

# 제23회 한국반도체학술대회

2016년 2월 22일(월)-24일(수), 강원도 하이원리조트

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

Room D

합백II+III(5층)

2016년 2월 24일(수) 10:10-11:40

[WD2-G] Device Modeling and Simulation 2 : Ab-Initio and Theoretical Study

좌장 : 이정수(포항공과대학교), 최성진(국민대학교)

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| WD2-G-1 | 10:10-10:25 | <b>First-Principles-based Quantum Transport Calculations of 2D Material Field-Effect Transistors</b><br>Yongsoo Ahn, Sangchun Park, and Mincheol Shin<br><i>School of Electrical Engineering, KAIST</i>  |
| WD2-G-2 | 10:25-10:40 | <b>Ab-initio Study on The Passivation of Ge/GeO<sub>2</sub> Interface by Density Functional Calculations</b><br>Kai Liu <sup>1,2</sup> , Cheol Seong Hwang <sup>2,3</sup> , and Jung-Hae Choi <sup>1</sup><br><i><sup>1</sup>Center for Electronic Materials, Korea Institute of Science and Technology, <sup>2</sup>Department of Materials Science and Engineering, Seoul National University, <sup>3</sup>Inter-University Semiconductor Research Center, Seoul National University</i> |
| WD2-G-3 | 10:40-10:55 | <b>Influence of Cross Section Geometry and Channel Orientation on Electron Subband Energy in Elliptical Silicon Nanowires</b><br>Junsung Park and Sung-Min Hong<br><i>School of Information and Communications, Gwangju Institute of Science and Technology</i>  |
| WD2-G-4 | 10:55-11:10 | <b>MoS<sub>2</sub> Metal Insulator Transition Based Memcapacitor Modeling and Simulation</b><br>Abdul Karim Khan, Jinwoo Noh, Chang-Hoo Sim, Yun Ji Kim, So-Young Kim, and Byoung Hun Lee<br><i>Exel Lab, School of Material Science and Engineering, Gwangju Institute of Science and Technology</i>  |
| WD2-G-5 | 11:10-11:25 | <b>Ab-initio Study on The Effects of Doping in Mono and Bilayer MoS<sub>2</sub></b><br>Jaehong Park <sup>1,2</sup> , Cheol Seong Hwang <sup>2,3</sup> , and Jung-Hae Choi <sup>1</sup><br><i><sup>1</sup>Center for Electronic Materials, Korea Institute of Science and Technology, <sup>2</sup>Department of Materials Science and Engineering, Seoul National University, <sup>3</sup>Inter-University Semiconductor Research Center, Seoul National University</i>                     |
| WD2-G-6 | 11:25-11:40 | <b>Atomistic Simulation of InAs Tunnel FETs based on TB-NEGF Method</b><br>Woo Jin Jeong and Mincheol Shin<br><i>School of Electrical Engineering, KAIST</i>   |