## The 27th Korean Conference on Semiconductors 제 27회 한국반도체학술대회

2020년 2월 12일(수) ~ 14일(금) | 강원도 하이원리조트

## 2020년 2월 14일(금), 10:45~12:30 Room J (하트 III, 6층)

## D. Thin Film Process Technology 분과 [FJ2-D] 2-dimensional System II

| FJ2-D-1<br>10:45~11:15 | [초청]<br>Epitaxial Oxide Thin Films for Novel Electronics<br>Seung-Hyub Baek<br><i>Center for Electronics Materials, KIST</i>  |
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| FJ2-D-2<br>11:15~11:30 | <i>In-situ</i> Observation of Two-Dimensional Electron Gas Creation at the Interface of<br>an Atomic-Layer-Deposited Al <sub>2</sub> O <sub>3</sub> /TiO <sub>2</sub> Thin Film Heterostructure<br>Tae Jun Seok <sup>1</sup> , Yuhang Liu <sup>1</sup> , Ji Hyeon Choi <sup>1</sup> , Hye Ju Kim <sup>2</sup> , Dae Hyun Kim <sup>3</sup> , Seong Hwan<br>Kim <sup>2</sup> , Jae Hyuck Jang <sup>4</sup> , Deok-Yong Cho <sup>5</sup> , Sang Woon Lee <sup>2</sup> , and Tae Joo Park <sup>1,3</sup><br><sup>1</sup> Department of Materials Science and Chemical Engineering, Hanyang University,<br><sup>2</sup> Department of Energy Systems Research and Department of Physics, Ajou University,<br><sup>3</sup> Department of Advanced Materials Engineering, Hanyang University, <sup>4</sup> Electron<br>Microscopy Research Center, KBSI, 5IPIT and Department of Physics, Chonbuk<br>National University |
| FJ2-D-3<br>11:30~11:45 | Tailoring of Two-dimensional Electron Gas Density in Thin Film OxideHeterostructure and its Application to Electronic DevicesSeong Hwan Kim, Hye Ju Kim, Chang Hee Ko, and Sang Woon LeeDepartment of Energy Systems Research and Department of Physics, Ajou University  |
| FJ2-D-4<br>11:45~12:00 | Chemical Mechanism of Formation of the 2-Dimensional Electron Gas at the Al <sub>2</sub> O <sub>3</sub> /TiO <sub>2</sub> Interface by Atomic Layer Deposition<br>Jeongwoo Park <sup>1</sup> , Jae Hyuck Jang <sup>2</sup> , Sang Woon Lee <sup>3</sup> , Tae Joo Park <sup>4</sup> , and Bonggeun Shong <sup>1</sup><br><sup>1</sup> Chemical Engineering, Hongik University, <sup>2</sup> Center for Scientific Instruments, KBSI,<br><sup>3</sup> Department of Energy Systems Research and Department of Physics, Ajou University,<br><sup>4</sup> Materials Science and Chemical Engineering, Hanyang University   |
| FJ2-D-5<br>12:00~12:15 | <b>Two-Dimensional Electron Gas in Thin Film Oxide Heterostructures</b><br>Hye Ju Kim <sup>1</sup> , Seong Hwan Kim <sup>1</sup> , Tae Jun Seok <sup>1</sup> , Tae Joo Park <sup>2</sup> , and Sang Woon Lee <sup>1</sup><br><sup>1</sup> Department of Energy Systems Research and Department of Physics, Ajou University,<br><sup>2</sup> Department of Materials Science and Chemical Engineering, Hanyang University  |
| FJ2-D-6<br>12:15~12:30 | Improved Two-Dimensional Electron Gas at the Interface of ZnO-Based Ultra-Thin<br>Film Heterostructures<br>Tae Jun Seok <sup>1</sup> , Yuhang Liu <sup>1</sup> , Ji Hyeon Choi <sup>1</sup> , Sang Woon Lee <sup>2</sup> , and Tae Joo Park <sup>1</sup><br><sup>1</sup> Department of Materials Science and Chemical Engineering, Hanyang University,<br><sup>2</sup> Department of Energy Systems Research and Department of Physics, Ajou University   |