The 17th Takayanagi Kenjiro Memorial Symposium
Research Institute of Electronics, Shizuoka University

Toward Advanced Imaging Science Creation
—50th Anniversary of Research Institute of Electronics—

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

Program

Tuesday, November 17

10:00 Opening (Chair: Prof. H. Suzuki)
Yukihiro Ito (President of Shizuoka University)
Hidenori Mimura (Director of Research Institute of Electronics, Shizuoka University)

10:15 Plenary Talks 1 (Chair: Prof. H. Suzuki)
Invited Talk 1: Carbon Nanotube Interconnects for 30 nm Linewidth and Beyond
Cory Y. Yang (Santa Clara University, USA)
Invited Talk 2: Digital Silicon Photomultipliers for Medical Applications
Edoardo Charbon (Delft University of Technology, Netherlands)
Invited Talk 3: Compact High-Speed Optical Switching - Enabled by Large Linear Electro-Optic Effect
Juerg Leuthold (ETH Zurich, Switzerland)

12:15 Lunch

13:30 Talks by New RIE Members (Chair: Prof. H. Inokawa)
Invited Talk 1: Single cell manipulation using a scanning ion conductance microscope
Futashi Hironaka (Research Institute of Electronics, Shizuoka University, Japan)
Invited Talk 2: Transformation between inverse bicontinuous cubic phases of a lyotropic liquid crystal
Toshihiko Oka (Research Institute of Electronics, Shizuoka University, Japan)
Invited Talk 3: Crystal structure and electrical properties of novel transparent conductive oxide
Naoki Wakiya (Research Institute of Electronics, Shizuoka University, Japan)

Organizer: Research Institute of Electronics, Shizuoka University
Information: http://www.rie.shizuoka.ac.jp/ Contact: TEL 053-478-1301 FAX 053-478-1651
Ag-doped ZnO nanocomposites with enhanced Seebeck coefficient


Phonon-drag contribution to Seebeck coefficient in nanometer-sized Si wires


Enhanced Photoelectron Emission with Deep-UV Surface Plasmon Resonance Excitation

N. Shirahata1, A. Oto1,2, M. Kikawada1, W. Inami1,2, and Y. Kawata1,2 (Grad. Sch. Sci. Tech., Shizuoka Univ., ‘Facility of Eng., Shizuoka Univ., Japan)

Phenomenological drift contribution to Seebeck coefficient in nanometer-sized Si wires


Enhanced Photoelectron Emission with Deep-UV Surface Plasmon Resonance Excitation

N. Shirahata1, A. Oto1,2, M. Kikawada1, W. Inami1,2, and Y. Kawata1,2 (Grad. Sch. Sci. Tech., Shizuoka Univ., ‘Facility of Eng., Shizuoka Univ., Japan)

Dynamical modification of the equivalent circuit with the bias voltage in a multiple-dopant system

A. Samanta1, D. Moraru2, Y. Takasu1, T. Mizuno1, and M. Tabe1 (Grad. Sch. Sci. Tech., Shizuoka Univ., ‘Facility of Eng., Shizuoka Univ., Japan)

Synthesis of Erbium co-doped TiO2/Ag nanocomposites with enhanced photocatalytic activity for Rhodamine B degradation under visible light irradiation


Controlled synthesis and morphology investigation of ethylenediamine passivated ZnO nanostructures and its photocatalytic activity under visible light irradiation


Synthesis of Eu-doped SnO2/RGO nanocomposites with enhanced photocatalytic activity for Rhodamine B degradation under visible light irradiation


Non-perturbative measurement of evanescent fields

T. Okamoto1, W. Inami1,2, and Y. Kawata1,2 (Grad. Sch. Sci. Tech., Shizuoka Univ., Japan, ‘Facility of Eng., Shizuoka Univ., Japan)

Enhanced Photoelectron Emission with Deep-UV Surface Plasmon Resonance Excitation


Raman-scattering contribution to Seebeck coefficient in nanometer-sized Si wires


Controlled synthesis and morphology investigation of ethylenediamine passivated ZnO nanostructures and its photocatalytic activity under visible light irradiation


Controlled synthesis and morphology investigation of ethylenediamine passivated ZnO nanostructures and its photocatalytic activity under visible light irradiation


Phonon-drag contribution to Seebeck coefficient in nanometer-sized Si wires


Enhanced Photoelectron Emission with Deep-UV Surface Plasmon Resonance Excitation

N. Shirahata1, A. Oto1,2, M. Kikawada1, W. Inami1,2, and Y. Kawata1,2 (Grad. Sch. Sci. Tech., Shizuoka Univ., ‘Facility of Eng., Shizuoka Univ., Japan)

Enhanced Photoelectron Emission with Deep-UV Surface Plasmon Resonance Excitation

N. Shirahata1, A. Oto1,2, M. Kikawada1, W. Inami1,2, and Y. Kawata1,2 (Grad. Sch. Sci. Tech., Shizuoka Univ., ‘Facility of Eng., Shizuoka Univ., Japan)

Thermoelectric properties of compositionally homogeneous P and N-type SiGe bulk crystals

D. Horiba1, W. Inami1,2, and Y. Kawata1,2 (Grad. Sch. Sci. Tech., Shizuoka Univ., Japan, ‘Facility of Eng., Shizuoka Univ., Japan)

Enhanced Photoelectron Emission with Deep-UV Surface Plasmon Resonance Excitation

N. Shirahata1, A. Oto1,2, M. Kikawada1, W. Inami1,2, and Y. Kawata1,2 (Grad. Sch. Sci. Tech., Shizuoka Univ., ‘Facility of Eng., Shizuoka Univ., Japan)

Controlled synthesis and morphology investigation of ethylenediamine passivated ZnO nanostructures and its photocatalytic activity under visible light irradiation


Controlled synthesis and morphology investigation of ethylenediamine passivated ZnO nanostructures and its photocatalytic activity under visible light irradiation


Controlled synthesis and morphology investigation of ethylenediamine passivated ZnO nanostructures and its photocatalytic activity under visible light irradiation


Controlled synthesis and morphology investigation of ethylenediamine passivated ZnO nanostructures and its photocatalytic activity under visible light irradiation


Controlled synthesis and morphology investigation of ethylenediamine passivated ZnO nanostructures and its photocatalytic activity under visible light irradiation


Controlled synthesis and morphology investigation of ethylenediamine passivated ZnO nanostructures and its photocatalytic activity under visible light irradiation


Controlled synthesis and morphology investigation of ethylenediamine passivated ZnO nanostructures and its photocatalytic activity under visible light irradiation


Controlled synthesis and morphology investigation of ethylenediamine passivated ZnO nanostructures and its photocatalytic activity under visible light irradiation

Poster Presentations by Young Researchers

- Effects of cholesterol on the entry of cell-penetrating peptide transportan 10 (TP10) into a single vesicle
  Md. Z. Islam1, S. Sharma1, and M. Yamazaki2,3,4

- Antimicrobial peptide Lactoferricin B-Induced Pore Formation in Single Giant Unilamellar Vesicles
  Md. Moniruzzaman1, J. Md. Alam2, H. Dohara3, and M. Yamazaki1,2,3,4

- Antimicrobial Peptide PGLa-Induced Pore Formation in Lipid Membranes and its Synergistic Effect with Magainin 2
  F. Parvez1, J. Md. Alam2, H. Dohara3, and M. Yamazaki1,2,3,4

- Effect of synthesis conditions on electrical properties of barium titanate ferroelectric thin film
  T. Arai1, Y. Kama1, N. Sakamoto2, T. Ohlen2, T. Matsuda2, N. Wakiya2, and H. Suzuki2

- Preparation and morphological study of superparamagnetic magnesium ferrite nano-sphere for hyperthermia applications
  H. Das1,2, T. Arai1, N. Sakamoto2, K. Shinozaki1,3, H. Suzuki4, and N. Wakiya2,3

- Initial Investigations on Li4La2Zr2O12 solid electrolyte based lithium-ion batteries
  V. Kumar1, V. Manimuthu1,2, H. Yamashita1,2, F. Salleh3, H. Ikeda1,2, and H. Suzuki1,2

- Multi-GPU HIE-FDTD method for Solution of the Large Scale Electromagnetic Problems with Thin Structure
  Y. Inoue and H. Asai

- Control of nanostructure of fluorine-doped tin oxide thin film by atomized spray pyrolysis deposition
  A. Badara1, M. Okuyama2, M. Shimomura3, R. M. G. Rajapakse3, and K. Murakami2

- Characterization of low-temperature synthesized organic-mechanoactivated materials
  M. Ranasingha1, M. Okuyama1, M. Shimomura1, R. M. G. Rajapakse2, and K. Murakami2

- Effect of seed layer on growth of vertically aligned ZnO nano rods
  A. Bramantyo1, M. Okuyama2, R. N. Passapati2, and K. Murakami2

- Reduction of surface roughness in water bounded p-type Ge-on-insulator layer by chemical mechanical polishing
  V. Manimuthu1,2,3 and H. Iida4,5

- Ag-doped ZnO nanocomposites with enhanced Seebeck coefficient
  V. Pandyaran1,2, F. Salleh3, and H. Iida3,4

- Simulation of electron beam heating in a novel thermal conductivity measurement technique for nanowire-thermopile materials
  N. Yamashita1,2, F. Salleh3, H. Kuwahara4, M. Shimomura1, K. Murakami2, and H. Iida5

- Phonon-drag contribution to Seebeck coefficient in nanometer-scale Si wires
  Y. Suzuki1,2, T. Amano3, F. Salleh4, and H. Iida5,6

- Novel ternary compound Cu3S8 thin films by single step solution process for low cost photovoltaic devices
  V. N. Kumar1, V. Manimuthu1,2, H. Mamode3, H. Ikeda1,2, and H. Suzuki1,2

- Synthesis of Erbium co-doped TiO2 /Ag nanocomposites with enhanced photocatalytic activity for Rhodamine B degradation under visible light irradiation
  N. Prakash1, T. Arai1,3, T. Ohlen2, Y. Tomoya2, and H. Ikeda1,2
  (1,2,3Grad. Sch. Sci. Tech. 1, Shizuoka Univ., 2,3,4Res. Inst. Electr. Eng. Shizuoka, 2,3,4Dept. Chemistry, Univ. of Peradeniya, Sri Lanka

- Controlled synthesis and morphology investigation of ethylenediammine passivated ZnO nanostructures and its photocatalytic activity under visible light irradiation
  S. Hatip1, J. Arch Proof2, M. Novanaveen3, S. Pannosamy4, C. Mathamuchivasan4, and H. Ikeda1,2
  (1,2,3,4Grad. Sch. Sci. Tech. 1, Shizuoka Univ., 1,3,4Res. Inst. Electr. Eng. Shizuoka, 1,3,4IBM Univ., Chernok, India

- Combustion analysis of a single ethanol droplet by laser trapping technique
  S. Fujikawa1, W. Inami1,2, and Y. Kawata2

- Non-perturbative measurement of evanescent fields
  T. Okamoto1, W. Inami1,2, and Y. Kawata2
  (1,2,3Res. Inst. Electr. Eng. Shizuoka, 1,2,3Res. Inst. Electr. Eng. Shizuoka, 1,2,3IBM Univ., Chernok, India

- Enhanced Photoelectron Emission with Deep-UV Surface Plasmon Resonance Excitation
  N. Shimohida1, A. Ono2,3, M. Kikawada1, W. Inami1,2, and Y. Kawata2
  (1,2,3Res. Inst. Electr. Eng. Shizuoka, 1,2,3Res. Inst. Electr. Eng. Shizuoka, 1,2,3IBM Univ., Chernok, India

- Development of cell stimulation by electron beam irradiation
  D. Horiba1, W. Inami2,3, and Y. Kawata2
  (1,2Res. Inst. Electr. Eng. Shizuoka, 1,2,3Res. Inst. Electr. Eng. Shizuoka, 1,2,3IBM Univ., Chernok, India

---

15:00

Wednesday, November 18

9:00

Plenary Talks 2 (Chair: Prof. Y. Hayakawa)
North Cafeteria, Hamamatsusho Campus, Shizuoka University

- Graphene Oxide Supported Binary Metal-Oxide Photocatalysts for Complete Degradation of Organic Pollutants in the Presence of Ultrasound under Diffused Light
  Barnardshow Pappoulai
  (IBM University, India)

- Gas Response of ZnO Nanostuctures using Surface Plasma Resonance and Microcantilever
  Rathee Niruiya
  (University of Indonesia, Indonesia)

13:00

Reception (Chair: Prof. Kawato)
North Cafeteria, Hamamatsusho Campus, Shizuoka University

---
The 17th Takayanagi Kenjiro Memorial Symposium

Research Institute of Electronics, Shizuoka University

Toward Advanced Imaging Science Creation
–50th Anniversary of Research Institute of Electronics–

Date
November 17 and 18, 2015, Registration Fee: Free

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

Program

Tuesday, November 17

10:00 Opening (Chair: Prof. H. Suzuki)
Yukihiro Ito (President of Shizuoka University)
Hidenori Mimura (Director of Research Institute of Electronics, Shizuoka University)

10:15 Plenary Talks 1 (Chair: Prof. H. Suzuki)
Invited Talk 1: Carbon Nanotube Via Interconnects for 30 nm Linewidth and Beyond
Cory Y. Yang (Santa Clara University, USA)
Invited Talk 2: Digital Silicon Photomultipliers for Medical Applications
Edoardo Charbon (Delft University of Technology, Netherlands)
Invited Talk 3: Compact High-Speed Optical Switching - Enabled by Large Linear Electro-Optic Effect
Juerg Leuthold (ETH Zurich, Switzerland)

12:15 Lunch

13:30 Talks by New RIE Members (Chair: Prof. H. Inokawa)
Invited Talk 1: Single cell manipulation using a scanning ion conductance microscope
Futomi Iwashita (Research Institute of Electronics, Shizuoka University, Japan)
Invited Talk 2: Transformation between inverse bicontinuous cubic phases of a lyotropic liquid crystal
Toshihiko Oka (Research Institute of Electronics, Shizuoka University, Japan)
Invited Talk 3: Crystal structure and electrical properties of novel transparent conductive oxide
Naoki Wakiya (Research Institute of Electronics, Shizuoka University, Japan)

Registration Fee: Free

Date
November 17 and 18, 2015

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

Program

Tuesday, November 17

10:00 Opening (Chair: Prof. H. Suzuki)
Yukihiro Ito (President of Shizuoka University)
Hidenori Mimura (Director of Research Institute of Electronics, Shizuoka University)

10:15 Plenary Talks 1 (Chair: Prof. H. Suzuki)
Invited Talk 1: Carbon Nanotube Via Interconnects for 30 nm Linewidth and Beyond
Cory Y. Yang (Santa Clara University, USA)
Invited Talk 2: Digital Silicon Photomultipliers for Medical Applications
Edoardo Charbon (Delft University of Technology, Netherlands)
Invited Talk 3: Compact High-Speed Optical Switching - Enabled by Large Linear Electro-Optic Effect
Juerg Leuthold (ETH Zurich, Switzerland)

12:15 Lunch

13:30 Talks by New RIE Members (Chair: Prof. H. Inokawa)
Invited Talk 1: Single cell manipulation using a scanning ion conductance microscope
Futomi Iwashita (Research Institute of Electronics, Shizuoka University, Japan)
Invited Talk 2: Transformation between inverse bicontinuous cubic phases of a lyotropic liquid crystal
Toshihiko Oka (Research Institute of Electronics, Shizuoka University, Japan)
Invited Talk 3: Crystal structure and electrical properties of novel transparent conductive oxide
Naoki Wakiya (Research Institute of Electronics, Shizuoka University, Japan)

Registration Fee: Free

Date
November 17 and 18, 2015

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

Program

Tuesday, November 17

10:00 Opening (Chair: Prof. H. Suzuki)
Yukihiro Ito (President of Shizuoka University)
Hidenori Mimura (Director of Research Institute of Electronics, Shizuoka University)

10:15 Plenary Talks 1 (Chair: Prof. H. Suzuki)
Invited Talk 1: Carbon Nanotube Via Interconnects for 30 nm Linewidth and Beyond
Cory Y. Yang (Santa Clara University, USA)
Invited Talk 2: Digital Silicon Photomultipliers for Medical Applications
Edoardo Charbon (Delft University of Technology, Netherlands)
Invited Talk 3: Compact High-Speed Optical Switching - Enabled by Large Linear Electro-Optic Effect
Juerg Leuthold (ETH Zurich, Switzerland)

12:15 Lunch

13:30 Talks by New RIE Members (Chair: Prof. H. Inokawa)
Invited Talk 1: Single cell manipulation using a scanning ion conductance microscope
Futomi Iwashita (Research Institute of Electronics, Shizuoka University, Japan)
Invited Talk 2: Transformation between inverse bicontinuous cubic phases of a lyotropic liquid crystal
Toshihiko Oka (Research Institute of Electronics, Shizuoka University, Japan)
Invited Talk 3: Crystal structure and electrical properties of novel transparent conductive oxide
Naoki Wakiya (Research Institute of Electronics, Shizuoka University, Japan)