



## Future Normal in Semiconductor

2025년 2월 14일(금), 09:00-10:45

Room K(하트 I), 6층

### G. Device & Process Modeling, Simulation and Reliability 분과

#### 051\_[FK1-G] Reliability & Packaging Simulation

좌장: 신흥식 수석(DB하이텍), 우지용 교수(경북대학교)

<p>FK1-G-1 09:00-09:15</p>	<p><b>Insertion of Protective Layer for Enhancing Effect of N<sub>2</sub>O Plasma Treatment on NBS Stability in IGZO TFTs</b> Seungyoon Shin, Jinkyu Lee, Hyunjin Choi, Seong-In Cho, and Soo-Yeon Lee Department of Electrical and Computer Engineering, Inter-university Semiconductor Research Center, Seoul National University</p>
<p>FK1-G-2 09:15-09:30</p>	<p><b>Degradation Modeling of Positive Bias Stress Reliability in a-IGZO TFTs Considering the Effects of Oxygen and Hydrogen</b> Do Hun Kim<sup>1</sup>, Seung Joo Myoung<sup>1</sup>, Dong Hyeop Shin<sup>1</sup>, Jung Rae Cho<sup>1</sup>, Donguk Kim<sup>1</sup>, Changwook Kim<sup>1</sup>, Narae Han<sup>2</sup>, Jee-Eun Yang<sup>2</sup>, Younjin Jang<sup>2</sup>, Sangwook Kim<sup>2</sup>, and Dae Hwan Kim<sup>1</sup> <sup>1</sup>School of Electrical Engineering, Kookmin University, <sup>2</sup>Samsung Advanced Institute of Technology (SAIT), Samsung Electronics Co., Ltd.</p>
<p>FK1-G-3 09:30-09:45</p>	<p><b>Comprehensive Analysis of Proton Collision Effects in SOI MOSFETs using Transient and Steady-State Responses</b> Hwan Jin Kim<sup>1</sup>, Haesung Kim<sup>1</sup>, Hyojin Yang<sup>1</sup>, Yubin Choi<sup>1</sup>, Sujong Kim<sup>1</sup>, Hyunwook Jeong<sup>1</sup>, Sung-Jin Choi<sup>1</sup>, Dae Hwan Kim<sup>1</sup>, Dong Myong Kim<sup>2</sup>, Sung Yun Woo<sup>3</sup>, and Jong-Ho Bae<sup>1</sup> <sup>1</sup>School of the Electronic Engineering, Kookmin University, <sup>2</sup>Department of Advanced Technology, DGIST, <sup>3</sup>School of Electronic and Electrical Engineering, Kyungpook National University</p>
<p>FK1-G-4 09:45-10:00</p>	<p><b>Uncovering Novel Time Exponent Variations in PBTl of a-IGZO Transistors via a 1 μs Ultrafast On-the-Fly Technique</b> Sangwook Jung<sup>1</sup>, Taewon Seo<sup>2</sup>, Changeon Jin<sup>2</sup>, and Yoonyoung Chung<sup>1,2,3,4</sup> <sup>1</sup>Graduate School of Semiconductor Technology, POSTECH, <sup>2</sup>Department of Electrical Engineering, POSTECH, <sup>3</sup>Department of Semiconductor Engineering, POSTECH, <sup>4</sup>Center for Semiconductor Technology Convergence, POSTECH</p>



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<p>FK1-G-5 10:00-10:15</p>	<p><b>Analysis of Proton-Induced Electrical Degradation in a-IGZO TFTs under Aerospace Environments</b> Yubin Choi<sup>1</sup>, Haesung Kim<sup>1</sup>, Hyojin Yang<sup>1</sup>, Junseong Park<sup>1</sup>, Hyunwook Jeong<sup>1</sup>, Sujong Kim<sup>1</sup>, Hwan Jin Kim<sup>1</sup>, Sung-Jin Choi<sup>1</sup>, Dae Hwan Kim<sup>1</sup>, Dong Myong Kim<sup>2</sup>, Sung Yun Woo<sup>3</sup>, and Jong-Ho Bae<sup>1</sup> <sup>1</sup>School of the Electronic Engineering, Kookmin University, <sup>2</sup>Department of Advanced Technology, DGIST, <sup>3</sup>School of Electronic and Electrical Engineering, Kyungpook National University</p>
<p>FK1-G-6 10:15-10:30</p>	<p><b>Data-driven Method for Predicting Thermo-mechanical Property Maps of Patterned Semiconductor Packages Using Machine Learning</b> Jeong-Hyeon Park, Sung Jun Kang, and Eun-Ho Lee Sungkyunkwan University</p>
<p>FK1-G-7 10:30-10:45</p>	<p><b>Development of an In-House Finite Element Method Simulator for Static Structural Analysis of a Warped Wafer</b> Sung-Min Hong School of Electrical Engineering and Computer Science, GIST</p>