### 2025년 2월 12일(수)-14일(금) | 강원도 하이원리조트

## Future Normal in Semiconductor

2025-02-14(금), 09:00-10:45

좌장: 추후업데이트 예정

#### D. Thin Film Process Technology 분과

#### [FE1-D] Thin Film Transistors - I

|                        | Innovative Design of Vertically-Stacked IGZO Thin-Film Transistors with  |
|------------------------|--|
| FE1-D-1<br>09:00-09:15 | Distinctive Planar and Vertical Channels Using a Single Active Layer  Ji-Won Kang <sup>1</sup> , Yeong-Ha Kwon <sup>2</sup> , Nak-Jin Seong <sup>2</sup> , Kyu-Jeong Choi <sup>2</sup> , Chi-Sun |
|                        | Hwang <sup>3</sup> , Jong-Heon Yang <sup>3</sup> , and Sung-Min Yoon <sup>1</sup>  |
|                        | <sup>1</sup> Kyung Hee University, <sup>2</sup> NCD Co., Ltd., <sup>3</sup> ETRI   |
| FE1-D-2<br>09:15-09:30 | Design Strategies to Implement a Highly-Reliable In <sub>2</sub> O <sub>3</sub> Vertical Channel   |
|                        | Transistor for 3-Dimensional Device Applications   |
|                        | Chae-Eun Oh <sup>1</sup> , Jong-Heon Yang <sup>2</sup> , Chi-Sun Hwang <sup>2</sup> , and Sung-Min Yoon <sup>1</sup>   |
|                        | <sup>1</sup> Kyung Hee University, <sup>2</sup> ETRI   |
| FE1-D-3<br>09:30-09:45 | Surface Treatment for High Performance, High Reliability In <sub>2</sub> O <sub>3</sub> Thin-  |
|                        | Film Transistors   |
|                        | Jeong Eun Oh <sup>1</sup> , Jae Young Lee <sup>2</sup> , Nahyen Kim <sup>2</sup> , and Jae Kyeong Jeong <sup>1,2</sup>   |
|                        | <sup>1</sup> Department of Electronics Engineering, University of Hanyang, <sup>2</sup> Department of  |
|                        | Artificial Intelligence Semiconductor Engineering, Hanyang University  |
| FE1-D-4<br>09:45-10:00 | SPICE-Compatible I-V Compact Model Considering Channel Length  |
|                        | Effect in IGZO FETs  |
|                        | Su Han Noh, Seung Joo Myoung, Dong Hyeop Shin, Sae Him Jung, Donguk Kim,   |
|                        | Changwook Kim, Sung-Jin Choi, Jong-Ho Bae, Dong Myong Kim, and Dae Hwan Kim  |
|                        | School of Electrical Engineering, Kookmin University   |
|                        | Electrical Performance and Hydrogen Permeability of Nitrogen-Doped   |
| FE1-D-5<br>10:00-10:15 | PEALD-SiOx Insulators Using N <sub>2</sub> O Plasma in ALD-Oxide Semiconductor   |
|                        | TFTs   |
|                        | Tae-Heon Kim, Dong-Gyu Kim, and Jin-Seong Park   |
|                        | Division of Materials Science and Engineering, Hanyang University  |
|                        | Strategical Dynamic Modulation of Turn-On Voltage for 2TOC DRAM Cell   |
| FE1-D-6                | Introducing Charge-Trap Layer into Write Transistor Using IGZO Channel   |
| 10:15-10:30            | Kyung-Min Kim, Sang-Han Ko, and Sung-Min Yoon  |
|                        | Kyung Hee University   |

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| FE1-D-7     | Accurate Analysis of Halide Perovskite Field Effect Transistor Properties with Mobility Attenuation Effect |
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| 10:30-10:45 | Youngmin Song, Yeeun Kim, Sunggyu Ryoo, Jaeyong Woo, and Takhee Lee  |
|             | Department of Physics and Astronomy, Seoul National University   |