



# 제 31회 한국반도체학술대회

The 31st Korean Conference on Semiconductors

2024년 1월 24일(수)-26일(금) | 경주화백컨벤션센터(HICO)

2024년 1월 26일(금), 13:45-15:30

Room J(204), 2층

## D. Thin Film Process Technology 분과

### [FJ2-D] Thin Film Transistors - I

좌장: 안지훈 교수(한양대학교), 백인환 교수(인하대학교)

<p>FJ2-D-1 13:45-14:00</p>	<p>Performance Enhancement of In-Ga-Zn-O Vertical-channel TFTs with a Channel Length of 40 nm via Al<sub>2</sub>O<sub>3</sub> Spacer Engineering Chae-Eun Oh<sup>1</sup>, Young-Ha Kwon<sup>2</sup>, Nak-Jin Seong<sup>2</sup>, Kyu-Jeong Choi<sup>2</sup>, and Sung-Min Yoon<sup>1</sup> <sup>1</sup>Kyung Hee University, <sup>2</sup>NCD Co., Ltd.</p>
<p>FJ2-D-2 14:00-14:15</p>	<p>Back-End-of-Line Compatible Al<sub>2</sub>O<sub>3</sub> Passivated p-Type Copper(I) Oxide Thin Film Transistors with Enhanced Current On/Off Ratio Seohyeon Park<sup>1</sup>, Jaewook Yoo<sup>1</sup>, Hyeonjun Song<sup>1</sup>, Soyeon Kim<sup>1</sup>, Hongseung Lee<sup>1</sup>, Seongbin Lim<sup>1</sup>, Minah Park<sup>1</sup>, Peide D. Ye<sup>2</sup>, and Hagyoul Bae<sup>1</sup> <sup>1</sup>Jeonbuk National University, <sup>2</sup>Purdue University</p>
<p>FJ2-D-3 14:15-14:30</p>	<p>IGZO 2T0C DRAM with Normally-off Operation Using Interfacial Dipole Suwon Seong<sup>1</sup>, Seongmin Park<sup>1</sup>, Taejun Ha<sup>1</sup>, Hyunyoung Cho<sup>1</sup>, Daehwan Kang<sup>2,3</sup>, and Yoonyoung Chung<sup>1,2,3</sup> <sup>1</sup>Department of Electrical Engineering, POSTECH, <sup>2</sup>Department of Semiconductor Engineering, POSTECH, <sup>3</sup>Center for Semiconductor Technology Convergence, POSTECH</p>
<p>FJ2-D-4 14:30-14:45</p>	<p>High-performance Graphene-Based Field Effect Transistors Fabricated by UV-assisted Atomic Layer Deposition Geonwoo Park<sup>1</sup>, Jeong Woo Shin<sup>2</sup>, Dohyun Go<sup>3</sup>, and Jihwan An<sup>4</sup> <sup>1</sup>Manufacturing Systems and Design Engineering, SEOULTECH, <sup>2</sup>Department of Mechanical Engineering, Nanyang Technological University, <sup>3</sup>Department of Chemistry, U.C. San Diego, <sup>4</sup>Department of Mechanical Engineering, POSTECH</p>
<p>FJ2-D-5 14:45-15:00</p>	<p>The C-V-Based Investigation of Capacitive Coupling in the Sub-micron Amorphous InGaZnO Thin-film Transistors Depending on the Device Structure, Gate Dielectric Material, and Anneal Temperature Sae Him Jung<sup>1</sup>, Seung Joo Myoung<sup>1</sup>, Donguk Kim<sup>1</sup>, Sangwook Kim<sup>2</sup>, Kwang-Hee Lee<sup>2</sup>, Moonil Jung<sup>2</sup>, Narae Han<sup>2</sup>, Jee-Eun Yang<sup>2</sup>, Younjin Jang<sup>2</sup>, and Dae Hwan Kim<sup>1</sup> <sup>1</sup>School of Electrical Engineering, Kookmin University, <sup>2</sup>SAIT</p>



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FJ2-D-6 15:00-15:15	Investigating Defects on Channel Surface of IGZO Thin-film Transistors under Ozone Annealing and UV Treatment Myeong Woo Ju <sup>1,2</sup> , Changyong Oh <sup>1,2</sup> , Taehyeon Kim <sup>3</sup> , Min Young Kim <sup>1</sup> , So Hee Park <sup>1</sup> , Geon Hyeong Lee <sup>1</sup> , and Bo Sung Kim <sup>1,2</sup> <sup>1</sup> Department of Applied Physics, Korea University, <sup>2</sup> E-ICT-Culture·Sports Track, Korea University, <sup>3</sup> Memory Diffusion Technology Team, Samsung Electronics Co., Ltd.
FJ2-D-7 15:15-15:30	Rapid Thermal Annealing (RTA) to Recover the Radiation Damage of a-IGZO TFTs for Highly Reliable DRAM Cell Transistors Minah Park, Jaewook Yoo, Hyeonjun Song, Soyeon Kim, Hongseung Lee, Seongbin Lim, Seohyeon Park, Yoon Kyeong Lee, Keun Heo, and Hagyoul Bae Jeonbuk National University