

IWDTF 2021
2021 International Workshop on
DIELECTRIC THIN FILMS FOR FUTURE ELECTRON DEVICES
— Science and Technology —
November 14-16, 2021, On-line virtual
<http://iwdtf.org>

Sponsored by The Japan Society of Applied Physics
Co-sponsored by JSAP Thin Film and Surface Physics Division
Endorsed by JSAP Silicon Technology Division / IEEE EDS Japan Joint Chapter



SCOPE:

The 2021 International Workshop on Dielectric Thin Films for Future Electron Devices: Science and Technology (IWDTF2021) will be held on-line, on November 14-16, 2021 in Japan standard time (UTC+9). This is the tenth in the series of IWDTF, which will focus on the science and technologies of dielectric films for electron devices, such as ultrathin dielectrics, high-k dielectrics, and ferroelectrics.

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

- Electron device application of dielectric thin films
- Material design of dielectric thin films
- Growth and related process of dielectric thin films
- Characterization and control of dielectrics, dielectrics surfaces, and dielectrics interfaces
- Electrical characterization of dielectrics, dielectrics surfaces, and dielectrics interfaces
- Surface preparation and cleaning issues for dielectrics
- Dielectric wear-out and reliability
- Dielectric reliability related to process integration
- Surface passivation technology
- Theoretical approaches to dielectrics, dielectrics surfaces, and dielectrics interfaces

KEYNOTE SPEAKERS (on-line live presentations):

Ken Takeuchi (Univ of Tokyo) "Co-design of non-volatile memory devices, circuits and systems in AI era"

Ming Liu (IMECAS) "Oxide based resistive switching device for memory and computing applications"

INVITED SPEAKERS (on-line live presentations):

Byun Jin Cho (KAIST) "Anti-ferroelectric HZO blocking layer in charge trap flash memory device"

Steven George (Univ of Colorado) "Thermal atomic layer etching of dielectric films and pathways for selectivity"

Masahiro Hori (Shizuoka Univ) "Charge pumping under spin resonance conditions in silicon MOSFETs"

Masaru Izawa (Hitachi High-Tech) "High selective thermal-cyclic ALE for conformal etch and recess of thin films"

Jiyoung Kim (Univ of Texas at Dallas) "Effects of oxidation reactants of thermal ALD for ferroelectric HZO films"

Takao Marukame (Toshiba) "Metal-oxide synapse devices and their application to neuromorphic analog neuron circuits"

Terence Mittmann (NaMLab) "Ferroelectric phase stabilization influences HfO₂-based device performance"

Norio Tokuda (Kanazawa Univ) "Advances in diamond MOS interface"

Kasidit Toprasertpong (Univ of Tokyo) "HfZrO₂-based ferroelectric FETs for emerging computing technologies"

Lin-Wang Wang (Berkeley National Lab) "Ultrathin dielectric integration and reliability on 2D semiconductors"

Xinran Wang (Nanjing Univ) "Atomistic plane wave pseudopotential simulations for MOSFET devices"

IMPORTANT DATES:

Abstract submission deadline: August 20, 2021

(Acceptance will be notified by September 30, 2021)

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 in PDF format of **two pages in length**, including all figures and tables, by **Aug 20, 2021** through the web site (<http://iwdtf.org/submission-of-papers/>)

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, phone number, and 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 middle of September. In the 2021 conference, all contributors will be requested to give an oral presentation conforming to 20 min format. Only when we have more contributing papers than expected some papers may be presented in poster format (on-line).

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

Authors of papers accepted in IWDTF2021 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 full-paper submission is **Dec 18, 2021**. The detailed guideline for authors including the instructions to prepare manuscript for the Special Issue of JJAP is available on the IWDTF2021 website. The publication charge will be covered by the conference. Please note that the manuscript will be published after the usual review process of JJAP.

REGISTRATION:

Registration for the IWDTF2021 should be made on-line on the workshop website (<http://iwdtf.org/>).

Participants	Registration fee
Regular	¥20,000
JSAP or IEEE member	¥10,000
JSAP Thin Film and Surface Physics Division member	¥8,000
Student	¥5,000

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

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