

Wednesday, November 16

9:00 **Plenary Talks 2 (Chair: Masaaki Nagatsu)**

- Invited Talk ① **Solution processed small molecules for organic photovoltaic**
Vinay Gupta
(National Physical Laboratory, New Delhi, India)
- Invited Talk ② **Synthesis of carbon-based nanomaterials and their application in photocatalysis and sorption**
Xiangke Wang
(North China Electric Power University, China)
- Invited Talk ③ **Solution Plasma Materials Processing**
Nagahiro Saito
(Nagoya University, Japan)

11:00 **Coffee Break**

11:10 **Special Talks on Network-Type Joint Research (Chair: Hiroshi Inokawa)**

- Invited Talk ① **Application of Zwitterionic Materials: From Infection Biomarker Sensing to Cell Therapy**
Tatsuro Goda
(Tokyo Medical and Dental University, Japan)
- Invited Talk ② **Surface plasmon resonance for living cell analysis and clinical diagnosis**
Yuhki Yanase
(Hiroshima University, Japan)
- Invited Talk ③ **Piezoelectric Resonator-Based Fractional-N PLL Technology**
Hiroyuki Ito
(Tokyo Institute of Technology, Japan)

12:40 **Lunch**

14:00 **Lectures by Takayanagi Prize Winners 1 (Chair: Yasuhiro Hayakawa)**

- Invited Talk ① **Physics and applications of IV-VI semiconductor quantum structures**
Akihiro Ishida
(Shizuoka University, Japan)
- Invited Talk ② **Control of electron- and hole-spin state by polarized photon**
Tetsu Ito
(Shizuoka University, Japan)

15:10 **Coffee Break**

15:20 **Lectures by Takayanagi Prize Winners 2 (Chair: Toshifumi Sugiura)**

- Invited Talk ③ **Clinical application of a computer aided diagnosis for dementia**
Akihiro Kakimoto
(Hamamatsu Photonics K.K., Japan)
- Invited Talk ④ **Bio and chemical microsensors based on whispering gallery mode in nitride microdisks**
Tetsuya Kouno
(Shizuoka University, Japan)

16:20 **Closing**

Masaaki Nagatsu
(Symposium Chair)



The 18th Takayanagi Kenjiro Memorial Symposium



Research Institute of Electronics, Shizuoka University

Toward Advanced Imaging Science Creation
– Innovative Development of Nanomaterials and Nanodevices –

DATE November 15 and 16, 2016, **Registration Fee: Free**

Location S-PORT, Hamamatsu Campus, Shizuoka University
3-5-1 Johoku, Naka-ku, Hamamatsu 432-8011, Japan.

Program

Tuesday, November 15

10:00 **Opening (Chair: Masaaki Nagatsu)**

Yukihiro Ito (President of Shizuoka University)
Hidenori Mimura (Director of Research Institute of Electronics, Shizuoka University)

10:15 **Plenary Talks 1 (Chair: Yukinori Ono)**

- Invited Talk ① **10 nm-scale Nanotechnology: From Nanoarrays to 0D Nanotransistor Biosensors**
Nicolas Clement
(NTT Basic Research Laboratories, Japan)
- Invited Talk ② **Integrated microenergy conversion technologies for holographic sensors**
Suhana Mohd Said
(University of Malaya, Malaysia)
- Invited Talk ③ **Optical CT: an old and new diagnostic optical imaging technique**
Yoko Hoshi
(Hamamatsu University School of Medicine, Japan)

12:15 **Lunch**

13:30 **Talks by New RIE Members (Chair: Naoki Wakiya)**

- ① **Charge pumping EDMR for MOS interface analysis**
Masahiro Hori
(Research Institute of Electronics, Shizuoka University, Japan)
- ② **Coupled-Dopant-Atoms as Building Blocks for Practical Atomic-Level Tunneling Operation of Si Nanodevices**
Daniel Moraru
(Research Institute of Electronics, Shizuoka University, Japan)
- ③ **Sn containing group-IV semiconductor thin films: Growth and Characterization**
Yosuke Shimura
(Research Institute of Electronics, Shizuoka University, Japan)
- ④ **Fabrication and Surface Functionalization of Nano-structured Materials with Advanced Plasma Technology for Biomedical Application**
Masaaki Nagatsu
(Research Institute of Electronics, Shizuoka University, Japan)

Organizer: Research Institute of Electronics, Shizuoka University

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Poster Presentations by Young Researchers

- ① **Spin-on-doping process optimization of direct wafer-bonded ultrathin Ge-on-insulator substrate by thermal diffusion method**
Veerappan Manimuthu
(Graduate School of Science and Technology, Shizuoka University)
- ② **Measurement of Temperature Variation of Anode During the Production of Single Walled Carbon Nanotubes by the Bipolar Arc Discharge Method**
Md. Abul Kalam
(Graduate School of Science and Technology, Shizuoka University)
- ③ **Effects of mechanical property of lipid membranes on the entry of cell penetrating peptide oligoarginine into a single vesicle**
Sabrina Sharmin
(Graduate School of Science and Technology, Shizuoka University)
- ④ **Antimicrobial Peptide Magainin 2-Induced Leakage from Single E. coli**
Farliza Parvez
(Graduate School of Science and Technology, Shizuoka University)
- ⑤ **Simulation of periodic electron-beam heating in a novel thermal diffusivity measurement technique for nanowire materials**
Naomi Yamashita
(Graduate School of Science and Technology, Shizuoka University)
- ⑥ **Lithium Polyacrylate (LiPAA) as an Advanced Binder for LLZO garnet electrolytes**
Jeevan Kumar Padarti
(Research Institute of Electronics, Shizuoka University)
- ⑦ **A study of Latency Insertion Method and Gauss-Seidel Method for the Transient Thermal Analysis**
Anh Ha Ngo
(Department of Engineering, Graduate School of Integrated Science and Technology, Shizuoka University)
- ⑧ **High-Speed Operation of Single-Electron Transistor**
Takahiro Tsutaya
(Department of Electronics and Materials Science, Shizuoka University)
- ⑨ **Fabrication of silver micro/nano structures by multi-photon induced reduction**
Seiya Toriyama
(Graduate School of Science and Technology, Shizuoka University)
- ⑩ **Study of the Effect of Magnetic Field during Deposition of Manganese Ferrite Films by Dynamic Aurora PLD**
Nipa Debnath
(Graduate School of Science and Technology, Shizuoka University)
- ⑪ **Skin permeability and transdermal drug delivery by plasma irradiation**
Kristof Jaroslav
(Graduate School of Science and Technology, Shizuoka University)
- ⑫ **Electroinduced domain structures in phonon crystal managed by crossed electrodes.**
Barsukou Starhei
(Graduate School of Science and Technology, Shizuoka University)
- ⑬ **Incorporation of polyaniline on graphene-related materials/ cotton-fabric by interfacial polymerization pathway for wearable device**
Pandiyarasan Veluswamy
(Graduate School of Science and Technology, Shizuoka University)
- ⑭ **Synthesis of graphite encapsulated magnetic nanoparticles with controllable morphology by an arc discharge approach**
Rui Hu
(Graduate School of Science and Technology, Shizuoka University)
- ⑮ **SOI MOSFET Photon Detector with Surface Plasmon Antenna**
Yash Sharma
(Graduate School of Science and Technology, Shizuoka University)
- ⑯ **Film formation process and growth model of hexagonal boron nitride grown on a c-plane sapphire substrate by LPCVD**
Naoki Umehara
(Graduate School of Science and Technology, Shizuoka University)

- ⑰ **A Stimulated Raman Scattering CMOS Image Sensor Using a Large-Area High-Speed Charge Modulator and Lock-in Amplifier**
Lioe De Xing
(Graduate School of Science and Technology, Shizuoka University)
- ⑱ **A Wide Dynamic Range CMOS Image Sensor Using Two Charge Storage Diodes with Different Sensitivities.**
Minho Lee
(Graduate School of Science and Technology, Shizuoka University)
- ⑲ **A Low-Power Hybrid Tri-Stage-Pipeline Column ADC for High-Speed CMOS Image Sensors**
Tongxi Wang
(Graduate School of Science and Technology, Shizuoka University)
- ⑳ **Wide Range X-ray SOI Pixel Detector with Variable In-Pixel Gain Selection**
Shrestha Sumeet
(Graduate School of Science and Technology, Shizuoka University)
- ㉑ **Realization of twist polarizer design using femtosecond direct laser write technique in infra-red spectral range**
Fanyaeu Ihar
(Graduate School of Science and Technology, Shizuoka University)
- ㉒ **Laser fabrication of photonic crystals for optical field enhancement applications**
Ooshima Kouhei
(Department of Electronics and Materials Science, Shizuoka University)
- ㉓ **Measuring viscosities by optical tweezers**
Anna Statsenko
(Graduate School of Science and Technology, Shizuoka University)
- ㉔ **Multi-solvent thermal decomposition method for effective size and morphology controlled synthesis of near infrared active silver sulfide quantum dots**
Ibrahim Khaleelullah Mohamed Mathar Sahib
(Graduate School of Science and Technology, Shizuoka University)
- ㉕ **Controlled synthesis of 2-D layered MoS2 nanostructures for enhanced photocatalytic activity under visible light irradiation**
Mani Sabarinathan
(Graduate School of Science and Technology, Shizuoka University)
- ㉖ **High spatial resolution and high signal-to-noise ratio imaging of label-free cellular structure**
Masahiro Fukuta
(Graduate School of Science and Technology, Shizuoka University)
- ㉗ **Effect of Plasma Parameters in Amino Modification of Carbon Encapsulated Iron Nanoparticles and Their Application in Viable Collection of Bacteria**
Anchu Viswan
(Graduate School of Science and Technology, Shizuoka University)
- ㉘ **Effect of zinc oxide coating on resonance frequency shift and Q-factor of microcantilever**
Lia Aprilia
(Graduate School of Science and Technology, Shizuoka University)
- ㉙ **Damage estimation of electron beam irradiation in the biocompatible film by D-EXA microscope observation**
Yuriko Masuda
(Graduate School of Science and Technology, Shizuoka University)
- ㉚ **Structural analysis of Au-induced crystallization of amorphous Ge for IR photodetector applications**
Selvaraj Shanithi
(Graduate School of Science and Technology, Shizuoka University)
- ㉛ **Temperature dependence of Fermi energy in Si evaluated by Kelvin-probe force microscopy**
Yuhei Suzuki
(Graduate School of Science and Technology, Shizuoka University)