

**2017 IWDTF**  
**2017 International Workshop on**  
**Dielectric Thin Films for Future Electron Devices**  
— **Science and Technology** —

(November 20-22, 2017, Todaiji Culture Center, Nara, Japan)  
<http://www.iwdtf.org/>

Endorsed by The Japan Society of Applied Physics  
Cooperated by IEEE EDS Japan Chapter



**SCOPE:**

The 2017 International Workshop on “Dielectric Thin Films for Future Electron Devices: Science and Technology” (2017 IWDTF) will be held at the Todaiji Culture Center, Nara, Japan, on November 20-22, 2017. In addition to the papers on conventional logic devices, the papers on various electron devices including the memory, the power, the analog, the sensor, and the display devices are welcomed. The workshop will consist of invited and contributed talks, and poster presentations. Selected topics of current interests will be reviewed by several invited talks.

Papers are solicited in, but not limited to, the following area:

- Gate dielectrics (high-k dielectrics, ultrathin silicon dioxide, oxynitride and oxide-nitride composite dielectrics) and metal electrodes
- Mobility enhancement technology
- 2D/3D materials and devices (including nanowires, CNT/graphene/2D materials, and 3D devices)
- Growth and related process of dielectric films
- Electrical characterization of dielectrics
- Gate dielectric wearout and reliability (including RTN)
- Characterization and control of gate dielectric/semiconductor interfaces (Si, Ge, SiGe, GeSn, III-V, etc.), including junction technology
- Surface preparation and cleaning issues for dielectrics
- Dielectric reliability related to process integration
- Theoretical approaches to dielectrics/semiconductor structure
- Surface passivation technology (including application to photovoltaics and organic thin film devices)
- Memory applications (MRAM, FeRAM, PCRAM, ReRAM, Flash memory, neuromorphic applications, etc.)
- Low voltage operation devices (tunnel FET, negative capacitance FET, etc.)
- Sensor, analog, display, and other applications
- Power device (Si, SiC, GaN, Ga<sub>2</sub>O<sub>3</sub>, Diamond, etc.)

**KEYNOTE SPEAKERS:**

**Tetsuo Endoh** (Tohoku Univ.)

**INVITED SPEAKERS:**

**Naoto Horiguchi** (IMEC), **Cheol Seong Hwang** (Seoul National Univ.), **Yuichiro Matsushita** (Univ. Tokyo), **Takashi Morie** (Kyushu Inst. Tech.), **Shu Nakaharai** (NIMS), **Katsunori Ueno** (Fuji Electric), **Kikuo Yamabe** (Univ. Tsukuba)

**VENUE:**

**Todaiji Culture Center**  
100, Suimon-cho, Nara-shi, Nara 630-8208, Japan  
([http:// culturecenter.todaiji.or.jp/](http://culturecenter.todaiji.or.jp/))

**IMPORTANT DATES:**

**Abstract deadline: July 31, 2017**

**Notification of acceptance: September 6, 2017**

**Pre-registration deadline: October 13, 2017**

**Workshop: November 20-22, 2017**

### **SUBMISSION OF PAPERS:**

Paper acceptance is based on the submitted abstracts. The work must be original and unpublished. The prospective authors are requested to submit abstract(s) (**in PDF file**), two pages in length, including all figures and tables, by **July 31** to the workshop website at <http://www.iwdtf.org/>. The two-page abstracts must be written in English and typed in an area of 8.5x11 inches or A4 size. The first page must be headed by the title of the paper, author(s), affiliation(s), address, telephone number, fax number, e-mail address of the corresponding author. The abstract must clearly and concisely state the specific results of the work and its originality. The detailed information about the format will be provided at the workshop website. Papers to be presented at the workshop will be selected by the program committee on the basis of the content of submitted abstracts. The decision will be notified by e-mail until the beginning of September 2017. All contributors will be requested to give either an oral presentation conforming to 20 min format or poster presentation.

### **SUBMISSION OF FULL-PAPERS TO THE SPECIAL ISSUE OF JJAP:**

Authors of papers accepted in IWDTF-17 are encouraged to submit the original and significant part of the papers to the Special Issue of the Japanese Journal of Applied Physics (JJAP). The deadline of the paper submission is **Nov. 30, 2017**. Please refer to the IWDTF-17 website for the detailed information. Those who wish to submit a paper to the special issue should follow the instructions for preparation of manuscript for JJAP. Please note that the manuscript will be published after the usual review process in JJAP.

### **REGISTRATION FEE:**

Registration for the IWDTF-17 should be made on the workshop website.

Participants	Pre-registration (On or before October 13)	On-site Registration (After October 13)	Banquet*
Regular	¥40,000	¥45,000	¥5,000
JSAP or IEEE member	¥35,000	¥40,000	¥5,000
Student	¥20,000	¥20,000	¥5,000

\* The banquet will be held in the evening on November 21, 2017.

No cancellation will be accepted after October 20, 2017.

### **COMMITTEES:**

#### **Organizing Committee**

Chairperson: H. Watanabe (Osaka Univ.)

Vice Chairperson: T. Chikyow (NIMS)

Members: C. Kaneta (Fujitsu Labs.), S. Miyazaki (Nagoya Univ.), A. Nishiyama (Toshiba), A. Tachibana (Kyoto Univ.),  
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Vice Chairperson: T. Watanabe (Waseda Univ.)

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S. Ogawa (Toray Research Center), T. Shimura (Osaka Univ.), S. Takeda (NAIST), Y. Uraoka (NAIST)

#### **Program Committee**

Chairperson: Y. Nara (Univ. Hyogo)

Vice Chairperson: H. Kageshima (Shimane Univ.), S. Migita (AIST)

Members: Y. Akasaka (Tokyo Electron), K. S. Chang-Liao (National Tsing Hua Univ.), K. Eriguchi (Kyoto Univ.),  
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B. H. Lee (Gwangju Inst. Sci. and Tech.), Y. Mitani (Toshiba), T. Nabatame (NIMS),  
O. Nakatsuka (Nagoya Univ.), H. Nohira (Tokyo City Univ.), Y. Okuno (TSMC), A. Sakai (Osaka Univ.),  
K. Shiraishi (Nagoya Univ.), Y. Sugita (Socionext), S. Takagi (Univ. Tokyo), M. Takenaka (Univ. Tokyo),  
N. Taoka (AIST), E. Tokumitsu (JAIST), S. Tsujikawa (Sony), T. Tsutsui (Tokyo Inst. Tech.),  
J. Yugami (Hitachi Kokusai Electric), W. Wang (Chinese Academy of Science)

### **FURTHER INFORMATION:**

Please visit our workshop website: <http://www.iwdtf.org/>

If you have any questions, please contact the 2017 IWDTF office: [iwdtf2017\[at\]asf.mls.eng.osaka-u.ac.jp](mailto:iwdtf2017[at]asf.mls.eng.osaka-u.ac.jp) .