



# Poster Session

On-line	On-demand
Off-line	May 24 (Tue.), 2022, 18:30–19:30 / Convention Hall B

## 01. AlN Bulk Crystals and Templates

[P-01]

---

### Growth of AlN Layer on Hole-Type PSS for DUV LED by HVPE

Young Jun Choi<sup>1</sup>, Hae-Gon Oh<sup>1</sup>, Hae-Yong Lee<sup>1</sup>, Seung-Jae Lee<sup>2</sup>

<sup>1</sup>LumiGNtech Co., Ltd., Korea, <sup>2</sup>Korea Photonics Technology Institute, Korea

[P-02]

---

### High Quality AlN Layer Growth with O<sub>2</sub>/H<sub>2</sub> on C Plain Sapphire Substrate by HVPE

Jae-Hoon Lee, Hae-Gon Oh, Young Jun Choi, Hae-Yong Lee

LumiGNtech Co., Ltd., Korea

[P-03]

---

### Crystallinity Improvement and Carbon-Oxygen Analysis of AlN Single Crystal Grown by Physical Vapor Transport

Jeongwoon Kim<sup>1</sup>, Yong-Hyeon Kim<sup>2</sup>, Jinsoo Kim<sup>1</sup>, Sunwoo Shin<sup>1</sup>, Dong-Seon Lee<sup>1</sup>, Si-Young Bae<sup>2</sup>

<sup>1</sup>Gwangju Institute of Science and Technology, Korea, <sup>2</sup>Korea Institute of Ceramic Engineering and Technology, Korea

[P-04]

---

### The N-Polar and Al-Polar AlN Fabricated by Sputtering with Al Target and High-Temperature Annealing

Zhibin Liu<sup>1,2</sup>, Yanan Guo<sup>1,2</sup>, Jianchang Yan<sup>1,2</sup>, Jimin Li<sup>1,2</sup>, Junxi Wang<sup>1,2</sup>

<sup>1</sup>Chinese Academy of Sciences, China, <sup>2</sup>University of Chinese Academy of Sciences, China

[P-05]

---

### Effects of Different Buffer Layers on the Surface Morphology and the Crystallinity of a-Plane AlN Films Grown on r-Al<sub>2</sub>O<sub>3</sub>

Tingsong Cai<sup>1,2</sup>, Yanan Guo<sup>1,2</sup>, Zhibin Liu<sup>1,2</sup>, Xiaoyan Yi<sup>1,2</sup>, Jinmin Li<sup>1,2</sup>, Junxi Wang<sup>1,2</sup>, Jianchang Yan<sup>1,2</sup>

<sup>1</sup>Chinese Academy of Sciences, China, <sup>2</sup>University of Chinese Academy of Sciences, China

## 02. Growth and Properties of AlGaN Heterostructures

[P-06]

---

### Structural and Transport Properties of Si-Doped Short-Period AlN/GaN Superlattices Grown by MBE

Siqi Li<sup>1</sup>, Pengfei Shao<sup>1</sup>, Dongqi Zhang<sup>1</sup>, Tao Tao<sup>1</sup>, Zili Xie<sup>1</sup>, Dunjun Chen<sup>1</sup>, Bin Liu<sup>1</sup>, Ke Wang<sup>1</sup>, Youdou Zheng<sup>1</sup>, Rong Zhang<sup>1,2</sup>

<sup>1</sup>Nanjing University, China, <sup>2</sup>Xiamen University, China

[P-08]

---

### The Effect of Oxygen Incorporation in Al<sub>x</sub>Ga<sub>1-x</sub>N Layers Grown by Hydride Vapor Phase Epitaxy

Chang Wan Ahn<sup>1</sup>, Sung Soo Park<sup>2</sup>, Eun Kyu Kim<sup>1</sup>

<sup>1</sup>Hanyang University, Korea, <sup>2</sup>Jeonju University, Korea

[P-09]

---

### The Effect of AlGa<sub>N</sub> Interlayer in AlN Buffer-Based Double-Hetero Structure HEMT

Keono Kim, Minho Kim, Yunseok Heo, Uiho Choi, Okhyun Nam

*Tech University of Korea, Korea*

[P-10]

---

### Stability of Graphene on AlN Template during GaN Growth in Metal-Organic Chemical Vapor Deposition

Hoe-Min Kwak, Je-Sung Lee, Woo-Lim Jeong, Kyung-Pil Kim, Seung-Hyun Mun, Dong-Seon Lee

*Gwangju Institute of Science and Technology, Korea*

[P-11]

---

### The Effect of Nitrogen Flow Rate on Structure and Composition of AlGa<sub>N</sub> Nanowires in Plasma-Assisted Molecular Beam Epitaxy

Mun-Do Park<sup>1</sup>, JaeYoung Baik<sup>1</sup>, Jun-Yeob Lee<sup>1</sup>, Soo-Young Choi<sup>1</sup>, Jeong-Hwan Park<sup>2</sup>, Dong-Seon Lee<sup>1</sup>

<sup>1</sup>Gwangju Institute of Science and Technology, Korea, <sup>2</sup>Nagoya University, Japan

[P-12]

---

### Growth of AlGa<sub>N</sub>/Ga<sub>N</sub>/AlN Double-Hetero Structure HEMT by Epilayer Engineering

Minho Kim, Keono Kim, Seongmin Kang, Yunseok Heo, Uiho Choi, Okhyun Nam

*Tech University of Korea, Korea*

[P-13]

---

**Photoluminescence Properties of UVB Emitting  $\text{Al}_y\text{Ga}_{1-y}\text{N}/\text{Al}_x\text{Ga}_{1-x}\text{N}$  Quantum Wells and Quantum Dots**

Mathieu Leroux<sup>1</sup>, Julien Brault<sup>2</sup>, M. Ajmal Khan<sup>2</sup>, Pierre Valvin<sup>3</sup>, Hideki Hirayama<sup>2</sup>, Bernard Gil<sup>3</sup>  
<sup>1</sup>CNRS-CRHEA, France, <sup>2</sup>RIKEN, Japan, <sup>3</sup>CNRS-The University of Montpellier, France

### 03. BN Growth and Fundamental Properties

[P-16]

---

**Effect of Pt Crystal Surface on Hydrogenation of Monolayer h-BN and its Conversion to Graphene**

MinSu Kim, Hyeon Suk Shin  
*Ulsan National Institute of Science and Technology, Korea*

[P-17]

---

**Impact of Solvent Composition on the Properties of hBN Crystals Grown from Molten Metal Solutions**

Eli Janzen<sup>1</sup>, Bernard Gil<sup>2</sup>, Guillaume Cassabois<sup>2</sup>, Pierre Valvin<sup>2</sup>, Adrien Rousseau<sup>2</sup>, J H Edgar<sup>1</sup>  
<sup>1</sup>Kansas State University, USA, <sup>2</sup>CNRS-The University of Montpellier, France

[P-18]

---

**High-Quality Boron Nitride Thin Films Fabricated by Solution Process at Low-Temperatures for Flexible Nanoelectronics**

Sang-Joon Park, Jun-Young Jeon, Tae-Jun Ha  
*Kwangwoon University, Korea*

[P-19]

---

**Van der Waals Heterostructure of Hexagonal Boron Nitride with an AlGaIn/GaN Epitaxial Wafer for High-Performance Radio-Frequency Applications**

Seokho Moon, Jiye Kim, Jaewon Kim, Jong Kyu Kim  
*Pohang University of Science and Technology, Korea*

## 04. Growth and Properties of Oxides (Ga<sub>2</sub>O<sub>3</sub> etc.) and Diamond

[P-20]

---

### Structural and Electrical Characterizations of $\epsilon$ -Ga<sub>2</sub>O<sub>3</sub> Thin Films Grown on SiC Substrates Using Mist Chemical Vapor Deposition

Seong-Ho Cho<sup>1,2</sup>, Min-Seong Kong<sup>1,3</sup>, Yun-Ji Shin<sup>1</sup>, Minh-Tan Ha<sup>1</sup>, Seong-Min Jeong<sup>1</sup>,  
Se Hun Kwon<sup>2</sup>, Min-Su Park<sup>3</sup>, Si-Young Bae<sup>1</sup>

<sup>1</sup>Korea Institute of Ceramic Engineering and Technology, Korea, <sup>2</sup>Pusan National University, Korea,

<sup>3</sup>Dong-A University, Korea

[P-21]

---

### Numerical Simulation of Edge-Defined Film-Fed Growth for High-Quality Ga<sub>2</sub>O<sub>3</sub> Single Crystal

Su-Min Lim<sup>1,2</sup>, Nhat-Minh Phung<sup>1,3</sup>, Minh-Tan Ha<sup>1</sup>, Yun-Ji Shin<sup>1</sup>, Young-Soo Lim<sup>2</sup>, Si-Young Bae<sup>1</sup>,  
Seong-Min Jeong<sup>1</sup>

<sup>1</sup>Korea Institute of Ceramic Engineering and Technology, Korea, <sup>2</sup>Pukyong National University, Korea,

<sup>3</sup>Changwon National University, Korea

[P-22]

---

### Investigation of Dislocation and Electrical Property of Homoepitaxial Ga<sub>2</sub>O<sub>3</sub> Films

Vuong Quoc Nguyen, Trong Si Ngo, Soon-Ku Hong

Chungnam National University, Korea

[P-23]

---

### Numerical Investigation of Enhancement-Mode $\beta$ -Ga<sub>2</sub>O<sub>3</sub> Vertical MOSFETs via Process and Device Simulations

In Ki Kim, Suhyeong Cha, Sung-Min Hong

Gwangju Institute of Science and Technology, Korea

[P-24]

---

### Comparison of Admittance Spectra of Diamond and $\beta$ -Ga<sub>2</sub>O<sub>3</sub> as Semiconductors for UV Solar-Blind Photodetectors

Vasily Zubkov, Anna Solomnikova

Saint Petersburg Electrotechnical University, Russia

[P-25]

---

**Electrical Properties of Metal-Insulator-Semiconductor Structure Diamond Schottky Barrier Diode Grown on Hetero-Epitaxial Diamond Substrate**

Sanghun Han<sup>1</sup>, Taemyung Kwak<sup>1</sup>, Uiho Choi<sup>1</sup>, Hyeonu Kang<sup>1</sup>, Geunho Yoo<sup>1</sup>, Seong-woo Kim<sup>2</sup>, Okhyun Nam<sup>2</sup>

<sup>1</sup>Tech University of Korea, Korea, <sup>2</sup>Adamant Namiki Precision Jewel Co., Ltd., Japan

[P-27]

---

**Growth and Characterization of Heteroepitaxial (001) and (111) Diamond on Ir/Sapphire Structures**

Uiho Choi<sup>1</sup>, Heejin Shin<sup>1</sup>, Taemyung Kwak<sup>1</sup>, Seongwoo Kim<sup>2</sup>, Okhyun Nam<sup>1</sup>

<sup>1</sup>Tech University of Korea, Korea, <sup>2</sup>Adamant Namiki Precision Jewel Co., Ltd., Japan

[P-28]

---

**Rutile GeO<sub>2</sub> Film with (100) Orientation Grown on c-Plane Sapphire Substrate by Pulsed Laser Deposition**

Gaofeng Deng, Katsuhiko Saito, Tooru Tanaka, Qixin Guo

Saga University, Japan

[P-29]

---

**Characteristic Analysis of High Purity of Single Crystal and Impurity Removal Using Pretreatment of CaF<sub>2</sub> Raw Materials**

June-Hyuk Kang, Doo-Gun Kim, Joo-Hyun Choi, Sun-Hoon Kim

Korea Photonics Technology Institute, Korea

[P-30]

---

**Spatial Variation in Quality of Ga<sub>2</sub>O<sub>3</sub> Single Crystal Grown by Edge-Defined Film-Fed Growth Method**

Su-Bin Park<sup>1</sup>, Tae-Wan Je<sup>1</sup>, Hui-Yeon Jang<sup>1</sup>, Su-Min Choi<sup>1</sup>, Mi-Seon Park<sup>1</sup>, Yeon-Suk Jang<sup>1</sup>, Yoon-Gon Moon<sup>2</sup>, Jin-Ki Kang<sup>2</sup>, Won-Jae Lee<sup>1</sup>

<sup>1</sup>Dong-Eui University, Korea, <sup>2</sup>AXEL, Korea

[P-31]

---

**Effect of Graphene Preparation on Remote Epitaxy of Single-Crystalline  $\epsilon$ -Ga<sub>2</sub>O<sub>3</sub>**

Jung-Hong Min<sup>1</sup>, Neeraj Mishra<sup>2</sup>, Kuang-hui Li<sup>1</sup>, Stiven Forti<sup>2</sup>, Tae-Yong Park<sup>1</sup>, Tien Khee Ng<sup>1</sup>, Camilla Coletti<sup>2</sup>, Boon S. Ooi<sup>1</sup>

<sup>1</sup>King Abdullah University of Science and Technology, Saudi Arabia, <sup>2</sup>Italian Institute of Technology, Italy

[P-33]

---

**LiTaO<sub>3</sub> Single Crystal Growth with Four Inches Diameter Using Czochralski Method**

June-Hyuk Kang, Doo-Gun Kim, Joo-Hyun Choi, Sun-Hoon Kim

*Korea Photonics Technology Institute, Korea*

[P-34]

---

**Strain Relaxation and Dislocation Annihilation in Compositionally Graded  $\alpha$ -(Al<sub>x</sub>Ga<sub>1-x</sub>)<sub>2</sub>O<sub>3</sub> Layer for High Voltage  $\alpha$ -Ga<sub>2</sub>O<sub>3</sub> Power Devices**

Byungsoo Kim, Duyoung Yang, Euijoon Yoon, Yongjo Park, Ho Won Jang

*Seoul National University, Korea*

[P-35]

---

**Study on Growth of High-Quality  $\alpha$ -Ga<sub>2</sub>O<sub>3</sub> on Sapphire Nanomembrane by Mist CVD**

Duyoung Yang, Byungsoo Kim, Euijoon Yoon, Yongjo Park, Ho Won Jang

*Seoul National University, Korea*

## 05. UV-emitters (Lasers and LEDs) and Detectors

[P-38]

---

**Lateral Patterning in Technology of AlGaInN UV-A Laser Diodes**

Robert Czernecki<sup>1,2</sup>, Ewa Grzanka<sup>1,2</sup>, Mikolaj Grabowski<sup>1</sup>, Artur Lachowski<sup>1</sup>, Szymon Grzanka<sup>1,2</sup>,  
Mike Leszczynski<sup>1,2</sup>

<sup>1</sup>*Institute of High Pressure Physics, Poland*, <sup>2</sup>*TopGaN Ltd., Poland*

[P-39]

---

**High Efficient ZnO-Based Ultraviolet Photodetector with Carbon Nanotube-Based Self-Heating System**

Jeong-Hyeon Kim, Gun-Woo Lee, Sung-Nam Lee

*Tech University of Korea, Korea*

[P-40]

---

**Study on Nano-Wrinkle Network Structured ZnO Ultraviolet Photodetector Using Sol-Gel Process**

Jongyun Choi, Gun-Woo Lee, Sung-Nam Lee

*Tech University of Korea, Korea*

**[P-41]**

---

**Analysis of TM Polarization Ratio in UVC-LEDs with 3D K-P Method by Considering Random Alloy Fluctuation**

Yu-Chieh Chang, Huan-Ting Shen, Yuh-Renn Wu  
*National Taiwan University, Taiwan*

**[P-42]**

---

**Solar-Blind Ultraviolet Photodetectors with Reduced Graphene Oxide Electrodes**

Bhishma Pandit, Jaehee Cho  
*Jeonbuk National University, Korea*

**[P-43]**

---

**Improved GaN-Based Light-Emitting Diodes Grown on Si (111) Substrates with NH<sub>3</sub> Growth Interruption**

Gyeong-Hun Jung<sup>1</sup>, Sohyeon Kim<sup>1</sup>, Taehyeon Kim<sup>1</sup>, Minji Kim<sup>1</sup>, Hannah Lee<sup>1</sup>, Min-Woo Park<sup>1</sup>, Se-Mi Oh<sup>2</sup>, Sang-Jo Kim<sup>3</sup>, Kyoung-Kook Kim<sup>1</sup>  
*<sup>1</sup>Tech University of Korea, Korea, <sup>2</sup>University of Michigan, USA, <sup>3</sup>Gwangju Institute of Science and Technology, Korea*

**[P-44]**

---

**Enhanced Photon Emission Efficiency Using Surface Plasmon Effect of Pt Nanoparticles for Ultra-Violet Emitter**

Minji Kim<sup>1</sup>, Hee-Jung Choi<sup>1</sup>, Sohyeon Kim<sup>1</sup>, Hannah Lee<sup>1</sup>, Taehyeon Kim<sup>1</sup>, GyeongHun Jung<sup>1</sup>, Semi Oh<sup>2</sup>, Kyoung-Kook Kim<sup>1</sup>  
*<sup>1</sup>Tech University of Korea, Korea, <sup>2</sup>University of Michigan, USA*

**[P-45]**

---

**Far-UVC Emission of Polarity-Engineered AlGaIn MQW Using Carbon Nanotube-Based Cold Cathode Electron Beam**

Uiho Choi<sup>1</sup>, Sung Tae Yoo<sup>2</sup>, Minho Kim<sup>1</sup>, Byeongchan So<sup>3</sup>, Changheon Cheon<sup>1</sup>, Mino Yang<sup>4</sup>, Moonsang Lee<sup>5</sup>, Kyu Chang Park<sup>2</sup>, Okhyun Nam<sup>1</sup>  
*<sup>1</sup>Tech University of Korea, Korea, <sup>2</sup>Kyung Hee University, Korea, <sup>3</sup>Karlsruhe Institute of Technology, Germany, <sup>4</sup>Korea Basic Science Institute, Korea, <sup>5</sup>Inha University, Korea*

[P-46]

---

**Improving Performance of AlGaIn-Based UVC LEDs by Using Chlorinated Indium Tin Oxide Electrodes**

Su-Kyung Kim<sup>1</sup>, Kee-Baek Sim<sup>1</sup>, Jun-Young Jin<sup>1,2</sup>, Young-Jin Ko<sup>3</sup>, Gyu-Weon Hwang<sup>2</sup>, Tae Yeon Seong<sup>1</sup>, Hiroshi Aman<sup>3</sup>

<sup>1</sup>Korea University, Korea, <sup>2</sup>Korea Institute of Science and Technology, Korea, <sup>3</sup>Nagoya University, Japan

[P-47]

---

**Revealing the Effect of n-GaN Thickness on the Efficiency of InGaIn/AlGaIn Multiple-Quantum-Well Near-Ultraviolet Light-Emitting Diodes**

Abu Bashar Mohammad Hamidul Islam<sup>1</sup>, Tae Kyoung Kim<sup>1</sup>, Yu-Jung Cha<sup>1</sup>, Jae Won Seo<sup>1</sup>, Jong-In Shim<sup>2</sup>, Dong-Soo Shin<sup>2</sup>, Joon Seop Kwak<sup>1</sup>

<sup>1</sup>Korea Institute of Energy Technology, Korea, <sup>2</sup>Hanyang University, Korea

[P-48]

---

**Size-Dependent Optoelectronic Performances in InGaIn/AlGaIn Flip-Chip Near-Ultraviolet Micro Light-Emitting Diodes**

Tae Kyoung Kim<sup>1</sup>, Abu Bashar Mohammad Hamidul Islam<sup>1</sup>, Yu-Jung Cha<sup>1</sup>, Jae Won Seo<sup>1</sup>, Jong-In Shim<sup>2</sup>, Dong-Soo Shin<sup>2</sup>, Joosun Yun<sup>3</sup>, Joon Seop Kwak<sup>1</sup>

<sup>1</sup>Korea Institute of Energy Technology, Korea, <sup>2</sup>Hanyang University, Korea

## 06. Nanostructures and Nanodevices

[P-49]

---

**Highly Efficient Yarn Fabricated Utilizing Perovskite Quantum Dot**

Seong Su Choi, Dae Hun Kim, Tae Whan Kim

*Hanyang University, Korea*

[P-50]

---

**Self-Healable Memristive Devices Based on a Zein Active Layer Inserted with Graphene Quantum Dots**

Yoon Chul Hwang, Jun Seop An, Youngjin Kim, Tae Whan Kim

*Hanyang University, Korea*



[P-51]

---

**Ultra-Long n-GaN Microwire Structures for UV Photodetector**

Jeong-Kyun Oh, Yong-Ho Ra, Dae-Young Um, Bagavath Chandran, Sung-Un Kim, Ji-Yeon Kim, Cheul-Ro Lee

*Jeonbuk National University, Korea*

[P-52]

---

**GaN Nanorod LEDs with Thick p-Ohmic Contact Metal**

Yeong-Hoon Cho, Taehwan Kim, Hoo Yeon Kim, Soyeon Park, In-Hwan Lee

*Korea University, Korea*

[P-53]

---

**Nano-Scale Bottom-Emitting Nanowire LEDs with Monolithic Aluminum Core-Shell Reflector**

Sung-Un Kim, Dae-Young Um, Jeong-Kyun Oh, Cheul-Ro Lee, Yong-Ho Ra

*Jeonbuk National University, Korea*

[P-54]

---

**High Efficiency Blue InGaN/GaN Nanorod LEDs Coupled with Localized Surface Plasmon**

So Yeon Park, Taehwan Kim, Yeong-Hoon Cho, In-Hwan Lee

*Korea University, Korea*

[P-55]

---

**AlGaInP Red Nanostructure LED with Star-Shaped Au/SiO<sub>2</sub> Nanoparticles for Localized Surface Plasmon**

Hooyeon Kim, Taehwan Kim, In-Hwan Lee

*Korea University, Korea*

[P-56]

---

**Self-Aligned Hierarchical ZnO Nanorod /NiO Nanosheet Arrays for High Photon Extraction Efficiency of GaN-Based Photonic Emitter**

Young-Hyeun Kim<sup>1</sup>, Won-Seok Lee<sup>1</sup>, Min-Woo Park<sup>1</sup>, Hannah Lee<sup>1</sup>, Semi Oh<sup>2</sup>, Kyoung-Kook Kim<sup>1</sup>

<sup>1</sup>Tech University of Korea, Korea, <sup>2</sup>University of Michigan, USA

[P-57]

---

**Ultraviolet-Assisted Room Temperature NO<sub>2</sub> Gas Sensor Based on ZnO Hemitubes and Nanotubes Covered with TiO<sub>2</sub> Nanoparticles**

Yoon-Seo Park<sup>1</sup>, Hee-Jung choi<sup>1</sup>, Sang-Min Kim<sup>1</sup>, Ju-Eun Yang<sup>1</sup>, Byung-Hoon Ahn<sup>1</sup>, Semi Oh<sup>2</sup>,  
Kyoung-Kook Kim<sup>1</sup>

<sup>1</sup>Tech University of Korea, Korea, <sup>2</sup>University of Michigan, USA

[P-58]

---

**Low-Temperature Solution Processed ZnO/TiO<sub>2</sub> Core-Shell Nanorods with Au Nanoparticles for Highly Sensitive NO<sub>2</sub> Gas Sensing at Room Temperature Assisted UV-LED**

Ju-Eun Yang<sup>1</sup>, Soon-Hwan Kwon<sup>1</sup>, Sang-Min Kim<sup>1</sup>, Yoon-Seo Park<sup>1</sup>, Byung-Hoon Ahn<sup>1</sup>, Semi Oh<sup>2</sup>,  
Kyoung-Kook Kim<sup>1</sup>

<sup>1</sup>Tech University of Korea, Korea, <sup>2</sup>University of Michigan, USA

## 07. UV Photonics and Photonic Devices

[P-59]

---

**Demonstration of Photoelectroactive Artificial Synapse through Photo-Induced Doping Effect**

Je-Jun Lee, Jin-Hong Park

*Sungkyunkwan University, Korea*

## 08. Wide-gap Heterostructure Physics

[P-60]

---

**Role of Defect Levels in Ultraviolet Light-Emitting Diodes Investigated by Electrical Characteristics under Optical Pumping**

SangJin Min, Jiwon Kim, Jong-In Shim, Dong-Soo Shin

*Hanyang University, Korea*

[P-61]

---

**Measuring and Analyzing the Surface Temperature of UV-LED Using Thermoreflectance**

Dong-Min Jeon, Jong-In-Shim, Dong-Soo Shin

*Hanyang University, Korea*

**[P-63]**

---

**Analysis of Temperature-Dependent Voltage Efficiency of UV-C Light Emitting Diodes**

JaeHyeok Park, ChanGeun Park, IlKyu Choi, SungMok Kim, Sang-Jin Min, Jong-In Shim, Dong-Soo Shin  
*Hanyang University, Korea*

**[P-64]**

---

**Analysis of Recombination Mechanisms in Ultraviolet Light-Emitting Diodes by Experimentally Modeling the Ideality Factor**

JooHan Bae, Dong-Gu Kim, SangJin Min, Jong-In Shim, Dong-Soo Shin  
*Hanyang University, Korea*

**[P-65]**

---

**Silicon in AlGa<sub>N</sub> and AlN: Shallow Donor or Deep DX-Center?**

Olga A. Fedorova, Sergey Yu. Karpov  
*SOFTimpact Ltd., Russia*