

# Program / Contents

IWJT2021, Through on-line, June 10-11, 2021

\* is watched only live (no on-demand viewing)

## **June 10 (Thursday)**

9:45 **Opening Remarks**

### **Keynote Speech 1**

10:00 KN-1 **HfO<sub>x</sub> based Ferroelectric Materials and Memories**  
Ming Liu / Chinese Academy of Sciences

10:40 **Break** (10 min)

### **Session 1 Junction Technology for Memory**

10:50 \*S1-1 **Demonstration of 1T1C FeRAM Arrays for  
Nonvolatile Memory Applications**  
[Invited] Jun Okuno / Sony Semiconductor Solutions Corp.

11:20 S1-2 **Fabrication and Evaluation of Split-Gate Type Charge-Trapping  
Nonvolatile Memory with High-k Trapping  
and Blocking Layers for Embedded Flash**  
[Invited] Yanzhe Wang / Renesas Electronics Corp.

11:50 **Lunch** (70 min)

### **Keynote Speech 2**

13:00 KN-2 **“Memory” for Sustainable Society**  
Kazunari Ishimaru / Kioxia Corp.

13:40 **Break** (10 min)

### **Session 2 Defect Engineering for Manufacturing**

13:50 S2-1 **Silicon Wafer Gettering Design for Advanced CMOS Image Sensors  
Using Hydrocarbon Molecular Ion Implantation: A review**  
[Invited] Kazunari Kurita / SUMCO Corp.

14:20 S2-2 **Evaluation of Plasma-Induced Stochastic Damage Creation  
in the Lateral Direction using pn Junction Structures**  
[Invited] Yoshihiro Sato / Panasonic Corp.

14:50 S2-3 **Reduction of Process-induced damage in atomic layer etching**  
[Invited] Akiko Hirata / Sony Semiconductor Solutions Corp.

15:20 **Break** (10 min)

### Session 3 Contact Technology (1)

- 15:30 \*S3-1 **Source/Drain Contact Engineering of InGaZnO Channel BEOL Transistor for Low Contact Resistance and Suppressing Channel Shortening Effect**  
[Invited] Yuta Sato / Kioxia Corp.
- 16:00 S3-2 **Ni<sub>2</sub>P Contact Technology for 300 mm Si Photonics Platform**  
Philippe Rodriguez / Univ. Grenoble Alpes, CEA-Leti
- 16:20 S3-3 **Impact of Nanosecond Laser Annealing on the Formation of Titanium Silicides**  
[Invited] Sébastien Kerdilès / Univ. Grenoble Alpes, CEA-Leti
- 16:50 **Break** (10 min)

### Session 4 Annealing Technology

- 17:00 S4-1 **Solid Phase Recrystallization and Dopant Activation in Arsenic Ion-Implanted Silicon-On-Insulator by UV Laser Annealing**  
[Invited] Toshiyuki Tabata / Laser Systems & Solutions of Europe (LASSE)
- 17:30 S4-2 **Stress relaxation and dopant activation in nsec laser annealed SiGe**  
[Invited] Fuccio Cristiano / LAAS-CNRS
- 18:00 \*S4-3 **Newly Developed Heat Source Combined with Short-Duration Flash Lamp Annealing (FLA) Featuring a Low Thermal Budget and Low Environmental Load**  
Hideaki Tanimura / SCREEN Semiconductor Solutions Co., Ltd.
- 18:20 **Preparation time of drink and foods yourself** (40 min)
- 19:00 **Online Banquet** (120 min)

## **June 11 (Friday)**

### **Keynote Speech 3**

- 9:30 KN-3 **Advanced packaging solutions for high performance memory**  
Akshay Singh / Micron Technology, Inc.
- 10:10 **Break** (10 min)

### **Session 5 Contact Technology (2)**

- 10:20 S5-1 **Recent Advances in Contact Resistance Improvement  
in Advanced Logic**  
[Invited] Hans Van Meer / Applied Materials Inc.
- 10:50 S5-2 **Study of Dopant Activation in Si Employing Differential Hall  
Effect Metrology (DHEM)**  
Abhijeet Joshi / Active Layer Parametrics (ALP)
- 11:10 S5-3 **Improved interface uniformity of epitaxial HfGe<sub>2</sub>/Ge(001) contact  
by microfabrication and its electron conduction property**  
Kentaro Kasahara / Nagoya Univ.
- 11:30 S5-4 **Advanced contact technology for InGaAs NMOS  
and Ge PMOS devices**  
[Invited] Sunil Babu Eadi / Chungnam National Univ.

### **Session 6 Junction Technology for Functional Devices**

- 12:00 S6-1 **Novel Photodetectors Based on SOI and Two-dimensional Materials**  
[Invited] Jing Wan / Fudan Univ.
- 12:30 **Lunch** (60 min)

### **Keynote Speech 4**

- 13:30 KN-4 **Vacancy complexes acting as midgap recombination centers  
in (Al,Ga)N semiconductors**  
Shigefusa F. Chichibu / Tohoku Univ.
- 14:10 **Break** (10 min)

### **Session 7 Defect Characterization for Power Devices**

- 14:20 S7-1 **Cathodoluminescence Study of Damage Formation and Recovery  
in Si-ion-implanted  $\beta$ -Ga<sub>2</sub>O<sub>3</sub>**  
[Invited] Ryuichi Sugie / Toray Research Center Inc.
- 14:50 S7-2 **Dose monitoring in MeV energy hydrogen implanted silicon  
by photo-modulated reflectance measurements**  
[Invited] János Szívós / Semilab Hungary Ltd.

15:20 **Break** (10 min)

**Session 8 Defect Characterization for Widegap Devices**

15:30 S8-1 **Study of HfSiO<sub>x</sub> film as gate insulator for GaN power device**  
[Invited] Toshihide Nabatame / National Institute for Materials Science (NIMS)

16:00 S8-2 **Fabrication of semipolar AlGaN UV LEDs on sapphire substrates**  
[Invited] Masafumi Jo / RIKEN

16:30 **Break** (10 min)

**Session 9 Junction Technology for Advanced Logic Devices**

16:40 S9-1 **Side-Contact Architecture for p/n-Stacked-Nano-Sheet ZrS<sub>2</sub> 2D-FETs  
Beyond 1-nm Technology Node**  
[Invited] Masaya Hamada / Tokyo Institute of Technology

17:10 S9-2 **Combining TCAD and advanced metrology techniques to support  
device integration towards N3**  
[Invited] Pierre Eyben / IMEC

17:40 **Preparation for Closing and Award Ceremony**

17:50 **Closing Remarks** (Award, Invitation for next workshop)