

# International Workshop on Nitride Semiconductors (IWN 2016)

## Program Changes

### MONDAY, October 3<sup>rd</sup>

#### ABSTRACT WITHDRAWALS:

Session A1.1: Bulk Growth I: Bulk Crystal Growth:

\*A1.1.08 Recent Developments on Growth and Applications of Ammonothermal GaN Substrates

Session B3.1: Photodetectors, Photovoltaics, Intersubband Devices I: Photodetectors and Photovoltaics I:

\*B3.1.02 III-Nitride Based Avalanche Photodetectors

PS1: Poster Session I

PS1.06 Effect of Nitrogen-Doped Carbon Additives on the LPE-Growth of GaN Single Crystal Using the Na Flux Method

PS1.51 Self-limiting Growth Optimization of Wurtzite GaN and InN Thin Films by Low-Temperature Plasma-Assisted Atomic Layer Deposition Utilizing Organo-Metallic Group-III Precursors

PS1.52 Optical Properties of GaN Thin Films Grown by Hollow-Cathode Plasma-Assisted Atomic Layer Deposition—Impact of Film Thickness

PS1.59 High Resistivity GaN Layers with an InGaN Interlayer Grown by MOCVD

PS1.126 Radiative Atomic Transition from Sparsely Rare Earth Doped GaN

PS1.156 The Second and Third Harmonic Generation Coefficients in InGaN/GaN Single Quantum Wells

#### ABSTRACT TIME CHANGES:

Session A1.1: Bulk Growth I: Bulk Crystal Growth:

4:30 PM \*A1.1.07 – MOVED FROM 4:15 PM High Quality Bulk GaN Crystal Grown by Acidic Ammonothermal

5:00 PM \*A1.1.09 – MOVED FROM 5:15 PM Optical, Electrical, and Thermal Properties of N-Type Bulk Ammono-Acidic GaN

Session B3.1: Photodetectors, Photovoltaics, Intersubband Devices I: Photodetectors and Photovoltaics I

5:30 PM B3.1.03 – MOVED FROM 5:15 PM Demonstration of Uniform and Reliable GaN p-i-n Ultraviolet Avalanche Photodiode Arrays with Large Detection Area on Free-Standing GaN Substrates

#### ABSTRACT PRESENTER CHANGES:

PS1: Poster Session I

PS1.61 The Mechanism of Strain Control for GaN on Si HEMTs with Fe-Doped GaN by Using Un-Doped GaN Interlayer [Fernando Ponce](#)

PS1.63 High Mobility InAlGaN/GaN Heterostructures Grown on Si Substrates Using Low-Temperature AlN Spacer Layer [Shashwat Rathakanthiwar](#)

PS1.68 Overgrowth and Microstructural Investigation of Semi-Polar (11-22) GaN on Arrayed Micro-Rods with Different Diameters [Richard M. Smith](#)

#### ABSTRACT ADDITIONS/TRANSFERS:

PS1: Poster Session I

PS1.15 - TRANSFERRED TO PS2.154: Reciprocal Space Mapping of InGaN Epilayers on Bare and Nitrided Si (111) by PAMBE

PS1.28 - TRANSFERRED TO PS2.155: Integration of Micron-Thick Crack-Free Al<sub>0.6</sub>Ga<sub>0.4</sub>N with Si(111) Substrate for Deep UV Photodetection

PS1.88 - TRANSFERRED TO PS2.71: (LATE NEWS) Atomic Force Microscope Measurements of Thermomechanical and Inverse-Piezoelectric Strain in AlGaIn/GaN High Electron Mobility Transistors

PS1.135 - TRANSFERRED TO PS2.156: Effect of Dislocations on Non-Polar a-GaN Schottky Photodetectors Aligned along In-Plane Polarized c-Direction

PS1.177 - TRANSFERRED FROM PS2.140: Understanding the Growth Mechanism of MOVPE-Grown Ni-Catalyzed GaN Nanowires

---

### TUESDAY, October 4<sup>th</sup>

#### ABSTRACT WITHDRAWALS:

Session B1.2: Visible Devices II: Long Wavelength Emitters

B1.2.06 Suppressing the Incorporation of Carbon Impurity in AlGaIn:Mg for Green LDs with Low Operation Voltage

Session D1.5: Materials Characterization V: Characterization of GaN and InN

D1.5.05 Raman Scattering Study of the High-Pressure Wurtzite to Rocksalt Phase Transition of GaN Grown on Serpentine Channel Patterned Sapphire Substrate

Session F0.2: Novel Materials and Devices II: Nitride MEMS and Other Novel GaN Device Architectures

F0.2.03 Second Harmonic Generation from a Three Dimensional GaN Micro-Cavity Emitter

#### ABSTRACT PRESENTER CHANGES:

Session A2.4: Epitaxial Growth IV: Growth of Light Emitters and (In,Ga)N

2:00 PM \*A2.4.01 Characteristics of GaN-Based LED on Alumina Cavity Engineered Sapphire Substrate [Euijoon Yoon](#)

---

### WEDNESDAY, October 5<sup>th</sup>

#### ABSTRACT WITHDRAWALS:

PS2: Poster Session 2

PS2.07 Momentum Representation of Leaky Light for the Identification of Light Escape Routes

PS2.16 Diffraction Analysis of High-Index-Contrast Air-Cavities Substrates for InGaIn/GaN Light-Emitting Diodes

PS2.68 Enhanced Light Emission in Near-Ultraviolet Vertical-Conducting LEDs with AlGaIn/GaN Distributed Bragg Reflectors

PS2.98 Effects of High-k Gate Dielectrics on the Electrical Behavior of AlInN/GaN Based Diodes and HEMTs

PS2.114 Normally-Off AlGaIn/GaN MIS-HEMTs by Ionic Liquid Wet Etching and LPCVD-Si<sub>3</sub>N<sub>4</sub> Gate Insulator

PS2.146 Structural and Electrical Transport Properties of Si Doped GaN Nanowires

PS2.154 Fabrication of Long-Range Ordered III-Nitride Nanostructures on Si Substrates via Template-Assisted Atomic Layer Deposition

PS2.155 Temperature-Dependent Photoluminescence of Low-Temperature Plasma-Assisted ALD-Grown Ordered GaN Nanostructures on Si Substrates

PS2.156 Fabrication of Flexible Core/Shell Nylon/III-Nitride Nanofibers by Electrospinning and Low-Temperature Plasma-Assisted Atomic Layer Deposition for Photocatalysis and Gas Sensing Applications

\* Invited Speaker

# International Workshop on Nitride Semiconductors (IWN 2016)

## Program Changes

### WEDNESDAY, October 5<sup>th</sup> continued...

#### ABSTRACT PRESENTER CHANGES:

##### PS2: Poster Session 2

- PS2.89 Impact of In-Rich InGaN Back-Barrier on the Two-Dimensional Electron Gas [Jean-Francois Carlin](#)  
PS2.118 Improvement of Off-State Performance in AlGaIn/GaN HEMT with TMAH Surface Treatment [Jung-Hee Lee](#)  
PS2.139 AlGaIn/GaN HEMT Membranes for Flexible Power Electronics [Charles Eddy](#)  
PS2.163 GaN Quantum-Disks-in-Nanowires Light-Emitters on Metal Substrates [Mohamed Ebaid](#)

#### ABSTRACT ADDITIONS/TRANSFERS:

##### PS2: Poster Session 2

- PS2.71 – TRANSFERRED FROM PS1.88 (LATE NEWS) Atomic Force Microscope Measurements of Thermomechanical and Inverse-Piezoelectric Strain in AlGaIn/GaN High Electron Mobility Transistors  
PS2.140 - NEW (LATE NEWS) On the Reverse Breakdown and Leakage Mechanisms of AlN Schottky Diodes at High Temperature  
PS2.154 - TRANSFERRED FROM PS1.15: Reciprocal Space Mapping of InGaIn Epilayers on Bare and Nitrided Si (111) by PAMBE  
PS2.155 - TRANSFERRED FROM PS1.28: Integration of Micron-Thick Crack-Free Al<sub>0.6</sub>Ga<sub>0.4</sub>N with Si(111) Substrate for Deep UV Photodetection  
PS2.156 - TRANSFERRED TO PS1.135: Effect of Dislocations on Non-Polar a-GaN Schottky Photodetectors Aligned along In-Plane Polarized c-Direction

---

### THURSDAY, October 6<sup>th</sup>

#### SESSION TITLE CHANGE:

D2.3 from 10:45 am – 12:15 pm: D2.3: Theory and Simulation III: Theory and Modeling of Electronic Devices

#### ABSTRACT WITHDRAWALS:

##### Session A2.7: Epitaxial Growth VII: Epitaxial Growth of (Al,Ga)N Session

A2.7.04 Improved Nucleation of AlN Template Layer on Sapphire Substrate by Using TMGa Pulse Flow

##### Session B1.6: Visible Devices VI: Light Emitters: Lasers

B1.6.01 GaN-on-Si UV LED and Blue/Violet Laser Diode

##### Session C0.4: Electronic Devices IV: Quantum Devices and Sensors & Late News

C0.4.12 Thermal Time Constants of GaN HEMTs

##### Session C2.3: Power Devices III: Devices for Power Electronics III

\*C2.3.01 Enhancement-Mode GaN-Based MIS-HEMTs for Dynamic Voltage Power Supply Applications

#### ABSTRACT PRESENTER CHANGES:

##### Session A2.10: Epitaxial Growth X: Growth of UV Devices and Thick AlN and GaN Films

4:30 PM A2.10.02 Significant Internal Quantum Efficiency Enhancement of GaN/AlGaIn Multiple Quantum Wells Emitting at ~350 nm

##### Session B1.5: Visible Devices V: Visible Light Emitters: Contacts, Tunnel Junctions and Monolithic Integration & Late News

9:15 AM B1.5.05 Light Emitting Diodes with Tunnel Junctions for Hole Injection Grown by Plasma-Assisted MBE [Grzegorz Muziol](#)

##### Session D2.3: Theory and Simulation III: Theory and Modeling of Electronic Devices

11:30 AM D2.3.10 Challenges and Opportunities in Modeling Gallium Nitride High Electron Mobility Transistors— From Numerical Simulations to Compact Transistor Model [Kexin Li](#)

##### Session E0.4: Nanostructures IV: (In,Ga)N Nanostructures: Optoelectronic Devices and Properties

12:00 PM E0.4.11 Far-Field Enhancement in High-Q Blue III-Nitride Photonic Crystal Nanobeam Cavities on Silicon [Raphael Butte](#)

##### Session B1.6: Visible Devices VI: Light Emitters: Lasers

12:15 PM B1.6.07 Impact of Mode-Hopping Noise on InGaIn Edge Emitting Laser RIN Properties [Antoine Congar](#)

##### Session C2.3: Power Devices III: Devices for Power Electronics III

2:45 PM C2.3.03 Normally-off AlGaIn/GaN-on-Si Metal-Oxide-Semiconductor-Heterojunction Field-Effect Transistor with an Integrated Single Stage GaN Inverter as a Gate Driver [Sang-Woo Han](#)

##### Session D1.9: Materials Characterization IX: Characterization of Optical Processes in (In,Ga)N

2:45 PM D1.9.03 Enhancement of Auger Recombination Induced by Localization in InGaIn/GaN Quantum Wells [Raphael Butte](#)

##### Session F0.7: Novel Materials and Devices VII: Novel Sensing Devices and Magnetism

2:30 PM F0.7.02 Sensing the Iron-Load of Ferritin Biomolecules Using GaInN Quantum Wells as Optochemical Transducers [Ferdinand Scholz](#)

#### ABSTRACT TIME CHANGES:

##### Session F0.7: Novel Materials and Devices VII: Novel Sensing Devices and Magnetism

3:00 PM F0.7.04 - MOVED FROM 3:30 PM: Impact of Mg Doped Cladding Layers on Ferromagnetism of (Ga,Mn)N Thin Films

3:15 PM F0.7.05 - MOVED FROM 3:00 PM: Stretching Magnetism with an Electric Field in a Nitride Semiconductor

3:30 PM F0.7.06 - MOVED FROM 3:15 PM: Enhanced Ferromagnetism in Nanoscale GaN:Mn Wires Grown on GaN Ridges

---

### FRIDAY, October 7<sup>th</sup>

#### ROOM CHANGE:

PL.2: Plenary Session II Moved to International Ballroom