



# 제25회 한국반도체학술대회

The 25<sup>th</sup> Korean Conference on Semiconductors

2018년 2월 5일(월)-7일(수), 강원도 하이원리조트 컨벤션 호텔

2018년 2월 7일(수), 09:00-10:30

Room F (봉래, 6층)

## F. Silicon and Group-IV Devices and Integration Technology 분과

### [WF1-F] Steep-Slope I : Tunnel-FET

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| WF1-F-1<br>09:00-09:15 | <b>Tunneling Field Effect Transistors with FIN-typed Channel Structure and Their Electrical Characteristics</b><br>Donghwan Lim, Hoon Hee Han, and Changhwan Choi<br><i>Division of Materials Science and Engineering, Hanyang University</i>   |
| WF1-F-2<br>09:15-09:30 | <b>Double-Gate Isosceles Trapezoid Tunnel Field-Effect Transistor (DGIT-TFET) to Suppress Ambipolar Current</b><br>Hwa Young Gu and Sangwan Kim<br><i>Department of Electrical and Computer Engineering, Ajou University</i>  |
| WF1-F-3<br>09:30-09:45 | <b>Segmented-Channel Tunnel Field Effect Transistor for Bi-Directional Current Flow</b><br>Jaesoo Park, Sungjin Lee, and Changhwan Shin<br><i>Department of Electrical and Computer Engineering, University of Seoul</i>  |
| WF1-F-4<br>09:45-10:00 | <b>Drive Current Boosting Method of Tunnel FET with Locally Concentrated Silicon-Germanium Channel near Surface</b><br>Junil Lee <sup>1</sup> , Ryoongbin Lee <sup>1</sup> , Euyhwan park <sup>1</sup> , Sihyun Kim <sup>1</sup> , Hyun-Min Kim <sup>1</sup> , Kitae Lee <sup>1</sup> , Soyoun Kim <sup>1</sup> , Sangwan Kim <sup>2</sup> , and Byung-Gook Park <sup>1</sup><br><i><sup>1</sup>Department of Electrical and Computer Engineering and ISRC, Seoul National University, <sup>2</sup>Department of Electrical and Computer Engineering, Ajou University</i> |
| WF1-F-5<br>10:00-10:15 | <b>Tunneling Field-Effect Transistor Having SiGe Source Junction and Its Small-Signal Equivalent Circuit Verification through Y-Parameter Analysis</b><br>Yung Hun Jung <sup>1</sup> , In Man Kang <sup>2</sup> , Wookyung Sun <sup>3</sup> , Hyungsoon Shin <sup>3</sup> , and Seongjae Cho <sup>1</sup><br><i><sup>1</sup>Department of Electronics Engineering, Gachon University, <sup>2</sup>School of Electronics Engineering, Kyungpook National University, <sup>3</sup>Department of Electronic and Electrical Engineering, Ewha Woman's University</i>          |
| WF1-F-6<br>10:15-10:30 | <b>Nanowire Tunnel Field-Effect Transistor (TFET) with Ultra-Thin-Tunnel Region for High Current Drivability and Low Subthreshold Swing</b><br>Seong-Hyun Lee, Jeong-Uk Park, and Sangwan Kim<br><i>Department of Electrical and Computer Engineering, Ajou University</i>  |