

# 29<sup>th</sup> JSAP Awards (Year 2007)

## Prof. Hiroshi Ishihara

Chairman, JSAP Award Selection Committee

The selection committee had solicited application for the candidates for the 29<sup>th</sup> JSAP awards through our monthly journal "OYO BUTURI" from January to March issues (both self-recommendation and appropriate recommendation). The committee accepted 39 candidate papers for JJAP Awards for the Best Original Paper, 21 for JJAP Awards for the Most Promising Young Scientists, and 18 recommended documents for JSAP Award for the Best Review Paper. Three members were in charge of reference for each candidate paper and based on their report, the committee discussed and decided on the first-stage candidates. Then all the committee members reread all

the selected papers and through the process of discussion and examination, decided the second-stage candidates and report them to the board meeting. Also, in this process, the member who was included as an author of candidate paper did not join the selection. After final deliberation at the board meeting, we decided to present awards to the following winners. The awards ceremony was held on September 4 after the Autumn Meeting of the Japan Society of Applied Physics (Hokkaido Institute of Technology). In addition, commemorative speeches of the winners were held at the relevant workshop sited from September 4 to 8.

## Recipient List

### 1. Award for the Best Original Paper

#### (1) Recipients:

Jun-ichi KUSHIBIKI (*Tohoku University*)  
Mototaka ARAKAWA (*Tohoku University*)  
Yuji OHASHI (*Tohoku University*)  
Kouji SUZUKI (*Tohoku University*)  
Takahisa MARUYAMA (*Tohoku University*)  
A Super-Precise CTE Evaluation Method for Ultra-Low-Expansion Glasses Using the LFB Ultrasonic Material Characterization System  
Jpn. J. Appl. Phys. Vol. 44, No. 6B, 2005, pp. 4374-4380

#### (2) Recipients:

Junichi TAKEYA (*CRIEPI*)  
Kazuhito TSUKAGOSHI (*Riken*)  
Yoshinobu AOYAGI (*Riken*)  
Taishi TAKENOBU (*Tohoku University*)  
Yoshihiro IWASA (*Tohoku University*)  
Hall Effect of Quasi-Hole Gas in Organic Single-Crystal Transistors  
Jpn. J. Appl. Phys. Vol. 44, No. 46, 2005, pp. L1393-L1396

#### (3) Recipients:

Shinji MIWA (*Osaka University*)  
Masashi SHIRAIISHI (*Osaka University*)  
Masaki MIZUGUCHI (*Osaka University*)  
Teruya SHINJO (*Osaka University*)  
Yoshishige SUZUKI (*Osaka University*)  
Spin-Dependent Transport in C<sub>60</sub>-Co Nano-Composites  
Jpn. J. Appl. Phys. Vol. 45, No. 28, 2006, pp. L717-L719

#### (4) Recipients:

Yasushi AKASAKA (*Selete*)  
Genji NAKAMURA (*Selete*)  
Kenji SHIRAIISHI (*University of Tsukuba*)  
Naoto UMEZAWA (*National Institute for Materials Science*)  
Kikuo YAMABE (*University of Tsukuba*)  
Osamu OGAWA (*Selete*)  
Myoungbum LEE (*Selete*)  
Heiji WATANABE (*Osaka University*)  
Toyohiro CHIKYOW (*National Institute for Materials Science*)  
Fumio OOTSUKA (*Selete*)  
Yasuo NARA (*Selete*)  
Kunio NAKAMURA (*Selete*)  
Modified Oxygen Vacancy Induced Fermi Level Pinning Model Extendable to P-Metal Pinning  
Jpn. J. Appl. Phys. Vol. 45, No. 49, 2006, pp. L1289-L1292

#### (5) Recipient:

Mitsuru FUNATO (*Kyoto University*)  
Masaya UEDA (*Kyoto University*)  
Yoichi KAWAKAMI (*Kyoto University*)  
Yukio NARUKAWA (*Nichia Corporation*)  
Takao KOSUGI (*Nichia Corporation*)  
Masayoshi TAKAHASHI (*Nichia Corporation*)  
Takashi MUKAI (*Nichia Corporation*)  
Blue, Green, and Amber InGaN/GaN Light-Emitting Diodes on Semipolar {1122} GaN Bulk Substrates  
Jpn. J. Appl. Phys. Vol. 45, No. 26, 2006, pp. L659-L662

#### (6) Recipient:

Yuzo FURUKAWA (*Toyohashi University of Technology*)  
Hiroo YONEZU (*Toyohashi University of Technology*)  
Yuji MORISAKI (*Toyohashi University of Technology*)  
Soo-Young MOON (*Toyohashi University of Technology*)  
Seigi ISHII (*Toyohashi University of Technology*)  
Akihiro WAKAHARA (*Toyohashi University of Technology*)  
Monolithic Implementation of Elemental Devices for Optoelectronic Integrated Circuit in Lattice-Matched Si/III-V-N Alloy Layers  
Jpn. J. Appl. Phys. Vol. 45, No. 35, 2006, pp. L920-L922

#### (7) Recipient:

Vinod ADIVARAHAN (*University of South Carolina*)  
Asif KHAN (*University of South Carolina*)  
Room-Temperature Stimulated Emission from AlN at 214 nm  
Jpn. J. Appl. Phys. Vol. 45, No. 49, 2006, pp. L1286-L1288

#### (8) Recipient:

M. BIBES (*Université Paris-Sud*)  
Ferroelectricity Down to at Least 2 nm in Multiferroic BiFeO<sub>3</sub> Epitaxial Thin Films  
Jpn. J. Appl. Phys. Vol. 45, No. 7, 2006, pp. L187-L189

#### (9) Recipient:

Toshio ANDO (*Kanazawa University*)  
Takayuki UCHIHASHI (*Kanazawa University*)  
Noriyuki KODERA (*Kanazawa University*)  
Atsushi MIYAGI (*Kanazawa University*)  
Hayato YAMASHITA (*Kanazawa University*)  
Mitsuru SAKASHITA (*Kanazawa University*)  
High-Speed Atomic Force Microscopy for Studying the Dynamic Behavior of Protein Molecules at Work  
Jpn. J. Appl. Phys. Vol. 45, No. 3B, 2006, pp. 1897-1903

(10) Recipient:

Masahiro HORIBE (*Fujitsu Limited*)  
 Mizuhisa NIHEI (*Fujitsu Limited*)  
 Daiyu KONDO (*Fujitsu Limited*)  
 Akio KAWABATA (*Fujitsu Limited*)  
 Yuji AWANO (*Fujitsu Limited*)  
 Carbon Nanotube Growth Technologies Using Tantalum Barrier Layer for Future ULSIs with Cu/Low-k Interconnect Processes  
 Jpn. J. Appl. Phys. Vol. 44, No. 7A, 2005, pp. 5309-5312

## 2. Award for the Most Promising Young Scientist

- (1) Yuya SAKURABA (*Tohoku University*)  
 Huge Spin-Polarization of L<sub>21</sub>-Ordered Co<sub>2</sub>MnSi Epitaxial Heusler Alloy Film  
 Jpn. J. Appl. Phys. Vol. 44, No. 35, 2005, pp. L1100-L1102
- (2) Takayuki TAMAKI (*Osaka University*)  
 Welding of Transparent Materials Using Femtosecond Laser Pulses  
 Jpn. J. Appl. Phys. Vol. 44, No. 22, 2005, pp. L687-L689
- (3) Masashi MIURA (*Nagoya University*)  
 Enhancement of Flux-Pinning in Epitaxial Sm<sub>1+x</sub>Ba<sub>2-x</sub>Cu<sub>3</sub>O<sub>y</sub> Films by Introduction of Low-T<sub>c</sub> Nanoparticles  
 Jpn. J. Appl. Phys. Vol. 45, No. 1, 2006, pp. L11-L13
- (4) Takashi MINEMOTO (*Ritsumeikan University*)  
 Fabrication of Spherical Silicon Solar Cells with Semi-Light-Concentration System.  
 Jpn. J. Appl. Phys. Vol. 44, No. 7A, 2005, pp. 4820-4824
- (5) Takahisa KOYAMA (*University of Hyogo*)  
 Hard X-Ray Nano-Interferometer and Its Application to High-Spatial-Resolution Phase Tomography  
 Jpn. J. Appl. Phys. Vol. 45, No. 43, 2006, pp. L1159-L1161
- (6) Winadda WONGWIRIYAPAN (*Osaka University*)  
 Single-Walled Carbon Nanotube Thin-Film Sensor for Ultrasensitive Gas Detection  
 Jpn. J. Appl. Phys. Vol. 44, No. 16, 2005, pp. L482-L484
- (7) Shuichi OGAWA (*Tohoku University*)  
 Rate-Limiting Reactions of Growth and Decomposition Kinetics of Very Thin Oxides on Si(001) Surfaces Studied by Reflection High-Energy Electron Diffraction Combined with Auger Electron Spectroscopy  
 Jpn. J. Appl. Phys. Vol. 45, No. 9A, 2006, pp. 7063-7079
- (8) Seiichiro ARIYOSHI (*Riken*)  
 Superconducting Detector Array for Terahertz Imaging Applications  
 Jpn. J. Appl. Phys. Vol. 45, No. 37, 2006, pp. L1004-L1006
- (9) Tsuyoshi KONDO (*Tokyo Institute of Technology*)  
 Investigation of Spin Voltaic Effect in a p-n Heterojunction  
 Jpn. J. Appl. Phys. Vol. 45, No. 26, 2006, pp. L663-L665

## 3. Award for the Best Review Paper

- (1) Recipients:  
 Shinichi TAKAGI (*The University of Tokyo*)  
 Si-based high-mobility MOS transistor technologies  
 OYO BUTURI, Vol.74, No.09, p.1178-1184 (2005)
- (2) Recipient:  
 Atsuo MORINAGA (*Tokyo University of Science*)  
 Units and standards in 21st century  
 OYO BUTURI, Vol.74, No.06, p.0718-0725 (2005)
- (3) Recipient:  
 Hideo TAKEZOE (*Tokyo Institute of Technology*)  
 Yoichi TAKANISHI (*Tokyo Institute of Technology*)  
 Bent-Core Liquid Crystals: Their Mysterious and Attractive World  
 Jpn. J. Appl. Phys. Vol. 45, No. 2A, 2006, pp. 597-625