

**The Conference Theme**  
*“Nanotechnology and Its Impact on Electron Devices”*

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**10:40-11:40** Current Status of Solar Power Generation and Future Technology of Solar Cell

T. Takamoto (Sharp)

**Opening**

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**Keynote Speeches (I)**

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S. Takeda (Osaka University)

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(<sup>1</sup>Osaka Institute of Technology, <sup>2</sup>The Wakasa Wan Energy

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(<sup>1</sup>NIST, <sup>2</sup>CREST, <sup>3</sup>Japan Atomic Energy Agency, <sup>4</sup>National Institute  
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(<sup>1</sup>NIST, <sup>2</sup>CREST, <sup>3</sup>Tsuruoka National College of Technology)

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Y. Ohmi, M. Ogawa, S. Souma (Kobe University)

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K. Kojima, Y. Omura (Kansai University)

**PC-16 (p.130)** Fabrication and Axial Sensitivity Analysis of Vibratory Piezoelectric Cantilever Sensors for Three-axis Tactile Sensing

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T. Segawa, Y. Yamaguchi, H. Hashimoto, M. Kimura (Ryukoku University)

## Keynote Speeches (II)

**10:00-10:40**

- K-4** (p.22) The Role of High-Doped Source and Drain on Device Performance in Nano-Scale Si-MOSFETs  
N. Sano (University of Tsukuba)

**Short Break (10:40-10:50)**

**10:50-11:30**

- K-5** (p.24) Single-Photon Detection by SOI MOSFET  
H. Inokawa (Shizuoka University)

**Lunch (11:30-13:30)**

## Technical Session A (Silicon Devices and Related)

**13:30-13:50**

- A-1** (p.32) Fabrication of Semiconductor Nanoparticles using Electro Spray Deposition Method  
T. Doe<sup>1,2</sup>, M. Horita<sup>1,2</sup>, T. Nishida<sup>1,2</sup>, Y. Ishikawa<sup>1,2</sup>, Y. Uraoka<sup>1,2</sup>  
(<sup>1</sup>NIST, <sup>2</sup>CREST)

**13:50-14:10**

- A-2** (p.34) Electrical and Structural Properties of Organic Thin-Film Transistor using Very Thin Pentacene Film  
A. Heya<sup>1</sup>, N. Matsuo<sup>1</sup>, T. Konaganezawa<sup>2</sup>  
(<sup>1</sup>University of Hyogo, <sup>2</sup>Japan Synchrotron Radiation Research Institute)



**14:10-14:30**

**A-3 (p.36)** Tight Binding Modeling of Intermediate Band Solar Cells Based on InAs/GaAs Quantum Dot Arrays

A. Mehdipour, M. Ogawa, S. Souma (Kobe University)

**Break (14:30-14:45)**

## **Technical Session B (Silicon Devices and Related)**

**14:45-15:05**

**B-1 (p.40)** Performance Improvement of Metal-Gate/High-k CMOS by NiPt-Silicidation Using Laser Annealing

Y. Yamamoto, T. Yamaguchi, Y. Kawasaki, S. Kudo, J. Tsuchimoto, K. Sato, Y. Nishida, T. Yamashita, H. Oda, Y. Inoue (Renesas Electronics Corp.)

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**B-2 (p.42)** Design Consideration of 0.4V-Operation SOTB MOSFET for Super Low Power Application

H.Makiyama<sup>1,2</sup>, K.Horita<sup>1,2</sup>, T.Iwamatsu<sup>1,2</sup>, H.Oda<sup>1,2</sup>, N.Sugii<sup>1,2</sup>, Y.Inoue<sup>1,2</sup>, Y.Yamamoto<sup>2</sup>

(<sup>1</sup>Low-power Electronics Association & Project, <sup>2</sup>Renesas Electronics Corp.)

**Break (15:25-15:40)**

**15:40-16:00**

**B-3 (p.44)** An Estimation of Inversion-Layer EOT Influenced by Quantum Effects for Sub-20nm MOSFETs

M. Yamamoto, A. Hiroki, J-C. Yoon (Kyoto Institute of Technology)

**16:00-16:20**

**B-4 (p.46)** Thin Film Transistors and Photo Diodes Fabricated on Double-Layered Polycrystalline Silicon Films Formed by Green Laser Annealing

K. Yamasaki<sup>1</sup>, E. Machida<sup>1</sup>, M. Horita<sup>1,2</sup>, Y. Ishikawa<sup>1,2</sup>, Y. Uraoka<sup>1,2</sup> (<sup>1</sup>NIST, <sup>2</sup>CREST)

**Break (16:20-16:40)**

## **Special Invited Session**

**16:40-17:20**

**T-1 (p.28) On-chip Robotics for Biomedical Innovations**  
F. Arai (Nagoya University)

**Short Break (17:20-17:30)**

## **Awards & Closing Remark**

**17:30-17:40** Award Presentation: Y. Ohmura (Kansai University)

**17:40-17:50** Closing Remark: Y. Ohmura (Kansai University)