

The 25th Takayanagi Kenjiro Memorial Symposium
Research Institute of Electronics, Shizuoka University

Toward Advanced Imaging Science Creation
~ Fusion of next-generation photonics and electronics ~

November 28 - 29, 2023

S-Port Conference Room, Hamamatsu Campus, Shizuoka University
3-5-1 Johoku, Naka-ku, Hamamatsu 432-8561, Japan

Day 1 (November 28)

9:30 **Opening Remarks** **Yukinori Ono (Symposium Chair)**
 Greetings **Kazuyuki Hizume (President of Shizuoka University)**
 Masakazu Kimura (Director of RIE, Shizuoka University)

Plenary Talks

(Chair: Yukinori Ono)

9:40 **PL-1.** **“Evolution of On-Chip Optics for Image Sensors”**
 Nobukazu Teranishi (Shizuoka University, Japan)

10:20 **PL-2.** **“Next Generation Digital Infrastructure and Photonics-Electronics**
 Convergence”
 Shu Namiki (National Institute of Advanced Industrial Science and
 Technology, Japan)

11:00 **Break**

(Chair: Daniel Moraru)

11:10 **PL-3.** **“Graphene-based Nanoelectronic Devices and NEMS for extreme**
 sensing and nanoscale thermal engineering”
 Hiroshi Mizuta (The Japan Advanced Institute of Science and
 Technology, Japan)

11:50 **PL-4.** **“Optoelectronic Response of Point Defects in 2D Semiconductors**
 Resolved at the Atomic Limit”
 Bent Weber (Nanyang Technological University, Singapore)

12:30 **Photo Session**

12:40 **Lunch**

Invited Talks

(Chair: Takayuki Nakano)

14:00 IT-1. “Trends and prospects of spin qubit research using semiconductor quantum dots”

Tetsuo Kodera (Tokyo Institute of Technology, Japan)

14:30 IT-2. “Cu(In,Ga)Se₂ detectors with high radiation tolerance”

Jiro Nishinaga (National Institute of Advanced Industrial Science and Technology, Japan)

15:00 IT-3. “Development of Interface state Control on Molecular Ion Implanted Silicon Epitaxial Wafers for CMOS Image Sensors”

Ryosuke Okuyama (SUMCO Corporation, Japan)

15:30 Break

15:40 Poster Session

17:10 Closing for Day-1

17:30 Networking @ CO-OP North Cafeteria

Day 2 (November 29)

Lectures by Takayanagi Prize Winners

(Chair: Masahiro Hori)

9:30 Opening

9:40 TL-1. “Practical Application of Radiation Imaging Detectors Based on Nanovision Science”

Toru Aoki (Shizuoka University, Japan)

10:20 TL-2. “Magnetization dynamics of in vivo magnetic nanoparticles for cancer theranostics”

Satoshi Ota (Shizuoka University, Japan)

10:50 Break

11:10 TL-3. “Preparation of nitride and oxynitride thin films with high-crystallinity using magnetic-field-induced PLD”

Takahiko Kawaguchi (Shizuoka University, Japan)

**11:40 TL-4. “Exploring an Optimal Electrode for Photoelectrochemical Cells using a Photocatalytic Reaction and Photoelectrochemical Characterizations”
Tomohiro Tojo (Shizuoka Institute of Science and Technology, Japan)**

**12:10 TL-5. “Molecular crystalline electrolytes with high Li-ion conductivity”
Makoto Moriya (Shizuoka University, Japan)**

12:40 Lunch

Invited Talks by RCBE Young Researchers

(Chair: Tomoaki Masuzawa)

**14:00 IT-1. “R&D of medical systems based on information science and perspectives for clinical applications”
Shinya Onogi (Tokyo Medical And Dental University, Japan)**

**14:30 IT-2. “Biomedical and IoT devices based on optical powering and energy harvesting”
Takashi Tokuda (Tokyo Institute of Technology, Japan)**

**15:00 IT-3. “Enhanced photoelectrical behavior of MoS₂-FET toward chemical recognition”
Md. Iftekharul Alam (Hiroshima University, Japan)**

**15:30 IT-4. “Organic Materials for Radiation Detection”
Masanori Koshimizu (Shizuoka University, Japan)**

16:00 Closing Yukinori Ono (Symposium Chair)