

Sunday, 21 October 2012

18:00 PM Welcome Party

Monday, 22 October 2012

9:00 AM	Opening Remark	K. Yamauchi	<i>Osaka University</i>
Session1: "Multi-Scale Surface Control Techniques"			
9:20 AM	1.1 <i>Invited</i> - Plasma Excitation using Tailored Voltage Waveforms for the Deposition of Thin Film Silicon for Photovoltaics: From Plasma Physics to Devices	E. V. Johnson ¹ , P. A. Delattre ² , T. Lafleur ² and J. P. Booth ²	^{1,2} <i>Ecole Polytechnique</i>
10:00 AM	1.2 <i>Invited</i> - Graphene Field Effect Transistors	T. Suemitsu	<i>Tohoku University</i>
10:30 AM	1.3 Atmospheric-Pressure Plasma Processing for Si Photovoltaics	K. Yasutake ¹⁻³ , H. Ohmi ¹⁻³ , T. Yamada ^{1,3} and H. Kakiuchi ^{1,3}	^{1,2} <i>Osaka University</i> ³ <i>JST-CREST</i>
10:55 AM	1.4 First-principles Simulations of Catalyst Assisted Wet-etching Processes at Semiconductor Surfaces	K. Inagaki, M. Oue, B. V. Pho, D. Hirose, K. Yamauchi and Y. Morikawa	<i>Osaka University</i>
11:15 AM	1.5 Low Temperature Growth of Graphene on Atomically Flat SiC Assisted by Plasma Oxidation	K. Arima ¹ , N. Saito ¹ , H. Nishikawa ¹ , Y. Sano ¹ , K. Kawai ¹ , J. Uchikoshi ¹ , K. Yamauchi ^{1,2} and M. Morita ¹	^{1,2} <i>Osaka University</i>
11:35 AM	Lunch		
Session2: "Surface Characterization and Bottom-up Technologies"			
13:00 PM	2.1 <i>Invited</i> - Toward Microscopy with Direct Electronic, Chemical, and Magnetic Contrast at the Atomic Level	V. Rose	<i>ANL</i>
13:40 PM	2.2 <i>Invited</i> - Laser-combined STM and Its Applications	H. Shigekawa	<i>University of Tsukuba</i>
14:10 PM	2.3 Identification of Al Atoms with Different Coordination on Al ₂ O ₃ /NiAl(110) Surface with NC-AFM	Y. J. Li, S. Oozawa, Y. Naitoh and Y. Sugawara	<i>Osaka University</i>
14:35 PM	2.4 Surface as a Foundation for Materials and Process Design	H. Kasai and W. A. Diño	<i>Osaka University</i>
14:55 PM	2.5 New Aspects of Nanoscale Observation by Synchrotron-Radiation-Based Scanning Tunneling Microscopy	A. Saito ^{1,2} , H. Matsuno ^{1,2} , T. Tanaka ^{1,2} , H. Miki ^{1,2} , Y. Furudate ^{1,2} , Y. Takagi ³ , Y. Tanaka ² , Y. Kohmura ² , M. Akai-Kasaya ¹ , T. Ishikawa ² , Y. Kuwahara ^{1,2} and M. Aono ⁴	¹ <i>Osaka University</i> ² <i>RIKEN/SPRING-8</i> ³ <i>IMS</i> ⁴ <i>NIMS</i>
15:50 PM	2.6 Development of a New High-speed Nano-profiler Based on Normal Vector Tracing for High-accuracy Aspheric Mirrors	K. Endo ¹ , J. Uchikoshi ² and Y. Higashi ³	^{1,2} <i>Osaka University</i> ³ <i>KEK</i>
15:40 PM	Coffee Break		
Student Session 1			
15:50 PM	S1-1 Catalyst-referred Etching and an Investigation of the Reaction Mechanism	S. Sadakuni ¹ , H. Asano ¹ , B. V. Pho ¹ , A. Isohashi ¹ , Y. Sano ¹ , S. Matsuyama ¹ and K. Yamauchi ^{1,2}	^{1,2} <i>Osaka University</i>
16:05 PM	S1-2 Investigation of Surface Potential of TiO ₂ by AFM&KPFM	L. Kou, T. Kamijo, Y. Naitoh, Y. J. Li and Y. Sugawara	<i>Osaka University</i>
16:20 PM	S1-3 Development of Stacking Mirror Device Using Millimeter-Thick Elliptical Supermirrors for Neutron Focusing	M. Nagano ¹ , F. Yamaga ¹ , D. Yamazaki ² , R. Maruyama ² , K. Soyama ² and K. Yamamura ¹	¹ <i>Osaka University</i> ² <i>J-PARC</i>
16:35 PM	S1-4 Formation of Passivation Films for Si Surfaces by Atmospheric-Pressure VHF Plasma Oxidation	Z. Zhuo ¹ , Y. Sannomiya ¹ , Y. Kanetani ¹ , Y. Fujiwara ¹ , T. Yamada ¹ , H. Ohmi ^{1,2} , H. Kakiuchi ¹ and K. Yasutake ^{1,2}	^{1,2} <i>Osaka University</i>
16:50 PM	S1-5 Fabrication and Evaluation of Photoelectronic Devices Integrated with Gold Nanoparticle Plasmon Antenna	T. Hashimoto ¹ , Y. Fukunishi ¹ , Z. Bin ^{2,3} , Y. Uraoka ^{2,3} , T. Hosoi ^{1,3} , T. Shimura ^{1,3} and H. Watanabe ^{1,3}	¹ <i>Osaka University</i> ² <i>NAIST</i> ³ <i>JST-CREST</i>
17:05 PM	Coffee Break		
17:15 PM	S1-6 First-Principles Study on Oxidation Process of SiC(0001) Surfaces and SiC(0001)/SiO ₂ Interfaces	S. Saito, S. Sato, Y. Morikawa and T. Ono	<i>Osaka University</i>
17:30 PM	S1-7 Cross-sectional TEM Observation of Nano-sized Crystals Encapsulated in Carbon Nanotubes	R. Sagawa ¹ , W. Togashi ¹ , T. Akita ² and Y. Takai ¹	¹ <i>Osaka University</i> ² <i>AIST</i>

17:45 PM	S1-8	Nanoscale Evaluation of Optical Activity of Chiral Organic Molecule Studied by Scanning Tunneling Microscopy Light Emission Technique	A. Fujiki, K. Harada, Y. Miyake, Y. Oshikane, M. Akai-Kasaya, A. Saito and Y. Kuwahara	Osaka University
18:00 PM	S1-9	Nano-observation of Biomolecular Dynamics using Au Nanoparticle Dimers	H. Morimura ¹ , S. Tanaka ² , H. Ishitobi ^{1,2} and Y. Inouye ^{1,2}	^{1,2} Osaka University
18:15 PM	S1-10	High Resolution Surface Potential Measurements by Heterodyne Amplitude-Modulation Kelvin Probe Force Microscopy	Z. M. Ma, L. L. Kou, Y. Naitoh, Y. J. Li and Y. Sugawara	Osaka University
18:30 PM		Coffee Break		
19:00 PM		Tutorial session (for students) / Excursion		
Tuesday, 23 October 2012				
Session 3: "Impact of Quantum Beam Techniques with Advanced Optics"				
9:20 AM	3.1	<i>Invited</i> - Some Issues in the Characterization of Nanostructures with X-ray Diffraction	I. C. Noyan ¹ , H. Öztürk ¹ , A. J Ying ¹ , S. M. Polvino ¹ , H. Yan ² and C. E. Murray ³	¹ Columbia University ² BNL ³ IBM
10:00 AM	3.2	<i>Invited</i> - In-situ Time-resolved/Space-resolved XAFS Study for Heterogeneous Catalysis	M. Tada	Institute for Molecular Science
10:30 AM	3.3	Recent Progress on Mirror-based Optics for the 3rd and 4th Generation Synchrotron Radiation Sources	K. Yamauchi ^{1,2,3}	^{1,2} Osaka University ³ JST-CREST
10:55 AM	3.4	Chemical Fabrication Techniques for Optical Components with Nanometer-level Accuracy	K. Yamamura	Osaka University
11:15 AM	3.5	Coherent X-ray Diffractive Imaging at SPring-8: Recent Progress and Outlook	Y. Takahashi	Osaka University
11:35 AM		Lunch		
Student Session 2				
13:00 PM	S2-1	Reactivity of Pt-M Nanoalloy Clusters: A Preliminary DFT Study	F. Oemry, H. Nakanishi and H. Kasai	Osaka University
13:05 PM	S2-2	Elasticity of Cross-linked Poly(Methyl Methacrylate) Nanocoil Springs Fabricated by Two Photon Polymerization	S. Ushiba, K. Masui, S. Shoji and S. Kawata	Osaka University
13:10 PM	S2-3	Development of Ultraprecise Piezoelectric Deformable Mirror for Adaptive X-ray Focusing	H. Nakamori ¹ , S. Matsuyama ¹ , S. Imai ¹ , T. Kimura ² , Y. Sano ¹ , Y. Kohmura ³ , K. Tamasaku ³ , M. Yabashi ³ , T. Ishikawa ³ and K. Yamauchi ^{1,4,5}	^{1,5} Osaka University ² Hokkaido University ³ RIKEN/SPring-8 ⁴ JST-CREST
13:15 PM	S2-4	Elimination of Mobile Ions in Thermal Oxide of SiC MOS Devices	A. Chanthaphan ¹ , S. Mitani ² , Y. Nakano ² , T. Nakamura ² , T. Hosoi ¹ , T. Shimura ¹ and H. Watanabe ¹	¹ Osaka University ² ROHM CO., LTD.
13:20 PM	S2-5	Molecular Orientation Analysis of Organic Thin Films by z-polarization Raman Microscope	T. Mino ¹ , Y. Saito ¹ , H. Yoshida ^{2,3} , S. Kawata ¹ and P. Verma ¹	¹ Osaka University ² Kyoto University ³ JST-PRESTO
13:25 PM	S2-6	Raman Scattering Study of the Crossed Carbon Nanotubes using Tip Enhanced Raman Scattering(TERS) Microscopy	Y. Okuno ¹ , P. Verma ^{1,2} and S. Kawata ^{1,2,3}	¹ Osaka University ² JST-CREST ³ RIKEN
13:30 PM	S2-7	Spin Dependent Transport in C/BN Hetero-nanotubes	H. D. Nguyen and T. Ono	Osaka University
13:35 PM	S2-8	Electronic and Vibrational Excitations of Molecules Induced by Surface Plasmons	K. Miwa, M. Sakaue and H. Kasai	Osaka University
13:40 PM	S2-9	Hole Transporting Properties in Single-crystal of U-shaped Furan- and Thiophene-containing π -conjugated Organic Materials	K. Nakahara ¹ , T. Okamoto ¹ , C. Mitsui ¹ , K. Miwa ¹ , M. Yamagishi ¹ , T. Uemura ¹ , H. Sato ² , A. Yamano ² , and J. Takeya ¹	¹ Osaka University ² RIGAKU Corp.
13:45 PM		Coffee Break		
13:55 PM	S2-10	Slit-scanning Raman Microscopy: Toward Label-free Imaging of Molecular Dynamics in Living Cells	K. Watanabe, A. Palonpon, K. Fujita and S. Kawata	Osaka University
14:00 PM	S2-11	High-power Polymer-FETs with 3D Structure on Plastic	K. Nakayama, T. Uemura, M. Uno and J. Takeya	Osaka University
14:05 PM	S2-12	Approach to a Nanoscale Optical Biosensor using Nanoshell Array for A Label-Free Immunoassay based on NIR-light Responsive LSPR	S. Uchida ¹ , N. Zettsu ² and K. Yamamura ¹	¹ Osaka University ² Nagoya University
14:10 PM	S2-13	Photo-Reduction of Gold Nanoparticles inside Gelatin-Based Phantom Cells with Green Visible Laser	K. Mochizuki ¹ , K. Fujita ¹ , Y. Inouye ² , N. I. Smith ³ and S. Kawata ¹	^{1,2,3} Osaka University

14:15 PM	S2-14 A Theoretical Study of Magnetic Properties in Co/Ni ₂ Multi-layer on W(110)	K. Kojima ¹ , W. A. Diño ¹ , M. Suzuki ² , T. Yasue ² , K. Kudo ³ , N. Akutsu ⁴ , E. Bauer ⁵ , T. Koshikawa ² and H. Kasai ¹	¹ Osaka University ^{2,4} Osaka Electro-Communication University ³ Ochanomizu University ⁵ Arizona State University
14:20 PM	S2-15 Prediction about Piezoelectric Behavior of Pb(Zr,Ti)O ₃ , Sn(Zr, Ti)O ₃ , Ge(Zr,Ti)O ₃	K. Oka, H. Nakanishi and H. Kasai	Osaka University
14:25 PM	S2-16 Stabilization for Supercontinuum Generation by using All-optical Intensity Limiter	K. Kawanishi, T. Konishi and K. Itoh	Osaka University
14:30 PM	S2-17 A Fiber-laser-based Stimulated Raman Scattering Microscope	K. Nose ¹ , Y. Ozeki ^{1,2} and K. Itoh ¹	¹ Osaka University ² JST-PRESTO
14:50 PM	Poster Session I		
16:10 PM	Break		
16:20 PM	Poster Session II		
18:00 PM	Banquet		

Wednesday, 24 October 2012

Session 4: "Advanced Processing and Materials Science for Device Applications"

9:30 AM	4.1 <i>Invited</i> - Germanium Based High Performance MOSFETs Integrated on Silicon	K. Saraswat	Stanford University
10:10 AM	4.2 <i>Invited</i> - Laser Rapid Annealing and Its Application to Silicon Device Processing at a Low Temperature	T. Sameshima	Tokyo University of Agriculture and Technology
10:40 AM	4.3 Gate Stack Technology for Next-Generation Green Electronics	H. Watanabe ^{1,2} , T. Shimura ¹ and T. Hosoi ^{1,2}	^{1,2} Osaka University
11:05 AM	4.4 Highly Efficient Formation of Amorphous and Microcrystalline Silicon Films at Low Temperatures Using Atmospheric-Pressure Very High-Frequency Plasma	H. Kakiuchi ¹ , H. Ohmi ² , T. Yamada ¹ and K. Yasutake ¹	^{1,2} Osaka University
11:25 AM	4.5 Development of Silicon Photo-Etching with <i>N</i> -Fluoropyridinium Salts	J. Uchikoshi ¹ , T. Nagai ² , K. Adachi ² , K. Kawai ¹ , K. Arima ¹ and M. Morita ¹	¹ Osaka University ² Daikin Industries, Ltd.
11:45 AM	Lunch		

Session 5: "Frontier in Carbon / Organic Nano-Scale Systems"

13:10 PM	5.1 <i>Invited</i> - High Performance Organic Semiconductors, Crystals and Transistors	L. Jiang, H. Dong and W. Hu	ICCAS
13:50 PM	5.2 <i>Invited</i> - Opportunities in Molecular Electronics with the Spin Degree of Freedom	S. Sanvito	Trinity College Dublin
14:30 PM	5.3 <i>Invited</i> - Solution-processed Organic Crystals for Field-effect Transistor Arrays on Paper Substrates	K. Tsukagoshi, Y. Li and C. Liu	WPI-MANA/NIMS
15:00 PM	5.4 <i>Invited</i> - Hybrid Molecular Simulations toward Understanding Enzymatic Catalysis	S. Hayashi	Kyoto University
15:30 PM	5.5 Intermolecular Electronic Coherence in Organic Single-crystal Transistors and High-speed Organic Electronics	J. Takeya and T. Uemura	Osaka University
15:55 PM	5.6 Optical Properties of Organic Molecular Nanosystems Studied by STM-induced-light Emission Technique	Y. Kuwahara ¹ , A. Fujiki ¹ , K. Harada ¹ , M. Akai-Kasaya ¹ , A. Saito ¹ , and T. Uemura ²	^{1,2} Osaka University
16:20 PM	Award Ceremony		
16:30 PM	Closing Remark		