:
Adsorption of benzene and dichlorobenzene on Ge(001) surface – a computational study

P34: A. Safaei *(MESA+ Institute for Nanotechnology, University of Twente, Enschede, The Netherlands)*:
Dynamics of Wetting-Induced Nanowire Reconstruction of Au/Ge(001)

P35: T.Jaroch *(Institute of Physical Chemistry, Polish Academy of Sciences, Warsaw, Poland)*:
Effect of the central electron accepting group on self-assembly properties of new donor-acceptor-donor (DAD) semiconductors: *bis*-(dithienyl-thiadiazoles) *versus bis*-(dithienyl-tetrazines)

P36: J. Domaradzki *(Faculty of Microsystem Electronics and Photonics, Wroclaw University of Technology, Wrocław, Poland)*:
Investigation of physicochemical properties of (Ti-V)O_x functional thin films and their possible application in the field of Transparent Electronics

P37: K. Idczak *(Institute of Experimental Physics, University of Wrocław, Wrocław, Poland)*:
Growth of Thin Zr Films on the GaN Surface

P38: S. Bilińska *(Institute of Experimental Physics, University of Wrocław, Wrocław, Poland)*:
Pb adsorption on the Si(111)-(7x7) surface

P39: M. Skiścim *(Institute of Experimental Physics, University of Wrocław, Wrocław, Poland)*:
LEED, AES and XPS investigation of the thin indium films on the Si(111) surface

P40: B. Mądry *(Institute of Experimental Physics, University of Wrocław, Wrocław, Poland)*:
Molecular self-assembly of porphyrin layers at metal-electrolyte interfaces