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2015 International Symposium toward the Future of Advanced Researches  
in Shizuoka University  
~Joint International Workshops on Advanced Nanovision Science / Advanced Green Science /  
Promotion of Global Young Researchers in Shizuoka University~

January 27<sup>th</sup> -28<sup>th</sup>, 2015  
Sanaru Hall, Hamamatsu Campus, Shizuoka University  
MEETING PROGRAM

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Tuesday, January 27<sup>th</sup>, 2015

9:00 Registration

Chair; Masaaki Nagatsu

9:45 Opening Remarks

Yukihiro Ito (President of Shizuoka University)

9:50 Global innovative collaboration based on research capability of Shizuoka University

Taichi Usui (Trustee of Shizuoka University)

Plenary Session: Chair; Hidenori Mimura

10:10 PL-1. (*Invited*) New Materials Frontier Opened through Research of Transparent Oxides

Hideo Hosono (Tokyo Institute of Technology, Japan)

Graduate School of Science and Technology Session 2: Chair; Kazuhiko Hara

11:10 GSST-1. (*Invited*) Exploring Photonics

Tsutomu Hara (Hamamatsu Photonics Co. Ltd., Japan)

11:35 GSST-2. (*Invited*) Use of genetically engineered stem cells for glioma therapy

Hiroki Namba (Hamamatsu University School of Medicine, Japan)

12:00 Lunch

Keynote Session: Chair; Takayuki Saito

13:00 KN-1. (*Invited*) Present Status and Future Prospects of Silicon Imaging Devices

Shoji Kawahito (RIE, Shizuoka University, Japan)

13:30 KN-2. (*Invited*) Fairy Chemicals - A Candidate for a New Family of Plant Hormones -

Hirokazu Kawagishi (RIGST, Shizuoka University, Japan)

14:00 KN-3. (*Invited*) Fostering global young students and researchers in interdisciplinary research and education program

Naoharu Watanabe (GSST, Shizuoka University, Japan)

- 14:30 Coffee break
- 14:50 Graduate School of Science and Technology Session 1: Chair; Norihisa Hiromoto  
GSST-3. (*Invited*) Temperature and Hydration Dependence of Complex Dielectric Spectra of  
Lysozyme in the THz Frequency Region  
Keisuke Tominaga (Kobe University, Japan)
- 15:15 GSST-4. (*Invited*) Orientation Controlled VO<sub>2</sub> Thin Films Deposited on Glass Substrates  
via ZnO Buffer by Pulsed Laser Deposition  
Tewei Chiu (National Taipei University of Technology, Taiwan)
- 15:40 Short Poster Presentations by Students and Young Researchers Session: Chair; Kiyoshi Yamauchi  
(51 posters, each 2 min)
- 17:22 Poster Session (until 18:20)
- 18:30 Social Gathering & at Awarding Ceremony of Poster Session  
(Coop Northern Restaurant (until 20:00))

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POSTER SESSION PROGRAM

January 27<sup>th</sup>, 2015, Sanaru Hall, Hamamatsu Campus, Shizuoka University

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15:40-17:22 Short Poster Presentations using PowerPoint at the Meeting Room of Sanaru Hall  
(2 minutes each including rotation time)

17:22-18:20 Poster Presentation using A0 sized Poster at the Lobby of Sanaru Hall

- PS-1 A High-Sensitivity 2x2 Multi-Aperture Color Camera Based on Selective Averaging  
B. Zhang, K. Kagawa, T. Takasawa, M. W. Seo, K. Yasutomi, S. Kawahito
- PS-2 Ultrathin Absorber Based on Bifilar Helices for NIR  
I. A. Faniayeu, V. Mizeikis
- PS-3 Measurement of 3-Tap 1MS/s CMOS Image Sensor for Multi-Point Fluorescence correlation spectroscopy  
P. S. Sivakumar, K. Kagawa, M. W. Seo, B. Zhang, T. Takasawa, K. Yasutomi, S. Kawahito
- PS-4 Cell Culturing on Hydrophilicity Controlled Silicon Nitride Surface for Cell Imaging  
Y. Masuda, Y. Nawa, L. Sheng, W. Inami, Y. Kawata
- PS-5 Fabrication of Bright Cathodoluminescent Thin Films for Nanometric Light Source of High Resolution Optical Microscope  
S. Kanamori, M. Fukuta, T. Furukawa, W. Inami, H. Kominami, Y. Kawata, Y. Nakanishi
- PS-6 Interface-Assisted Merging of Two Donor Potential Wells in Ultrathin Si-Transistors  
A Samanta, D Moraru, T Mizuno, M Tabe
- PS-7 Atomic and Molecular Behavior in Tunneling Transport via Dopants in Nano-Transistors  
D. Moraru, A. Samanta, Y. Takasu, T. Mizuno, and M. Tabe
- PS-8 KPFM Observation of Donors in Ttransistor Channels Doped with Different Concentrations  
K.Tyszka, D. Moraru, T. Mizuno, R. Jablonski, M. Tabe
- PS-9 Contribution of Phonon and Carrier Transport to Seebeck Coefficient in Ultrathin SOI Layer  
F. Salleh, T. Oda, Y. Suzuki, Y. Kamakura, H. Ikeda
- PS-10 Growth of Compositionally Homogeneous P-Type SiGe Bulk and Thermoelectric Properties  
M. Omprakash, M. Arivanandhan, T. Koyama, Y. Momose, H. Ikeda, H. Tatsuoka, D.K. Aswal, S. Bhattacharya, Y. Okano, T. Ozawa, Y. Inatomi, S. Moorthy babu, Y. Hayakawa
- PS-11 Phonon-Drag Contribution to Seebeck Coefficient in P-Type Si, Ge and SiGe  
V. Manimuthu, M. Omprakash, Y. Suzuki, F. Salleh, M. Arivanandhan, Y. Kamakura, Y. Hayakawa, H. Ikeda
- PS-12 Hydrothermal Synthesis of Organic Ligand Capped TiO<sub>2</sub> Nanoparticles for Dye Sensitized Solar Cell Performance  
J. Archana, M. Anzai, M. Navaneethan, Y. Hayakawa
- PS-13 Preparation of Silver and Erbium Modified TiO<sub>2</sub> Nanostructures and Their Enhanced Photocatalytic Degradation of Dye  
N. Prakash, R. Karthikeyan, D.Thangaraju, M. Navaneethan, M. Arivanandhan, T. Koyama, Y. Hayakawa

- PS-14 Morphology Dependent Functional Properties and Dye-Sensitized Solar Cell Performance of ZnO Nanostructures  
M. Navaneethan, J. Archana, T. Koyama, Y. Hayakawa
- PS-15 Phase Changes of Nickel Sulfide Hierarchical Structures  
R. Karthikeyan, M. Navaneethan, D. Thangaraju, N. Prakash, M. Arivanandhan, Y. Hayakawa
- PS-16 Effects of Hybrid-Type Oxide Electrode on Electrical Properties of CSD-Derived PMN-PT Thin Films on Si Wafer  
T. Arai, T. Ohno, T. Matsuda, N. Sakamoto, N. Wakiya, H. Suzuki
- PS-17 Growth Process of InGaSb under Microgravity and Normal Gravity Conditions  
V. N. Kumar, Y. Katsumata, M. Arivanandan, G. Rajesh, T. Koyoma, Y. Momose, Y. Inatomi, K. Sakata, T. Ishikawa, M. Takayanagi, S. Kamigaichi, T. Ozawa, Y. Okano, Y. Hayakawa
- PS-18 A novel Foam Measurement Technique via Single-Tip Optical Fiber Probe based on 3D Ray Tracing Simulation  
A. Nihei, T. Saito
- PS-19 Influences of Bubble-Interface Contamination on Bubble Motion and the Surrounding Liquid Motion, and These Influences on the Bubble Instantaneous Mass Transfer  
J. Huang, T. Saito
- PS-20 Visualization of Bubble Formation Induced by Femtosecond Laser Pulses in Water/Acetone on a Time Scale from Sub-Picosecond to Mmicroseconds  
Y. Mizushima, Takayuki Saito
- PS-21 Fundamental Study of Photomedicine: Photosensitized Amino Acid Damage by Porphyrin Phosphorus(V) Complex  
D. Ouyang, K. Hirakawa
- PS-22 Novel Multi Type Molecular Targeted Antitumor Agents: Preparation and Preclinical Research on Branched Phospha Sugar Derivatives  
H. Hasegawa, M. Yamashita, R. Makita, M. Fujie, S. Nakamura, T. Oshikawa, M. Yamada, Mayumi Yamaoka, J. Yamashita, K. Hirakawa, M. Kondo, Y. Okita, M. Toda, K. Ohnishi, H. Sugimura, Y. Matano
- PS-23 Reduction of Odorous Compounds using Bacterial Probiotic Supplementation in Swine Manure Slurry *in vitro* and in Confinement Houses  
M. J. Alam, Z. Ferdaushi, S. S. Lee
- PS-24 Entry of Cell-Penetrating Peptide Transportan 10 into a Single Vesicle by Translocating Across Lipid Membrane before Pore Formation  
M. Z. Islam, H. Ariyama, M. J. Alam, M. Yamazaki
- PS-25 Screening Protein Phosphatase(s) Involved in Starvation Induced PAS Organization in Budding Yeast  
M. W. Talukdar, M. Y. Akter, T. Ushimaru
- PS-26 *In vitro* Analysis of Multipotency of Mouse Visceral Yolk Sac Cells using Nnovel Genetic Markers  
S. Yagi, T. Koike, N. Shiojiri
- PS-27 Elucidation of the Mechanism of Pore formation of the Antimicrobial peptide, Magainin 2 using Single GUVs  
J. M. Alam, M. A. S. Karal, T. Takahashi, V. Levadny, M. Yamazaki

- PS-28 Development of an Improved Recombinant Baculovirus Insecticide Containing an Insect-Specific Toxin Gene  
MP Ali, Tatsuya Kato , Enoch Y. Park
- PS-29 Synthesis of Self-Assembling GNP-Supported Organocatalysts: Application for Asymmetric Synthesis  
P. L. SÓti, T. Narumi, N. Watanabe, N. Mase
- PS-30 Studies on Flower-Inducing Compounds in *Lemna paucicostata* Exposed to Drought Stress  
R. Tsuchiya, T. Narumi, N. Mase, N. Watanabe
- PS-31 Development of High-quality Polylactide Synthesis via Organocatalytic Ring-Opening Polymerization in Supercritical Carbon Dioxide  
S. Yamamoto, T. Narumi, N. Watanabe, N. Mase
- PS-32 Orchestrated Action of PP2A Antagonizes Atg13 Phosphorylation and Promotes Autophagy after TORC1 Inactivation  
A. M. Yeasmin, T. M. Waliullah, A. Kondo, T. Ushimaru
- PS-33 Gold Nanoparticles (Au NPs): On the way of different Synthetic Routes  
S. R. Ahmed, J. Lee, Enoch Y. Park
- PS-34 CdSeTeS/ZnS Quantum Dot-Graphene Oxide Nanocomposite as Fluorescent “Switch-on” Probe For Polyaromatic Hydrocarbon  
O. Adegoke, P. B. C. Forbes
- PS-35 Fluid Intakes Recognition for Long-Term Care Support by Analyzing Swallowing Sound  
Y. Kobayashi, M. Nishimura, H. Mineno
- PS-36 Versatile Synthesis of Fluoride-doped Tin (IV) oxide Nano-architectures on Glass  
A. Bandara, K. Murakami, R. M. G. Rajapakse, P. V. V. Jayaweera, D. Liyanage
- PS-37 Application of Plasma Functionalized Graphite Encapsulated Magnetic Nanoparticles in Biomolecule Sensing  
A. Viswan, H. Chou, A. Sakudo M. Nagatsu
- PS-38 Plasma-Assisted Functionalization of Zinc Oxide for Biosensing Application  
M. A. Ciolan, D. Luca, M. Nagatsu
- PS-39 Size Dependent Properties of Magnesium Ferrite Nanoparticles Synthesized by Ultrasonic Spray Pyrolysis Technique for Magnetic Hyperthermia Applications  
H. Das, N. Sakamoto, H. Aono, K. Shinozaki, H. Suzuki, N. Wakiya
- PS-40 The Paradox of Enrichment in Phytoplankton by Induced Competitive Interactions  
J. M. Tubay, H. Ito, T. Uehara, S. Kakishima, S. Morita, T. Togashi, K. Tainaka, M. P. Niraula, B. E. Casareto, Y. Suzuki, J. Yoshimura
- PS-41 Molecular and Biological Study of the Thyroid Transcription Factors using Teleosts  
J. Sakamoto, Y. Uemae, N. Katagiri, Y. Hidaka, A. Hiratsuka, J. Takemori, M. Suzuki
- PS-42 Synthesis of Chitosan-Coated Magnetic Bentonite by Plasma-Induced Graft Chitosan and Its Application in Cs<sup>+</sup> Capture  
S. Yang, N. Okada, X. Wang, M. Nagatsu
- PS-43 Effect of Gelatin into the Water Dispersion and Centrifugal Purification of the Single Walled Carbon Nanotubes  
K. H. Maria, T. Mieno

- PS-44 Application of Functionalized Carbon Nanotubes to Obtain Conductive Cotton Textile for Advanced Nanotechnology  
M. J. Rahman, T. Mieno
- PS-45 Graphene Oxide/Polypyrrole Composites for Highly Selective Enrichment of U(VI) from Aqueous Solutions  
R. Hu, X. K. Wang, M. Nagatsu
- PS-46 Biomolecules Immobilization of CNTs Dot-Array Functionalized by Atmospheric Pressure Plasma Jet for Biochip Sensor Application  
T. Abuzairi, M. Okada, N. R. Poespawati, R. Wigajatri, M. Nagatsu
- PS-47 Development as a cAMP-Synthetic Red/Far-Red Light Switches  
K. Fushimi, G. Enomoto, M. Ikeuchi, R. Narikawa
- PS-48 Mechanoluminescence Properties of SrAl<sub>2</sub>O<sub>4</sub>: Eu<sup>+2</sup>, Dy<sup>+3</sup> Phosphors  
R. A. D. M. Ranasinghe, K. Murakami
- PS-49 Electrostatic Effects on Tension-Indiced Pore Formation in Lipid Membranes  
M. A. S. Karal, V. Levadny, T. Tsuboi, M. Belaya, M. Yamazaki
- PS-50 Radiation Tolerance of Optically Reconfigurable Gate Arrays  
R. Moriwaki, H. Ito, M. Watanabe, A. Ogiwara, H. Maekawa
- PS-51 Measurement of Oxygen Atomic Density with Dual-Wavelength Self-Absorption-Calibrated VUVAS Method  
X. Yang, R. Tei, M. Nagatsu

Wednesday, January 28<sup>th</sup>, 2015

Research Institute of Electronics Session 1: Chair; Hiroya Ikeda

9:20 RIE-1. (Invited) Development of Zinc Oxide and Allied Material Composites for Display Devices and White Light Emitting Diodes

Muniasamy Kottaisamy (Thiagarajar College of Engineering, India)

9:45 RIE-2. (Invited) Bioimaging and Quantum Sensing with Fluorescent Nanodiamonds

Huan-Cheng Chang (Academia Sinica, Taiwan)

10:10 RIE-3. (Invited) Formation of WO<sub>3</sub>, MoO<sub>3</sub> Thin Film Nanostructures for Gas Sensing Applications

Ganesan Ravi (Alagappa University, India)

Research Institute of Green Science and Technology Session 1: Chair; Masakazu Hara

10:35 RIGST-1. (Invited) Antioxidant Study of Phenylpropanoids in Herbs and Spices

Shin-Kyo Chung (Kyungpook National University, Korea)

11:00 RIGST-2. (Invited) Cooperative genomes of the planthopper and its endosymbionts

Chuan-Xi Zhang (Zhejiang University, China)

Research Institute of Electronics Session 2: Chair; Michiharu Tabe

11:25 RIE-4. (Invited) Living with Intelligent Machines

Annamaria R. Varkonyi-Koczy (Obuda University, Hungary)

11:50 RIE-5. (Invited) Benefits of Combining Neural Networks and Robust Fixed Point Transformations

Terez A. Varkonyi (Obuda University, Hungary)

12:15 Lunch

Special invited talk session: Chair; Enoch Y. Park

13:20 SI-1. (Invited)

Rimi Nakano (MEXT)

Research Institute of Green Science and Technology Session 2: Chair; Michiru Kondo

13:50 RIGST-3. (Invited) Multifunctional Magnetoplasmonic Nanomaterials and

Their Biomedical Applications

Jae-Beom Lee (Pusan National University, Korea)

14:15 Coffee break

Research Institute of Electronics Session 3: Chair; Yasuhiro Hayakawa

15:00 RIE-6. (Invited) Highly Uniform Resistive Switching Properties of Amorphous Oxide Thin Films

Prepared by Low Temperature Photochemical Solution Deposition

Dinghua Bao (Sun Yat-Sen University, China)

15:25 RIE-7. (Invited) Advancement of Graphene Oxide Conducting layer in Surface Plasmon Resonance Fiber Optic Sensors

Ahmad Shukri bin Muhammad Noor (Universiti Putra Malaysia,

Malaysia)

15:50 RIE-8. (Invited) Active Layer in Organic-Based Memory Devices:

Incorporation of Gold Nanoparticles in Aloe Vera Gel

Kuan Yew Cheong (Universiti Sains Malaysia, Malaysia)

Research Institute of Green Science and Technology Session 3: Chair; Motonori Tomita

16:15 RIGST-4. (Invited) Developing Herbal Formulation of Anthocyanins and Anthocyanidins-enriched

Extracts from *Eugenia jambolana* 'Jamun'

Inder Pal Singh (NIPER, India)

16:40 RIGST-5. (Invited) piggyBac transposon-derived targeting shRNA interference against  
the *Bombyx mori* nucleopolyhedrovirus (*BmNPV*)

Yun-Gen Miao (Zhejiang University, China)

17:05 Closing:

Closing Remarks

Naoki Wakiya (Shizuoka University)

18:10 Banquet

(Hotel Crown Palace (until 20:00))