



## Future Normal in Semiconductor

2025년 2월 14일(금), 15:10-17:10

Room N(다이아몬드 II), 6층

### E. Compound Semiconductors 분과

#### 080\_[FN3-E] WBG Semiconductor-I

좌장:정용식 박사(KAIST), 심재필 박사(한국나노기술원)

<p>초청 FN3-E-1 15:10-15:40</p>	<p><b>MOCVD-based AlGaN/GaN HEMT Epitaxy Technology for RF and Power Semiconductors</b> Young-Hun Han<sup>1</sup>, June-O Song<sup>1</sup>, Ji-Hyung Moon<sup>1</sup>, Hyung Sun Yun<sup>1</sup>, Tae-Kyung Kim<sup>1</sup>, Byoung-Cgul Jun<sup>2</sup>, Jae-Hak Lee<sup>3</sup>, and Dae-Hyun Kim <sup>1</sup>WaveLord. Inc, <sup>2</sup>Wavice. Inc, <sup>3</sup>School of Electronic and Electrical Engineering, Kyungpook National University</p>
<p>FN3-E-2 15:40-15:55</p>	<p><b>Improved <math>f_{max}</math> in Short-<math>L_g</math> Al<sub>0.4</sub>Ga<sub>0.6</sub>N/GaN HEMTs with Al<sub>0.08</sub>Ga<sub>0.92</sub>N Back-barrier</b> Wan-Soo Park<sup>1</sup>, Hyeok-Jun Lee<sup>1</sup>, Su-Min Choi<sup>1</sup>, Sang-Kuk Kim<sup>2</sup>, Jae-Hak Lee<sup>1</sup>, Tae-Woo Kim<sup>3</sup>, Kyounghoon Yang<sup>4</sup>, and Dae-Hyun Kim<sup>1</sup> <sup>1</sup>Kyungpook National University, <sup>2</sup>QSI, <sup>3</sup>Texas Tech University, <sup>4</sup>KAIST</p>
<p>FN3-E-3 15:55-16:10</p>	<p><b>Impact of Gate Field Plate on Kink Phenomenon in S22 of AlGaN/GaN HEMTs for RF Applications: A Comparative Study</b> Xuejing Yang<sup>1</sup>, Yongsik Jeong<sup>1</sup>, Wan-Soo Park<sup>2</sup>, Su-Min Choi<sup>2</sup>, Dae-Hyun Kim<sup>2</sup>, and Kyounghoon Yang<sup>1</sup> <sup>1</sup>KAIST, <sup>2</sup>Kyungpook National University</p>
<p>FN3-E-4 16:10-16:25</p>	<p><b>Positive-Bias-Stress Instability (PBTI) and Fast Trap Generation in AlGaN/GaN HEMTs during On-State Condition</b> Kevin Samways and Tae-Woo Kim Department of Electrical and Computer Engineering, TTU, Texas</p>
<p>FN3-E-5 16:25-16:40</p>	<p><b><math>L_g = 50</math> nm In<sub>0.17</sub>Al<sub>0.83</sub>N/GaN HEMTs with <math>f_T = 120</math> GHz and <math>f_{max} = 300</math> GHz</b> Hyeok-Jun Lee<sup>1</sup>, Su-Min Choi<sup>1</sup>, Wan-Soo Park<sup>1</sup>, Hyo-Jin Kim<sup>1</sup>, Jae-Hak Lee<sup>1</sup>, Kyounghoon Yang<sup>2</sup>, and Dae-Hyun Kim<sup>1</sup> <sup>1</sup>School of Electronic and Electrical Engineering, Kyungpook National University, <sup>2</sup>KAIST</p>



# 제 32회 한국반도체학술대회

The 32nd Korean Conference on Semiconductors

2025년 2월 12일(수)-14일(금) | 강원도 하이원리조트

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<p>FN3-E-6 16:40-16:55</p>	<p><b>Device-Level Thermal Management of GaN HEMTs through Electro-Thermal Modeling</b> Changhwan Song, Jisu Kim, and Jungwan Cho School of Mechanical Engineering, Sungkyunkwan University</p>
<p>FN3-E-7 16:55-17:10</p>	<p><b>Evaluation of Al-rich AlGa<sub>N</sub> Channel Layers in HEMTs Grown by Conventional and Pulsed Flow MOCVD Techniques</b> Shyam Mohan, Joocheol Jeong, Jooyong Park, Joonhyuk Lee, Jaejin Heo, and Okhyun Nam Convergence Center for Advanced Nano Semiconductor, Department of Nano Semiconductor, Tech University of Korea</p>