

The 10th Takayanagi Kenjiro Memorial Symposium
and
The 5th International Symposium on Nanovision Science (COE)
"Nanospace Manipulation of Photons and Electrons for Nanovision System"

Organized by
Research Institute of Electronics, Shizuoka University
and
The 21st Century COE Program, Shizuoka University

Monday, November 17, 2008

Opening (10:00 ~ 10:10)

(1) Opening Speech

Naotaka Oki (President of Shizuoka University)

(2) Opening Speech

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

Session 1 Plenary Talks (10:10 ~ 11:30)

1-1 (*Invited Paper*) The Future of Machine Vision

Peter Seitz (University of Neuchatel and Swiss Center for Micro-
electronics, Switzerland) 1

1-2 (*Invited Paper*) Physics and Applications of Hybrid Silicon Nanoelectro-
mechanical Devices

Hiroshi Mizuta, Yoshishige Tsuchiya and Shunri Oda* (The University
of Southampton, U.K. and *Tokyo Institute of Technology, Japan) 6

Session 2 Advanced Optoelectronic Devices and Human Interfaces I (11:30 ~ 12:10)

2-1 Formation of Radiation Sensitive Nano-Layered Structures by Pulsed Laser
Irradiation of Semiconductors

Volodymyr Gnatyuk and Toru Aoki (Shizuoka University) 11

2-2 Preliminary Experiment for the Growth of Homogeneous Ternary Bulk
Crystal under Microgravity

Yasuhiro Hayakawa (Shizuoka University) 15

Lunch (12:10 ~ 13:30)

Session 3 Advanced Optoelectronic Devices and Human Interfaces II (13:30 ~ 15:10)

3-1 (<i>Invited Paper</i>) Computer-Aided Diagnosis and Surgery Based on Medical Image Recognition and Visualization Kensaku Mori (Nagoya University, Japan)	20
3-2 Methods and Technologies for Image Acquisition with Portable Handheld Electromagnetic Scanners Kamen Kanev, Hiroshi Inokawa, Yoshihiro Nishimura*, Akira Sasamoto*and Takayuki Suzuki* (Shizuoka University and *National Institute of Advanced Industrial Science and Technology, Japan)	25
3-3 New Functional and High Performance Devices by Si Nanostructures Hiroya Ikeda (Shizuoka University)	31
3-4 Reaction and Arrangement of Molecules on a Silicon Surface Masaru Shimomura, Takenori Kawaguchi, Dausuke Ichikawa, Yasuo Fukuda and Kenji Murakami (Shizuoka University)	35

Coffee Break (15:10 ~ 15:30)

Overview of the 21st Century COE Program (15:30 ~ 15:40)

Hidenori Mimura (COE Leader, Shizuoka University)

Session 4 Photon Emission (15:40 ~ 17:00)

4-1 (<i>Invited Paper</i>) Luminescence from Individual Semiconductor Nano-materials : Nanocrystal Quantum Dots and Carbon Nanotubes Yoshihiko Kanemitsu (Kyoto University, Japan)	40
4-2 Characteristics of Nano-sized Dot Array Carbon Nanotube Emitters and ZnO Nanophosphors Masaaki Nagatsu, Takafumi Matsuda, Qiongrong Ou, Jun Sato, Kosuke Shinji and Akihisa Ogino (Shizuoka University)	41
4-3 Semiconductor Quantum Wells for Intersubband Device Applications Akihiro Ishida, Daoshe Cao, Martin Veis and Yoku Inoue (Shizuoka University)	46

Reception (17:10 ~ 19:10)

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Session 5 Nanophotonics (9:00 ~ 10:20)

- 5-1 (*Invited Paper*) Nanophotonics for Optical Data Storage
Min Gu (Swinburne University of Technology, Australia) 51
- 5-2 (*Invited Paper*) Nano-Sculptured Optical Thin Films for Polarization Modulation
Yi-Jun Jen and Ching-Wei Yu (National Taipei University of Technology, Taiwan) 53

Coffee Break (10:20 ~ 10:40)

Session 6 Photon Detection (10:40 ~ 12:00)

- 6-1 (*Invited Paper*) Lead-Chalcogenide Sensors and Lasers for the Mid- Infrared Range
Hans Zogg, M. Rahim, F. Felder, M. Fill, D. Boye (Swiss Federal Institute of Technology Zurich, Switzerland) 59
- 6-2 A CMOS Time-Resolved Sensor for Fluorescence Lifetime Imaging
Shoji Kawahito, Hyung-June Yoon and Shinya Itoh (Shizuoka University) 63
- 6-3 X-Ray/Gamma-Ray Imaging for Nanovision Science
Toru Aoki, Takuya Nakashima, Hisashi Morii, Yoichiro Neo, Hidenori Mimura (Shizuoka University) 65

Lunch (12:00 ~ 13:20)

Session 7 Young Researchers Presentation

Part I : Short Oral Presentations (13:20 ~ 14:30)

Part II : Poster Presentations (14:30 ~ 15:50)

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Chihiro Moriguchi (Shizuoka University)69
- 7-2 X-ray Imaging Technique for Material Identification
Wenjuan Zou (Shizuoka University) 71
- 7-3 Estimated Congestion Distance System using Frequency Division of Wireless Network
Hideyuki Kobayashi (Shizuoka University) 73

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