



The 3rd International Symposium on Nanovision Science (COE)
and
The 9th Joint International Conference on
Advance Science and Technology (JICAST)



International Symposium on COE & JICAST

January 23(Tue), 24(Wed), 2007,
Sanaru Hall, Hamamatsu Campus, Shizuoka University
3-5-1 Johoku, Hamamatsu 432-8011, Japan

Registration Fee
FREE!

Program

Jan 23

Session 1 (10:00 ~ 10:30) **Opening Session**

1-1 Opening Speech

Hitoshi Ishii (Vice President, Shizuoka University)

1-2 Overview of The 21st Century COE Program "Research and Education Center of Nanovision Science"

Hidenori Mimura (COE Leader, Shizuoka University)

1-3 Overview of JICAST

Hisao Murai (Director of International Center, Shizuoka University)

Session 2 (10:30 ~ 11:45) **Invited Talks (I) "Photonic and Electronic Applications"**

2-1 Quaternary $\text{Cu}_2\text{ZnSnSe}_4$ (CZTSe) Thin Films as a Potential Solar Absorber for Photovoltaic Applications

R.A.Wibowo, E.S.Lee and K.H.Kim (Yeungnam University, Korea)

2-2 Recent Development of Metal Free Organic Dye-sensitized Solid-state Solar Cells

Akinori Konno and G.R.Asoka Kumara (Shizuoka University)

2-3 Electrodeposition of Ordered Metal Oxide Nanostructures and Its Potential Applications

Xu Zhude and Liu Run (Zhejiang University, China)

Session 3 (13:30 ~ 14:55) **"Information and Human Technology"**

3-1 Invited Biomedical Applications of Low and Atmospheric Pressure Plasmas

Jurgen Engemann (University of Wuppertal, Germany)

3-2 Field Emitter Drive X-ray Imager for Nanovision Imaging

Toru Aoki, Yoichiro Neo and Hidenori Mimura (Shizuoka University)

3-3 PupilMouse Having Two Optical Systems

Yoshinobu Ebisawa (Shizuoka University)

3-4 A Novel Imaging System for the Acquisition and Reproduction of True Colors

Yoshifumi Shimodaira, Tahseen Ejaz, Tetsuya Yokota, Yoshiyuki Kawagoe and Gosuke Ohashi (Shizuoka University)

3-5 Research on Terahertz Sensing Technology

Norihisa Hiromoto (Shizuoka University)

Session 4 (15:10 ~ 16:20) **"Nanomaterials"**

4-1 Invited Smart Nanocomposites for Actuators and Micromotors

Miklos Zrinyi (Budapest University of Technology and Economics, Hungary)

4-2 PbTe/PbS Multilayer Mirror for Surface Emitting Quantum Cascade Lasers

Akihiro Ishida, Jun Kumagai, Daoshe Cao, Martin Veis and Yoku Inoue (Shizuoka University)

4-3 Novel ZnO-based material systems for light emitting devices

Jiro Temmyo (Shizuoka University)

4-4 Development of Display Phosphors for the Nanovision System

Kazuhiko Hara (Shizuoka University)

Latest Information : <http://www.gsest.shizuoka.ac.jp/coe/index.html>

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Session 5 (16:35~17:50) **"Young Researcher's Presentations (I)"**

- 5-1 Nanometer Scale Deposition using Nanopipette Probe Techniques
Futoshi Iwata (Shizuoka University)
- 5-2 Bio-electronics Device using Photosynthesis Protein Coupled with FET
Satoshi Yoneyama, Tatsuhiko Sugiyama, Kayo Suzuki and Makoto Minakata (Shizuoka University)
- 5-3 Highly Ordered Polymeric Thin Films Prepared by Vapor Deposition Polymerization
Atsushi Kubono, Masashi Murai and Yuko Minagawa (Shizuoka University)
- 5-4 Structure of In-induced 4xn Reconstruction on the GaP(001) Surface
Masaru Shimomura, Daisuke Ichikawa and Yasuo Fukuda (Shizuoka University)
- 5-5 MOCVD Growth of GaN Nanowires
Yoku Inoue, Akinori Tajima, Mitsutaka Nishijima and Akihiro Ishida (Shizuoka University)

Reception (18:00 ~ 20:00) at Sanaru Hall

Jan 24

Session 6 (9:30 ~ 10:45) **Invited Talks (II) "Luminescence and Imaging"**

- 6-1 Water-Soluble Two-Photon Absorption Chromospheres for Biological Imaging
Han Young Woo (Pusan National University, Korea)
- 6-2 Application of Visual Information Extraction from Images
Toru Kaneko and Atsushi Yamashita (Shizuoka University)
- 6-3 Novel Growth Techniques for Variety of Semiconducting Silicides
Hirokazu Tatsuoka (Shizuoka University)

Session 7 (11:00 ~ 12:10) **"Nanostructures"**

- 7-1 Invited Construction of Carbon Nanotube Junctions
Istvan Laszlo (Budapest University of Technology and Economics, Hungary)
- 7-2 Fabrication of Nano-sized CNT Field Emitters and Nano-structured ZnO Phosphors Using Plasma Processing
Masaaki Nagatsu Marcel Mesko, Qiongrong Ou, Takafumi Matsuda, Takayuki Tanaka and Akihisa Ogino (Shizuoka University)
- 7-3 Micro- or Nano-Field Emitters for Nanovision Science
Hidenori Mimura, Yoichiro Neo and Toru Aoki (Shizuoka University)
- 7-4 Ultra High-Q Microsphere and Its Application to Nanovision Science
Makoto Tomita (Shizuoka University)

Session 8 (13:30 ~ 14:45) **"Young Researcher's Presentations (II)"**

- 8-1 Research and Development on Novel Potential Contrast Agents for MR Imaging - MR Angiography and Early Stage Findings for Liver Tumors to Innovate on Medical Treatments
Gang Yu, Mitsuji Yamashita, Kengo Aoshima, Masatsugu Kobayashi, Nao Kamikage, Masaki Takahashi, Yasuo Takehara and Harumi Sakahara (Shizuoka University)
- 8-2 Development of Dynamic Aurora PLD and Preparation of Ferromagnetic Zinc-Ferrite Thin Film
Naoki Wakiya, Keishu Muraoka, Nobuyasu Mizutani, Hisao Suzuki and Kazuo Shinozaki (Shizuoka University)
- 8-3 Ferroelectric Ordering in Disk-shaped Molecules Substituted with Triple Amide Groups
Atsushi Sugita and Shigeru Tasaka (Shizuoka University)
- 8-4 Estimation of Maximum Atmospheric Corrosion Rate of Carbon Pipes
Kazuhiro Takeda, Yoshifumi Tsuge, Hisayoshi Matsuyama and Eiji Oshima (Shizuoka University)
- 8-5 Oxidation Treatment of Waste Biomass with Pressure Superheated Steam
Idzumi Okajima, Kazuyuki Murakami and Takeshi Sako (Shizuoka University)

Session 9 (15:00 ~ 16:40) **"Optical Devices and Systems"**

- 9-1 Invited Telemanipulation in a Virtual Nano Environment
Peter Korondi (Budapest University of Technology and Economics, Hungary)
- 9-2 Self-Assembling Process for Fabrications of Nano-Dots and Nano-Holes Array for using Diblock Copolymer
Yoshimasa Kawata and Tsuyoshi Matsuyama (Shizuoka University, *Pulstec Industrial Co. Ltd.)*
- 9-3 A CMOS Time-of-Flight Range Image Sensor for Real-Time 3D Imaging
Shoji Kawahito (Shizuoka University)
- 9-4 Single-Molecular Wire Devices
Hiroshi Sakaguchi (Shizuoka University)
- 9-5 Single-Electron Devices Toward Manipulation of Electrons, Photons and Ions
Michiharu Tabe (Shizuoka University)
- 9-6 Anatase Nanolayer Exhibiting High-Speed Bipolar Resistive Switching
Masayuki Fujimoto and Hiroshi Koyama (Shizuoka University)

Session 10 (16:40 ~ 17:00) **Closing**