

[MoA1] 2D Materials - I

Session Date	July 13 (Mon.), 2026
Session Time	11:15–12:30
Session Room	Room A (Baekrok Hall A, 1F)
Session Chairs	Dr. Benjamin Groven (IMEC, Belgium), Prof. Kerstin Volz (Philipps–University Marburg, Germany)

[MoA1–1] [Invited]

11:15–11:45

From MOCVD to AI-Driven Metrology: Enabling Scalable Production and Quality Control of Wafer-Scale 2D Semiconductors

Xiaotian Zhang, Suzhou Laboratory, China

[MoA1–2] [Invited]

11:45–12:15

Scalable MOVPE van der Waals Epitaxy of hBN for III–Nitride Devices: From Mixed 2D/3D Heterostructures to RGB Micro–LEDs and Deep–UV LEDs

Suresh Sundaram^{1,2}, Phuong Vuong^{1,2,3}, May Tran Thi², Ashuthosh Srivastava^{1,2}, Tarik Moudakir⁴, Simon Gautier⁴, Paul L. Voss^{1,2}, Jean Paul Salvestrini^{1,2}, and Abdallah Ougazzaden^{1,2}, ¹Georgia Tech–Europe, France, ²Georgia Tech–CNRS IRL 2958, France, ³Georgia Institute of Technology, USA, ⁴Institut Lafayette, France

[MoA1–3]

12:15–12:30

MOCVD Growth of Suspended hBN on GaN Nano–Needles for Analog Memristive Switching via Geometric Filament Confinement

Seokho Moon¹, Jaesub Song², Odongo Francis Ngome Okello¹, Adrien Rousseau³, Semi Im², Jawon Kim², Inyong Hwang², Changuk Ji², Jinho Byun², Jiye Kim², Junyoung Choi², Hyunjeong Kwak², Seyoung Kim², Bernard Gil³, Guillaume Cassabois³, Si–Young Choi², and Jong Kyu Kim², ¹Ajou University, Korea, ²Pohang University of Science and Technology, Korea, ³Universite de Montpellier, France

[MoB1] Nitrides for Electronics - I

Session Date	July 13 (Mon.), 2026
Session Time	11:15–12:30
Session Room	Room B (Baekrok Hall B, 1F)
Session Chairs	Prof. Xiaohang Li (King Abdullah University of Science and Technology, Saudi Arabia), Prof. Markus Pristovsek (Nagoya University, Japan)

[MoB1–1] [Invited]

11:15–11:45

Recent Progress and Device Advantages of N-Polar GaN/AlN HEMTs

N. Okada¹, F. Yamanaka¹, A. H. Zazuli¹, M. Feng¹, T. Kimoto¹, R. Ninoki¹, N. Hirata¹, H. Danbata¹, A. Hayashiuchi¹, K. Sunai¹, H. Tokumoto¹, Y. Kitamura¹, S. Kurai¹, M. Hiroki², K. Hirama², Y. Taniyasu², and Y. Yamada¹, ¹Yamaguchi University, Japan, ²NTT, Inc., Japan

[MoB1–2] [Invited]

11:45–12:15

MOCVD Growth of III-Nitride Using New Precursors for HEMT: Challenges and Progress

Byeongchan So, Teresa Duarte, Hanspeter Menner, Jannik Richter, Lutz Kirste, Mario Prescher, Patrik Straňák, Sven Maegdefessel, Felix Hoffmann, Fouad Benkhelifa, Stefano Leone, and Rüdiger Quay, Fraunhofer Institute for Applied Solid State Physics IAF, Germany

[MoB1–3]

12:15–12:30

Tunable High-Temperature MOCVD Growth for Strain-Controlled AlN-Based RF GaN HEMT Epitaxy

JongJin Jang, SeongCheol Choi, and DongSik Seo, TES Co., Ltd., Korea

[MoA2] Advanced Growth Techniques - I

Session Date	July 13 (Mon.), 2026
Session Time	14:00–15:45
Session Room	Room A (Baekrok Hall A, 1F)
Session Chairs	Prof. Zhe Zhuang (Nanjing University, China), Prof. Michael Heuken (AIXTRON, RWTH Aachen University, Germany)

[MoA2–1] [Invited]

14:00–14:30

Remote Epitaxy of Deformable and Stacktronic Devices

Young Joon Hong, Sungkyunkwan University, Korea

[MoA2–2]

14:30–14:45

Fabrication of Wafer-Scale Freestanding GaN Membrane Utilizing Transfer-Free Thin Amorphous Carbon Layer via MOCVD-Based Remote Epitaxy

Joonghoon Choi, Wonkwang Yang, Chang Soo Kim, Junhyun Bae, and Young Joon Hong, Sungkyunkwan University, Korea

[MoA2–3]

14:45–15:00

Remote Epitaxy of α -Ga₂O₃ via Polycrystalline MoS₂

Gyeong Ryul Lee and Roy. B. Chung, Kyungpook National University, Korea

[MoA2–4]

15:00–15:15

MOCVD of GaN and AlGaIn/GaN Heterostructures on Si(001) by Wafer-Scale MoS₂ Templates

Seung Hoon Lee¹, Chen Chen¹, Brian M. Bersch², and Joan M. Redwing¹, ¹Pennsylvania State University, USA, ²Northrop Grumman Mission Systems, USA

[MoA2–5]

15:15–15:30

InGaIn Quantum Wells Grown on Spatially Patterned Substrates – Towards the 3D Laser Emitters

Grzanka Ewa, Grzanka Szymon, Robert Czernecki, Mikołaj Grabowski, Roman Hrytsak, Artur Lachowski, Julita Smalc-Koziorowska, and Michał Leszczynski, Institute of High Pressure Physics, Poland

Room-Temperature Continuous-Wave III-V/Si PhC Lasers on SOI Using Selective Lateral Heteroepitaxy

Xingyu Yang, Yao Chen, Jinglong Chen, Siyuan Yu, and Yu Han, Sun Yat-sen University, China

[MoB2] Micro-LEDs

Session Date	July 13 (Mon.), 2026
Session Time	14:00–15:45
Session Room	Room B (Baekrok Hall B, 1F)
Session Chairs	Prof. Xinqiang Wang (Peking University, China), Dr. Armin Dadgar (Otto-von-Guericke-Universität Magdeburg, Germany)

[MoB2-1] [Invited]

14:00–14:30

In Incorporation and Strain Relaxation for Efficient Red InGaN Micro-LEDs: Towards a RGB Monolithic Approach

A. Dussaigne, J. Bosch, F. Barbier, G. Veux, F. Fedeli, B. Aventurier, D. Cooper, F. Rol, and F. Lévy, CEA-Leti, France

[MoB2-2] [Invited]

14:30–15:00

Enhancing Luminous Efficiency: The Breakthrough of PlayNitride's Tantium® MicroLED

Ching-Liang Lin¹, Yi-Ru Huang², Chia-Yun Kao², and Yun-Li Li¹, ¹Playnitride Inc., Taiwan, ²Playnitride display Co. Ltd., Taiwan

[MoB2-3]

15:00–15:15

GaN-on-Si Single-Chip Full-Color Micro-LED Display

Qian Sun^{1,2}, ¹Suzhou Legin Semiconductor Co., Ltd., China, ²Chinese Academy of Sciences, China

[MoB2-4]

15:15–15:30

Wafer Scale Fabrication of Three-Dimensional InGaN/GaN Nanostructured Quantum Wells for Enhanced Color Controllability of Micro-LEDs

Mandar Kulkarni and Sang-Wan Ryu, Chonnam National University, Korea

Ideal Relaxed InGaN Templates Enabling Ultra-Bright RGB-Emitting MicroLEDs

Zhaoxia Bi^{1,2,3,4}, Magnus Heurlin³, Martin Berg³, Hira Usman¹, Nathanael Löfström^{1,2,3}, Jiawei Sun¹, Anders Gustafsson^{1,2}, Mikael Björk³, and Lars Samuelson^{1,2,3}, ¹Southern University of Science and Technology, China, ²Lund University, Sweden, ³Hexagem AB, Sweden, ⁴Future Display Institute of Xiamen, China

[MoA3] Arsenides

Session Date	July 13 (Mon.), 2026
Session Time	16:05–18:05
Session Room	Room A (Baekrok Hall A, 1F)
Session Chairs	Dr. Jean Decobert (III–V Lab, France), Dr. David Lackner (Fraunhofer Institut für Solare Energiesysteme ISE, Germany)

[MoA3–1] [Invited]

16:05–16:35

An Old Technology Which Still Surprises. III–Vs MOVPE, Precursors, Surface Processes and a Lot of Zinc and Oxygen

Emanuele Pelucchi¹, Camille Barbier¹, Agnieszka Gocalinska¹, Pawel P. Michalowski², John O'Hara¹, Luca Colavecchi¹, Gediminas Juska¹, Adrianna Rejmer², and Ayse Ozcan-Atar¹, ¹Tyndall National Institute, University College Cork, Ireland, ²Lukasiewicz Research Network, Poland

[MoA3–2]

16:35–16:50

Accurate Prediction of Intersubband Transitions in MOVPE–Grown III–V Asymmetric Coupled Quantum Wells

K. Pantzas¹, V. Trinité², A. Vasanelli³, C. Sirtori³, G. Beaudoin¹, J. L. Reverchon², G. Patriarche¹, and I. Sagnes¹, ¹Université Paris–Saclay, France, ²III–V Lab, France, ³Laboratoire de physique de L'École normale supérieure de Paris, France

[MoA3–3]

16:50–17:05

MOVPE–Grown C–Band Emitting InAs Quantum Dots on a Ge–Buffered Si (001) Substrate

P. Vijayan, M. Jetter, and P. Michler, Universität Stuttgart, Germany

[MoA3–4]

17:05–17:20

Development of AlAsP/GaAs Microcavities with Narrow Linewidth InGaAs QWs

N. J. Bailey, P. M. Walker, S. Lovett, L. Eaton, D. N. Krizhanovskii, and J. Heffernan, University of Sheffield, United Kingdom

[MoA3-5]

17:20-17:35

III-V/Germanium Photovoltaic Cells via MOVPE: Applications in Thermophotovoltaics and Laser Power Converters

Rey-Stolle, Pablo Martín, Aitana Cano, Rubén Fortín, Romain Foucher, Lidia Escanciano, and Iván García, Universidad Politécnica de Madrid, Spain

[MoA3-6]

17:35-17:50

MOVPE Growth and Characterization of GaAs-Based PIN Diodes for RF Applications

Simeon N. Vladimirov, Lidia Escanciano, Iván García, and Ignacio Rey-Stolle, Universidad Politécnica de Madrid, Spain

[MoA3-7]

17:50-18:05

Sculpturing Potential of Bound State in the Continuum Exciton-Polariton Condensates based on MOCVD-Grown Multi Quantum Well

Jaewon Kim¹, Daegwang Choi², Hyungyu Song¹, and Yong-Hoon Cho¹, ¹Korea Advanced Institute of Science and Technology, Korea, ²Gachon University, Korea

[MoB3] Optical Characterization

Session Date	July 13 (Mon.), 2026
Session Time	16:05–17:50
Session Room	Room B (Baekrok Hall B, 1F)
Session Chairs	Prof. Tetsuya Takeuchi (Meijo University, Japan), Dr. Frank Brunner (Ferdinand-Braun-Institute, Germany)

[MoB3–1] [Invited]

16:05–16:35

Optical In-Situ Metrology and MOVPE: Versatile Toolbox for Laser Device Growth

A. Maaßdorf, M. Brendel, S. Breuer, and M. Weyers, Ferdinand-Braun-Institut, Germany

[MoB3–2]

16:35–16:50

Composition-Dependent Raman Anisotropy in MOVPE-Grown Non-Polar (11-20) $\text{Al}_x\text{Ga}_{1-x}\text{N}$

A Azizur Rahman¹, Eeshika Suresh^{1,2}, Maheshwar Gokhale¹, Amit P Shah¹, Kailash Rustagi¹, and Arnab Bhattacharya¹, ¹Tata Institute of Fundamental Research, India, ²Amrita Vishwa Vidyapeetham, India

[MoB3–3]

16:50–17:05

Optical Response and Anisotropy in MOVPE-Grown Non-Polar $\text{Al}_x\text{Ga}_{1-x}\text{N}$: Insights from Mueller Matrix Ellipsometry

A Azizur Rahman¹, Sanchali Datta^{1,2}, Maheshwar Gokhale¹, Amit P Shah¹, and Arnab Bhattacharya¹, ¹Tata Institute of Fundamental Research, India, ²Tripura University, India

[MoB3–4]

17:05–17:20

WITHDRAWN

[MoB3–5]

17:20–17:35

Temperature- and Wavelength-Dependent Photoluminescence Lifetimes in InGaN Quantum Wells with Varying Indium Compositions

Ririka Yamagata¹, Soma Hatanaka¹, Soya Yamagishi¹, Itsuki Shimbo¹, Atsushi A. Yamaguchi¹, Kazunori Iwamitsu², and Shigetaka Tomiya², ¹Kanazawa Institute of Technology, Japan, ²Nara Institute of Science and Technology, Japan

Functional-Form Analysis of Photoluminescence Decay in InGaN Quantum Wells

Arata Suzuki¹, Ririka Yamagata¹, Itsuki Shimbo¹, Atsushi A. Yamaguchi¹, Daisuke Iida², and Kazuhiro Ohkawa², ¹Kanazawa Institute of Technology, Japan, ²King Abdullah University of Science and Technology, Saudi Arabia

[TuA1] Phosphides

Session Date	July 14 (Tue.), 2026
Session Time	08:30–10:15
Session Room	Room A (Baekrok Hall A, 1F)
Session Chairs	Dr. Emanuele Pelucchi (Tyndall National Institute, Ireland) Dr. Ameer Abdullah (KAIST, Korea)

[TuA1–1] [Invited]

08:30–09:00

Growth Management of InP-Based Optoelectronic and Microelectronic Devices on InP-on-Silicon (InPoSi) Wafers

C. Besancon¹, D. Néel¹, N. Vaissière¹, E. Izquierdo¹, A. Elias¹, G. Daccord¹, J.L. Reverchon¹, O. Delorme¹, A. Wilk¹, N. Davy¹, V. Nodjiadjim¹, C. Mismar¹, F. Fortunato², J. Bergsten³, H. Rodilla², B. Ghyselen⁴, L. Sanchez⁵, T. Bria⁵, F. Fournel⁵, and J. Decobert¹, ¹III–V Lab, France, ²Chalmers University of Technology, Sweden, ³Low Noise Factory, Sweden, ⁴SOITEC, France, ⁵CEA-Leti, France

[TuA1–2]

09:00–09:15

Impact of Growth Parameters on High Quality InP Microridges Grown Directly on On-Axis Si Substrates

T. Meyer¹, A. Baechele¹, M. Prescher¹, L. Kirste¹, R. Keil¹, M. Haertelt¹, P. Merkert¹, S. Messaoudène², L. Andreutti², M. Doron², B. Ben Bakir², A. Trampert³, and R. Aidam¹, ¹Fraunhofer Institute for Applied Solid State Physics IAF, Germany, ²CEA-Leti, France, ³Paul-Drude-Institut für Festkörperelektronik, Germany

[TuA1–3]

09:15–09:30

Orientation Patterned Gallium Phosphide for Integrated Nonlinear Photonics

B. Le Corre^{1,2}, S. Combré³, M. Millotte¹, G. Beaudoin¹, A. Harouri¹, L. Le Gratiot¹, I. Sagnes¹, B. Gérard⁴, A. De Rossi³, A. Grisard³, G. Patriarche¹, Y. Léger², and K. Pantzas¹, ¹Université Paris-Saclay, France, ²Université de Rennes, France, ³Thales Research and Technology, France, ⁴III–V Lab, France

[TuA1-4]

09:30-09:45

WITHDRAWN

[TuA1-5]

09:45-10:00

Resistive Ru-Doped InP Layers for Improved Semi-Insulating Buried Heterostructures

Gustavo Afonso, Nicolas Vaissiere, Antoine Elias, Cosimo Calo, Vladyslav Vakarin, Giancarlo Cerulo, Mokhtar Korti, Olivier Parillaud, Frederic Pommereau, and Jean Decobert, III-V Lab, France

[TuA1-6]

10:00-10:15

In-Situ Reflectometry and Curvature Monitoring for Process Control of InP-Based Laser Heterostructures Grown by MOVPE

K. Haberland¹, J. Decobert², N. Vaissiere², V. Bot², C. Besancon², and F. Weigert¹, ¹LayTec AG, Germany, ²III-V Lab, France

[TuB1] Lasers

Session Date	July 14 (Tue.), 2026
Session Time	08:30–10:15
Session Room	Room B (Baekrok Hall B, 1F)
Session Chairs	Dr. Andre Maaßdorf (Ferdinand-Braun-Institute, Germany) Dr. Nick Bailey (University of Sheffield, United Kingdom)

[TuB1-1] [Invited]

08:30–09:00

High Efficiency GaN-Based VCSELs with AlInN/GaN DBRs Grown by MOVPE

Tetsuya Takeuchi, Satoshi Kamiyama, and Motoaki Iwaya, Meijo University, Japan

[TuB1-2]

09:00–09:15

3.2-W InGaN-Based Photonic Crystal Surface Emitting Laser

Qian Sun, Chinese Academy of Sciences, China

[TuB1-3]

09:15–09:30

WITHDRAWN

[TuB1-4]

09:30–09:45

Extending the Concept of Quantum Mechanics to Bottom-Up Semiconductor Lasers

Wei Wen Wong, Xiaoying Huang, Jihua Zhang, Gaurang Garg, Olivier Lee Cheong Lem, Chennupati Jagadish, and Hoe Tan, The Australian National University, Australia

[TuB1-5]

09:45–10:00

A Novel Monolithic High-Contrast Grating VCSEL Grown by MOVPE for Near-Infrared Emission

Mikołaj Badura¹, Justyna Olejnik¹, Wojciech Dawidowski¹, Jan M. Śmigiel¹, Damian Radziejewicz¹, Adriana Łozińska¹, Marcin Gębski², Magdalena Marciniak², Tomasz Czyszanowski², Weronika Głowadzka³, Marek Ekielski³, Iwona Sankowska³, Anna Szerling³, and Beata Ściana¹, ¹Wrocław University of Science and Technology, Poland, ²Lodz University of Technology, Poland, ³Łukasiewicz Research Network, Poland

[TuB1-6]

10:00-10:15

Design and Development of InGaN-Based VECSEL Structures for High-Power Single-Mode Green Emission

Lucja Marona, Szymon Grzanka, Agata Bojarska, and Piotr Perlin, Institute of High-Pressure Physics PAS, Poland

[TuA2] Low-Dimensional Materials

Session Date	July 14 (Tue.), 2026
Session Time	10:35–12:20
Session Room	Room A (Baekrok Hall A, 1F)
Session Chairs	Prof. Zaichun Sun (Wuhan University of Technology, China), Prof. Lars Samuelson (Southern University of Science and Technology, China)

[TuA2–1] [Invited]

10:35–11:05

Telecom C-Band InAs Quantum Dots on GaAs for Quantum Technological Application

Michael Jetter, Ponraj Vijayan, Stephanie Bauer, Robert Sittig, Raphael Joos, Nam Tran, Cornelius Nawrath, Sascha Kolatschek, Simone Luca Portalupi, and Peter Michler, University of Stuttgart, Germany

[TuA2–2]

11:05–11:20

Interlayer-Free Self-Assembled Growth of GaN Nanorods on Si Substrate for White Light-Emitting Diode

Ameer Abdullah¹, Jeong Ho¹, Sang-Wan Ryu², and Yong Hoon Cho¹, ¹Korea Advanced Institute of Science and Technology, Korea, ²Chonnam National University, Korea

[TuA2–3]

11:20–11:35

Exploring the MOVPE Growth of Droplet Epitaxy InAs/InP Quantum Dots for Quantum Photonic Applications

Elisa M. Sala¹, Young In Na¹, Raja S.R. Gajjala², Edoardo G. Banfi², Guoliang Zhou¹, Paul M. Koenraad², and Jon Heffernan¹, ¹The University of Sheffield, United Kingdom, ²Eindhoven University of Technology, Netherlands

[TuA2–4]

11:35–11:50

Growth of InGaAs Quantum Dots on GaAs with Emission at C-Band Wavelengths

Juwana Jose, David Nguyen, Christoph Berger, Jürgen Bläsing, Armin Dadgar, and André Strittmatter, Otto von Guericke University, Germany

[TuA2-5]

11:50-12:05

Robust GaAs/SiO₂/Si Wafer-Bonded Templates for Monolithic Telecom C-Band InAs Quantum Dot Single-Photon Sources on Silicon

P. Vijayan, M. Seidel, M. Jetter, and P. Michler, Universität Stuttgart, Germany

[TuA2-6]

12:05-12:20

MOVPE of Ga(Sb,Bi)/GaSb Heterostructures on GaSb Nano-Ridges

Marcel Kröner¹, Michiel de Maeyer^{2,3}, Johannes Haust¹, Andreas Beyer¹, Bernardette Kunert², and Kerstin Volz¹, ¹Philipps-Universität Marburg, Germany, ²imec, Belgium, ³Ghent University, Belgium

[TuB2] Nitrides for Electronics - II

Session Date	July 14 (Tue.), 2026
Session Time	10:35–12:20
Session Room	Room B (Baekrok Hall B, 1F)
Session Chairs	Prof. Narihito Okada (Yamaguchi University, Japan), Dr. Byeongchan So (Fraunhofer Institute for Applied Solid State Physics IAF, Germany)

[TuB2-1] [Invited]

10:35–11:05

AlN-Based Heteroepitaxy and Devices by MOCVD

Xiaohang Li, King Abdullah University of Science and Technology, Saudi Arabia

[TuB2-2]

11:05–11:20

Record-High 2DEG Mobility in GaN HEMTs on an Improved AlN Buffer with a 50-nm GaN Channel

M. Hino, S. Yoshida, I. Makabe, K. Makiyama, J. Kotani, and K. Nakata, Sumitomo Electric Industries, Ltd., Japan

[TuB2-3]

11:20–11:35

Prospects and Challenges for N-Polar AlN-Based GaN Channel HEMTs

Markus Pristovsek¹, Yoann Robin¹, Itsuki Furuhashi¹, Chengzhi Zhang², Martin Kuball², Matthew D. Smith², Sheng Zhang³, Xinhua Wang³, and Xu Yang^{1,3}, ¹Nagoya University, Japan, ²University of Bristol, United Kingdom, ³Chinese Academy of Sciences, China

[TuB2-4]

11:35–11:50

Suppress the Parasitic Leakage Current of Homoepitaxial GaN HEMT Using Self-Organizing Nucleated AlN Isolation Layer

JunShuai Xue, WenBo Sun, GuanLin Wu, Cheng Zhao, ChenKai Zhang, JinCheng Zhang, and Yue Hao, Xidian University, China

[TuB2-5]

11:50-12:05

Homoepitaxial Growth of AlGa_N Drift Layers on Bulk Ammonothermal GaN and AlGa_N Substrates

Pawel Prystawko, Tomasz Sochacki, Robert Kucharski, Piotr Kruszewski, and Marcin Krysko, Institute of High Pressure Physics PAS, Poland

[TuB2-6]

12:05-12:20

GaN-on-GaN Regrowth Interface Optimization in MOVPE for Electronic Device Structures

F. Brunner, A. Bassal, K. Tetzner, O. Hilt, S. Breuer, and M. Weyers, Ferdinand-Braun-Institut, Germany

[TuA3] 2D Materials - II

Session Date	July 14 (Tue.), 2026
Session Time	14:00–16:00
Session Room	Room A (Baekrok Hall A, 1F)
Session Chairs	Prof. Xiaotian Zhang (Suzhou Laboratory, China), Prof. Suresh Sundaram (Georgia Institute of Technology, France)

[TuA3–1] [Invited]

14:00–14:30

Opportunities of Halogen-Based Gas-Phase Reactants during Chemical Vapor Deposition of Transition Metal Dichalcogenides

Benjamin Groven, IMEC, Belgium

[TuA3–2]

14:30–14:45

Electrically Driven Ultraviolet Emission from Carbon-Incorporated h-BN Films Grown by MOCVD

Semi Im, Seokho Moon, Jawon Kim, Jaesub Song, Changuk Ji, Seonghyeon Pak, and Jong Kyu Kim, Pohang University of Science and Technology, Korea

[TuA3–3]

14:45–15:00

Role of h-BN Thickness in MOVPE-Grown III-Nitride Heterostructures: Enabling Detachment and Preserving Material Quality

T. M. Tran, P. Vuong, V. Ottapilakkal, M. Bourras, P.L. Voss, S. Sundaram, J.P. Salvestrini, and A. Ougazzaden, Georgia Institute of Technology, France

[TuA3–4]

15:00–15:15

Hexagonal Boron Nitride/Aluminium Gallium Nitride Heterojunction for High-Performance Deep Ultraviolet Photodetection

Jawon Kim¹, Seokho Moon², Semi Im¹, Jaesub Song¹, Changuk Ji¹, Seonghyeon Pak¹, and Jong Kyu Kim¹,
¹Pohang University of Science and Technology, Korea, ²Ajou University, Korea

[TuA3-5]

15:15–15:30

MOCVD Growth of 2D Post-Transition Metal Chalcogenides

Robin Gönkel, Nils Langlotz, Samane Badrosadat Ojaghi, Max Bergmann, Jürgen Belz, and Kerstin Volz, Philipps-Universität Marburg, Germany

[TuA3-6]

15:30–15:45

Scalable Hexagonal Boron Nitride-Based Memristors with Reliable Analog Switching Behavior

Jaesub Song¹, Jungho Lee², Seokho Moon³, Seonghyeon Pak¹, Semi Im¹, Jawon Kim¹, Changuk Ji¹, Jiye Kim¹, Hyeonwoo Lee², Beomjin Park², Dong-Seok Kim⁴, Changwook Jeong², and Jong Kyu Kim¹, ¹Pohang University of Science and Technology, Korea, ²Ulsan National Institute of Science and Technology, Korea, ³Ajou University, Korea, ⁴Korea Atomic Energy Research Institute, Korea

[TuA3-7]

15:45–16:00

Influence of Pre-Growth Treatment on the Homoepitaxial Growth of MOVPE BN on ¹⁰BN Flakes

A. K. Dąbrowska¹, I. Nowik¹, R. Bożek¹, M. Tokarczyk¹, K. Ludwiczak¹, B. Furtak¹, P. Tatarczak¹, P. Maksymiuk¹, J. Iwański¹, G. Cassabois², B. Gil², T. Poirier³, J. Li³, J.H. Edgar³, J. Binder¹, and A. Wyszomatek¹, ¹University of Warsaw, Poland, ²Université de Montpellier, France, ³Kansas State University, USA

[TuB3] Optical Devices

Session Date	July 14 (Tue.), 2026
Session Time	14:00–16:00
Session Room	Room B (Baekrok Hall B, 1F)
Session Chairs	Dr. Amélie Dussaigne (CEA-Leti, France), Dr. Michael Jetter (University of Stuttgart, Germany)

[TuB3–1] [Invited]

14:00–14:30

Polarization Manipulation in III-Nitride Light Emitting Devices

Fang Liu¹, Yucheng Guo¹, Zexing Yuan¹, Xin Gao², Zhaoying Chen¹, Ping Wang¹, Hailin Peng², Bo Shen¹, Zhongfan Liu², and Xinqiang Wang¹, ¹Peking University, China, ²Great Bay University, China

[TuB3–2]

14:30–14:45

Impact of Thermal Budget and Carrier Gas Switching on the Performance of Multi-Color Cascaded LEDs

Christoph Berger, Armin Dadgar, Florian Hörich, and André Strittmatter, Otto-von-Guericke-University Magdeburg, Germany

[TuB3–3]

14:45–15:00

MOVPE Growth of Monolithic Multi-Band SWIR–MWIR InAsSb/InAsPSb MQW Heterostructures on InP Enabled by Strain Engineering

Dongwan Kim¹, Thuy Thi Nguyen¹, Minkyong Kim², Jungwon Yoon², Thu Trang Thi Bui^{1,3}, Dayoung Kim^{1,3}, Changsug Lee², Byong Sun Chun^{1,3}, and Sang Jun Lee^{1,2,3}, ¹Korea Research Institute of Standards and Science, Korea, ²IRSpectra co., LTD., Korea, ³Korea Research Institute of Standards and Science, Korea

[TuB3–4]

15:00–15:15

Investigating Surface Treatments on GaN p–i–n Avalanche Photodiodes with Shallow Beveled Edge Termination

Alexandra Dolgashev¹, Davide Balzerani¹, A. Nepomuk Otte¹, Theeradetch Detchprohm¹, Dhrubab Biswas², Subhra Chowdhury², and Russell D. Dupuis¹, ¹Georgia Institute of Technology, USA, ²Magnolia Optical Technologies, USA

[TuB3-5]

15:15–15:30

Efficiency Optimization of 222 nm AlGaIn-Based Far-UVC LEDs

Kexin Ren, Zhiyuan Liu, Haicheng Cao, Tingang Liu, Zixian Jiang, and Xiaohang Li, King Abdullah University of Science and Technology, Saudi Arabia

[TuB3-6]

15:30–15:45

Fast MOVPE Growth of AlGaAs/GaAs Dual-Junction Solar Cells

D. Lackner¹, C. Klein¹, M. Klitzke¹, J. Schön^{1,2}, J. Ohlmann¹, and F. Dimroth¹, ¹Fraunhofer Institute for Solar Energy Systems ISE, Germany, ²University of Freiburg, Germany

[TuB3-7]

15:45–16:00

Composition Pulling Effect of Indium and Origin of High-Energy Peak in InGaIn-Based Red Micro-LEDs

Chunyu Liu¹, Panpan Li^{1,2}, Hira Usman³, Anders Gustafsson³, Yang Su¹, Zihan Xia¹, Weifang Lu^{1,2}, Xu Yang^{1,2}, JinChai Li^{1,2}, Hongjian Li^{1,2}, Kai Huang^{1,2}, Zhaoxia Bi², Lars Samuelson³, and Rong Zhang^{1,2}, ¹Xiamen University, China, ²Future Display Institute of Xiamen, China, ³Southern University of Science and Technology, China

[WeA1] Gallium Oxides

Session Date	July 15 (Wed.), 2026
Session Time	10:25–12:10
Session Room	Room A (Baekrok Hall A, 1F)
Session Chairs	Dr. Dongwan Kim (Korea Research Institute of Standards and Science, Korea), Prof. Seokho Moon (Ajou University, Korea)

[WeA1–1] [Invited]

10:25–10:55

Atomic-Scale Interface and Polarity Engineering in III-Nitride and β -Ga₂O₃ Heterostructures by Hot-Wall MOVPE

Minho Kim¹, Alexis Papamichail², Ingmar Persson³, Hengfang Zhang¹, Dat Q. Tran¹, Ken Goto², Andri Dhora², Daniela Gogova¹, Per O. Å. Persson¹, Plamen P. Paskov¹ and Vanya Darakchieva^{1,2},
¹Linköping University, Sweden, ²Lund University, Sweden

[WeA1–2]

10:55–11:10

Effects and Applications of Nuclear Radiation in Ga₂O₃

Yoonho Choi, Jaeheon Jung, Hae Seong Hwang, and Roy B.Chung, Kyungpook National University, Korea

[WeA1–3]

11:10–11:25

AlN Mesa Sidewall Passivation Enables Thermally Stable Reverse Blocking in Vertical β -Ga₂O₃ Power Diodes

Ganesh Mainali, Nuzhat Yousf, Dhanu Chettri, Haicheng Cao, Leo Raj Solay, and Xiaohang Li, King, Abdullah University of Science and Technology, Kingdom of Saudi Arabia

[WeA1–4]

11:25–11:40

High Efficiency Growth of (001) β -Ga₂O₃ Films by Cold-Wall MOCVD

Shun Ukita and Hironori Okumura, University of Tsukuba, Japan

[WeA1-5]

11:40-11:55

Heteroepitaxial Growth of β -Ga₂O₃ on High-Angle Off-Cut Sapphire via MOCVD

Ji-Hyeon Park, Hyeong-Yun Kim, JungHun Choi, and Dae-Woo Jeon, Korea Institute of Ceramic Engineering and Technology, Korea

[WeA1-6]

11:55-12:10

Influence of Substrate Atomic Symmetry on the Epitaxy and Rotational Domain Formation of κ -Ga₂O₃

Ha Young Kang, Jaeheon Jung, Young Soo Hwang, and Roy B. Chung, Kyungpook National University, Korea

[WeB1] UV Devices

Session Date	July 15 (Wed.), 2026
Session Time	10:25–12:10
Session Room	Room B (Baekrok Hall B, 1F)
Session Chairs	Prof. Young Joon Hong (Sungkyunkwan University, Korea) Prof. JunShuai Xue (Xidian University, China)

[WeB1–1] [Invited]

10:25–10:55

The Role of Point Defects in AlGaIn-Based Far-UVC LEDs

T. Wernicke¹, J. Höpfner¹, M. Schilling¹, I. Prozeev², K. Loeto³, J. Ruschel⁴, D. Cameron^{5,6}, T. Kolbe⁴, J. Pacuk⁷, M. Guttman⁴, J. Rass⁴, G. Kusch⁷, Z.S. Pehlivan⁷, H.K. Cho⁴, S. Hagedorn⁴, N. Roccato⁷, N. Susilo¹, P. Edwards⁵, A. Muhin¹, F. Piva⁷, G. Cardinali¹, C. De Santi⁷, M. Buffolo⁷, N. Trivellin⁷, Marco Pilati⁷, M.R. Wagner³, M. Weyers⁴, S. Einfeldt⁴, G. Meneghesso⁷, E. Zanoni⁷, R.W. Martin⁵, R.A. Oliver⁸, J. Lähnemann³, F. Tuomisto², M. Meneghini⁷, M. Kneissl^{1,4}, ¹Technische Universität Berlin, Germany, ²University of Helsinki, Helsinki, Finland, ³Paul-Drude-Institut, Berlin, Germany, ⁴Ferdinand-Braun-Institut, Germany, ⁵University of Strathclyde, United Kingdom, ⁶Gatan, Inc., Pleasanton, United States, ⁷University of Padua, Italy, ⁸University of Cambridge, United Kingdom

[WeB1–2] [Invited]

10:55–11:25

MOVPE Growth of UV-B Laser Diodes on Sapphire Substrate and Realization of Room-Temperature Continuous-Wave Operation

Motoaki Iwaya, Takumu Saito, Rintaro Miyake, Sho Iwayama, Tetsuya Takeuchi, Satoshi Kamiyama, and Hideto Miyake, Meijo University, Japan

[WeB1–3]

11:25–11:40

Low-Leakage Shallow-Beveled Mesa GaN Ultraviolet Avalanche Photodiodes with AlGaIn Windows for Improved Responsivity

Davide Balzerani¹, Alexandra V. Dolgashev¹, A. Nepomuk Otte¹, Theeradetch Detchprohm¹, Subhra Chowdhury², Dhruves Biswas², and Russell D. Dupuis¹, ¹Georgia Institute of Technology, USA, ²Magnolia Optical Technologies, USA

[WeB1-4]

11:40-11:55

MOVPE-Grown p-AlGaIn with Coupled Polarization and Impurity Doping Achieving 12% EQE in Deep-Ultraviolet LEDs

Hongyu Liu¹, Li Chen², Jichun Ye¹, and Wei Guo¹, ¹Ningbo Institute of Materials Technology and Engineering, Chinese Academy of Sciences, ²Yongjiang Laboratory, China

[WeB1-5]

11:55-12:10

Nanoscale Characterization of Carrier Capture into the Active Region of Far-UVC LEDs

Frank Bertram¹, Gordon Schmidt¹, Niklas Dreyer¹, Peter Veit¹, Jürgen Christen¹, M. Ajmal Khan², Kohei Fujimoto^{2,3}, M. Nawaz Sharif^{2,3}, Hiroyuki Yaguchi³, and Hideki Hirayama², ¹Otto-von-Guericke University Magdeburg, Germany, ²RIKEN Cluster for Pioneering Research, Japan, ³Saitama University, Japan

[WeA2] Polarity-Engineered Epitaxy

Session Date	July 15 (Wed.), 2026
Session Time	13:30–15:15
Session Room	Room A (Baekrok Hall A, 1F)
Session Chairs	Prof. Ryota Akaike (Mie University, Japan) Prof. Arnab Bhattacharya (Tata Institute of Fundamental Research, India)

[WeA2-1] [Invited]

13:30–14:00

AlN-based Field-Effect Transistors Enabled by Polarization-Engineered Structures

Masanobu Hiroki, NTT Inc., Japan

[WeA2-2]

14:00–14:15

Suppression of Mn Segregation in N-Polar GaN on Mn-Doped GaN Substrates

Shigeki Yoshida, Maui Hino, Isao Makabe, Kozo Makiyama, Junji Kotani, and Ken Nakata, Sumitomo Electric Industries, Ltd., Japan

[WeA2-3]

14:15–14:30

Metalorganic Vapor Phase Epitaxy of N-Polar GaN on Ga-Polar GaN

Kazuhisa Ikeda¹, Masahiro Uemukai², Tomoyuki Tanikawa³, Ryuji Katayama², and Atsushi Kobayashi¹,
¹Tokyo University of Science, Japan, ²The University of Osaka, Japan, ³Meijo University, Japan

[WeA2-4]

14:30–14:45

Polarity-Guided Epitaxy of h-BN on AlN Using MOVPE for 2D–3D Integration

Yuning Wang¹, Ryota Akaike¹, Kosuke Takagi¹, Tomohiro Tamano¹, Hiroki Yasunaga¹, Wentao Zhang^{2,3}, Ke Xu^{2,4,5}, and Hideto Miyake¹, ¹Mie University, Japan, ²Chinese Academy of Sciences, China, ³University of Science and Technology of China, ⁴Suzhou Nanowin Science and Technology Co., Ltd., China, ⁵Jiangsu Institute of Advanced Semiconductors, China

[WeA2-5]

14:45–15:00

Fabrication of Polarity-Inverted AlN Structure Using Oxidation Processes

Tomohiro Tamano¹, Ryota Akaike¹, Hiroki Yasunaga¹, Zentaro Akase², Shigetaka Tomiya², and Hideto Miyake¹, ¹Mie University, Japan, ²Nara Institute of Science and Technology, Japan

[WeA2-6]

15:00–15:15

High-Quality N-Polar GaN Growth on Silicon for Fully-Vertical GaN-on-Si Power Devices

Pineda Padilla, A., Veux, G., Barbier, F., Guy, K., Plaza Argüello, D., Vergnaud, C., Dussaigne, A., Dupont, F., and Charles, M., CEA-Leti, France

[WeB2] Visible LEDs

Session Date	July 15 (Wed.), 2026
Session Time	13:30–15:15
Session Room	Room B (Baekrok Hall B, 1F)
Session Chairs	Prof. Christophe Durand (University Grenoble Alpes, CEA, France), Prof. Qian Sun (Chinese Academy of Sciences, China)

[WeB2-1] [Invited]

13:30–14:00

3D MOVPE Enabling Lateral Integration of InGaN-Based RGB Micro-LEDs

Mitsuru Funato and Yoshinobu Matsuda, Kyoto University, Japan

[WeB2-2]

14:00–14:15

Vertical GaN-on-Si LEDs on Conducting TiAlN/TiN Buffer Layers

Armin Dadgar, Fabian Grossmann, Emine Kaynar, Christoph Berger, Jürgen Bläsing, and André Strittmatter, Otto-von-Guericke-Universität Magdeburg, Germany

[WeB2-3]

14:15–14:30

From Relaxed InGaN Pseudo-Substrate to Red Emitting Quantum Wells (QWs)

H. Damen¹, D. P. Fowan³, M. Nemoz³, S. Vézian³, B. Damilano³, A. Trassoudaine², and A. Dussaigne¹,
¹Université Grenoble Alpes, France, ²Université Clermont Auvergne, France, ³Université Côte d'Azur, France

[WeB2-4]

14:30–14:45

Enhanced Light Output in Nanorod Micro-LEDs through Optical Feedback and Structural Engineering

Min-Seok Lee¹, Sung-Un Kim¹, Jeong-Kyun Oh¹, Geon-Yeong Kim¹, Dae-Young Um², Cheul-Ro Lee¹, and Yong-Ho Ra¹, ¹Jeonbuk National University, Korea, ²Kumoh National Institute of Technology, Korea

[WeB2-5]

14:45-15:00

Modeling of Efficient Dual-Wavelength Blue-Green InGaN LEDs

Hao Lee¹, You-Jia Chen², Huai-Chin Huang¹, Li-Sheng Hu², Hsing-Ting Hung³, Chuang-Yu Hsieh³, Tien-Chang Lu², Chia-Yen Huang², and Yuh-Renn Wu¹, ¹National Taiwan University, Taiwan, ²National Yang Ming Chiao Tung University, Taiwan, ³Advanced Optoelectronic Technology Inc., Taiwan

[WeB2-6]

15:00-15:15

Impact of V-Defect Geometry and Random Alloy Fluctuations in Cylindrical Simulations of Low-Bias Leakage in Red InGaN LEDs

Pei-Shan Hsieh and Yuh-Renn Wu, National Taiwan University, Taiwan

[WeA3] Advanced Growth Techniques - II

Session Date	July 15 (Wed.), 2026
Session Time	15:35–17:05
Session Room	Room A (Baekrok Hall A, 1F)
Session Chairs	Prof. Yong-Ho Ra (Jeonbuk National University, Korea), Prof. Si-Young Bae (Pukyong National University, Korea)

[WeA3–1] [Invited]

15:35–16:05

Epitaxial Growth of III–Nitride Semiconductors and Their LED Structures

Zhe Zhuang, Yimeng Sang, and Bin Liu, Nanjing University, China

[WeA3–2]

16:05–16:20

Applications of Mist Chemical Vapor Deposition in the Deposition of Inorganic Functional Thin Films

Zaichun Sun and Bingchu Mei, Wuhan University of Technology, China

[WeA3–3]

16:20–16:35

Hybrid 3D/2D Growth Mode for High–Quality AlN on Si(111) by MOCVD

Mingtao Nong¹, Haicheng Cao¹, Tingang Liu¹, Patsy A Miranda Cortez¹, Glen Isaac Maciel García¹, Xiao Tang², Che–Hao Liao³, Kexin Ren¹, Zixian Jiang¹, and Xiaohang Li¹, ¹King Abdullah University of Science and Technology, Saudi Arabia, ²University of Bristol, United Kingdom, ³National Yunlin University of Science and Technology, Taiwan

[WeA3–4]

16:35–16:50

Novel MOCVD Selective Area Growth of InGaAs/GaAs/AlGaAs Using SOI Shadow Mask and Its Application to COMD Free 980nm Laser

Akihiko Kasukawa¹, I. Novitasari¹, Z–J. Sun¹, A. Albert¹, S. L. Lee¹, and M. Arai², ¹National Taiwan University of Science and Technology, Taiwan, ²University of Miyazaki, Japan

Formation Mechanisms of Cubic GaN Grown in Si Inverted Pyramids by Selective Area OMVPE

David A. Lister, Cyan Kim, Melissa Radford, Sarah Fortin, Karen L. Kavanagh, and Simon Watkins,
Simon Fraser University, Canada

[WeB3] Nitrides for Electronics - III

Session Date	July 15 (Wed.), 2026
Session Time	15:35–17:05
Session Room	Room B (Baekrok Hall B, 1F)
Session Chairs	Prof. Okhyun Nam (Tech University of Korea, Korea), Dr. Isabel Streicher (Cornell University, USA)

[WeB3–1]

15:35–15:50

In-Depth Study of Localised Growth of GaN on Silicon Leading to 1 kV, 5 mOhm.cm² Vertical Diodes

M. Charles¹, D. Plaza-Arguello¹, M. El Amrani¹, T. Kaltsounis¹, H. El Rammouz¹, Z. M'Qaddem¹, T. Guillemin², S. Torrenco¹, M. Lafossas¹, N. Rochat¹, Y. Cordier², and J. Buckley¹, ¹CEA Leti, France, ²Univ. Côte d'Azur, France

[WeB3–2]

15:50–16:05

Investigating the Impact of High-Temperature Ohmic Contact Annealing on AlN Schottky Barrier Diodes

Haicheng Cao¹, Mingtao Nong¹, Tingang Liu¹, Zixian Jiang¹, Zhiyuan Liu¹, Saravanan Yuvaraja¹, Xiao Tang², Biplab Sarkar³, Ying Wu¹, and Xiaohang Li¹, ¹King Abdullah University of Science and Technology, Saudi Arabia, ²University of Bristol, United Kingdom, ³Indian Institute of Technology, India

[WeB3–3]

16:05–16:20

Submicron Ultrafast Raman Thermography System for Power Semiconductor Devices and Next Generation Semiconductors.

Jung-Hoon Song^{1,2}, Youngboo Moon^{1,3}, Seungyoung Lim¹, Gye Eun Choi¹, and Jaesun Kim¹, ¹AccuOptotec Co., Korea, ²Kongju National University, Korea, ³UJL Co., Korea

[WeB3–4]

16:20–16:35

Understanding the Impact of n-Type GaN Drift Layer Growth Conditions on 300 mm Wafer Bow for GaN-on-Si Vertical Devices

G. Bouhet, F. Barbier, C. Vergnaud, H. El Rammouz, A. Chaumont, M. Lafossas, P. Valentin, V. Balan, A. Olivier, J. Buckley, C. Masante, M. Charles, and S. Torrenco, CEA-Leti, France

[WeB3-5]

16:35-16:50

SiO_x Interlayer for Reverse Current Suppression in p-GaN Diodes

Zixian Jiang and Xiaohang Li, King Abdullah University of Science and Technology, Saudi Arabia

[WeB3-6]

16:50-17:05

Crack-Free Si-Doped AlN on Si(111) for Fully Vertical AlN Schottky Barrier Diodes

Haicheng Cao¹, Mingtao Nong¹, Xiao Tang², Biplab Sarkar³, Ying Wu¹, and Xiaohang Li¹, ¹King Abdullah University of Science and Technology, Saudi Arabia, ²University of Bristol, United Kingdom, ³Indian Institute of Technology, India

[ThA1] Al-rich AlGaN

Session Date	July 16 (Thu.), 2026
Session Time	08:30–09:45
Session Room	Room A (Baekrok Hall A, 1F)
Session Chairs	Prof. Hoe Tan (The Australian National University, Australia), Prof. Sang Wan Ryu (Chonnam National University, Korea)

[ThA1–1]

08:30–08:45

Interface Engineering on Enhancement-Mode Al-Rich $\text{Al}_{0.8}\text{Ga}_{0.2}\text{N}$ MOSFET Enabled by Atomic Layer Etching

Tingang Liu, Haicheng Cao, Mingtao Nong, and Xiaohang Li, King Abdullah University of Science and Technology, Saudi Arabia

[ThA1–2]

08:45–09:00

Impact of AlN/AlGaN Superlattice Structure on Proton-Induced Transport in Al-Rich AlGaN Channel HEMTs

Shyam Mohan, Joocheol Jeong, Jaejin Heo, Hyogeun Cho, Mingoo Jo, Minyeong Kim, and Okhyun Nam, Tech University of Korea, Korea

[ThA1–3]

09:00–09:15

Formation of Low-Resistance Ohmic Contacts to Al-Rich AlGaN Using Compositionally Graded n-AlGaN

Riku Ando, Ryota Akaike, Shozabro Tanaka, Hiroki Yasunaga, Takao Nakamura, and Hideto Miyake, Mie University, Japan

[ThA1–4]

09:15–09:30

Investigation of Low-Resistivity Au-Free Metal Contact on n-Type $\text{Al}_x\text{Ga}_{1-x}\text{N}$ ($x \geq 0.8$)

Tingang Liu, Haicheng Cao, Mingtao Nong, and Xiaohang Li, King Abdullah University of Science and Technology, Saudi Arabia

High-Temperature and Radiation Responses of Al-Rich AlGaN Channel HEMTs Employing Various Gate Metals

Mingoo Jo¹, Joocheol Jeong¹, Shyam Mohan¹, Jaejin Heo¹, Hyogeun Cho¹, Minyeong Kim¹, Dongseok Kim², Jiun Oh³, Minji Kim³, and Okhyun Nam¹, ¹Tech University of Korea, Korea, ²Korea Atomic Energy Research Institute, Korea, ³Korea Institute of Energy Technology, Korea

[ThB1] Structural Analysis

Session Date	July 16 (Thu.), 2026
Session Time	08:30–10:15
Session Room	Room B (Baekrok Hall B, 1F)
Session Chairs	Dr. Masanobu Hiroki (NTT Inc., Japan), Prof. Soon-Ku Hong (Chungnam University, Korea)

[ThB1–1] [Invited]

08:30–09:00

MOVPE Growth of AlGa_N with Step-and-Terrace Structures on AlN Templates

Ryota Akaike, Hiroki Yasunaga, Takao Nakamura, and Hideto Miyake, Mie University, Japan

[ThB1–2]

09:00–09:15

Atomic Structure of Antiphase Domain Boundaries in III–V Semiconductor Layers Epitaxially Grown on Silicon (100) or Obtained by Direct Wafer Bonding

Gilles Patriarche¹, Konstantinos Pantzas¹, Alexandre Beck², Laurent Pedesseau², Rozenn Gautheron-Bernard², Nathaniel Findling¹, Ludovic Largeau¹, Grégoire Beaudoin¹, Jean-Baptiste Rodriguez³, Eric Tournié³, Isabelle Sagnes¹, and Charles Cornet², ¹Centre national de la recherche scientifique, France, ²Institut National des Sciences Appliquées de Rennes, France, ³Université de Montpellier, France

[ThB1–3]

09:15–09:30

Interplay of Carrier Recombination and Separation in an InGa_N MQW LED Investigated by Nano-STEM-EBIC and -STEM-CL

Niklas Dreyer, Frank Bertram, Gordon Schmidt, Luca Greczmiel, Christoph Berger, Armin Dadgar, André Strittmatter, and Jürgen Christen, Otto-von-Guericke-University Magdeburg, Germany

[ThB1–4]

09:30–09:45

Vacancy Properties and Their Clustering in GaN MOVPE Epitaxial Layers and Heterostructures

Alice Hospodková¹, Jakub Čížek², František Hájek¹, Karla Kuldová¹, Tomáš Hubáček¹, Jiří Pangrác¹, Maciej Oskar Liedke³, Eric Hirschmann³, Maik Butterling³, and Andreas Wagner³, ¹Institute of Physics of the Czech Academy of Sciences, Czech Republic, ²Charles University, Czech Republic, ³Helmholtz-Zentrum Dresden-Rossendorf, Germany

[ThB1–5]

09:45–10:00

Revisiting the Stacking Faults in 4H–SiC

Soon-Ku Hong¹, Moonkyong Na², Hyundon Jung³, and Wook Bahng², ¹Chungnam National University, Korea, ²Korea Electrotechnology Research Institute, Korea, ³Horiba STEC Korea, Korea

[ThB1–6]

10:00–10:15

Analytical X-Ray Solutions for Thin Film and Wafer Analysis

Andrey Zameshin¹, Alexey Pustovarenko¹, Amardeep Bharti¹, Choong Ki (Daniel) Lee², and Shuji Kusano³, ¹Malvern Panalytical, Netherlands, ²Spectris Korea Ltd, Korea, ³Spectris Co. Ltd, Japan

[FrA1] Nanowires

Session Date	July 17 (Fri.), 2026
Session Time	10:20–12:05
Session Room	Room A (Baekrok Hall A, 1F)
Session Chairs	Prof. Yong-Ho Ra (Jeonbuk National University, Korea), Dr. Elisa Maddalena Sala (The University of Sheffield, United Kingdom)

[FrA1–1] [Invited]

10:20–10:50

Growth of Core–Shell Microwire UV Emitters: From UV–A Toward UV–C

Houssein Mohaidly, Lucie Valéra, Vincent Grenier, Lucas Jaloustre, Saron R.S. De Mello, C. Petit-Etienne, E. Pargon, Gwénolé Jacopin, and Christophe Durand, Université Grenoble Alpes, France

[FrA1–2]

10:50–11:05

Facile Electrochemically Driven Defect Passivation of MOCVD–Grown GaN Nanowires Toward Durable and High–Performance Photoelectrodes

Fawad Tariq and Sang–Wan Ryu, Chonnam National University, Korea

[FrA1–3]

11:05–11:20

Interface Engineering of MOVPE–Grown GaN Nanowire Photoanodes with FeOOH/NiO Layers for Durable Alkaline Water Oxidation

Khaled Abdelkarem and Sang–Wan Ryu, Chonnam National University, Korea

[FrA1–4]

11:20–11:35

Tailoring Cu–Pd Nanoclusters on GaN Nanowires for Efficient CO₂–to–C₂H₄ Photoelectrochemical Conversion

Sneha S Lavate, In–Seo Na, Jeong–Kyun Oh, Sung–Un Kim, Min–Seok Lee, and Yong–Ho Ra, Jeonbuk National University, Korea

[FrA1-5]

11:35-11:50

Interfacial Engineering of Ni(OH)₂ Decorated GaN Nanorods for Enhanced Photoelectrochemical Formate Production.

Shivraj Mahadik, Jeong-Kyun Oh, Sung-Un Kim, Min-Seok Lee, Hussain Musharrof, and Yong-Ho Ra, Jeonbuk National University, Korea

[FrA1-6]

11:50-12:05

Selective-Area Growth of Vertical InP Nanowires on Si(111) Substrate

Yuki Azuma¹, Keita Taniyama¹, Wei Wen Wong², Junichi Motohisa¹, Hark Hoe Tan², and Katsuhiro Tomioka¹, ¹Hokkaido University, Japan, ²The Australian National University, Australia

[FrB1] Emerging Nitrides

Session Date	July 17 (Fri.), 2026
Session Time	10:20–12:05
Session Room	Room B (Baekrok Hall B, 1F)
Session Chairs	Dr. Ji-Hyeon Park (Korea Institute of Ceramic Engineering and Technology, Korea), Dr. An-Na Cha (Chonnam National University, Korea)

[FrB1–1] [Invited]

10:20–10:50

MOCVD of Novel Nitrides for Sustainable Electronics – AlScN and AlYN

Isabel Streicher¹, Stefano Leone², Huili Grace Xing¹, Debdeep Jena¹, and Hari Nair¹, ¹Cornell University, USA, ²Fraunhofer Institute of Applied Solid State Physics IAF, Germany

[FrB1–2]

10:50–11:05

Growth and Structural Characterization of AlYN/GaN/Sapphire by Metalorganic Chemical-Vapor Deposition

Shun Narita, Yudai Shimizu, Daisuke Iida, Keitaro Ikejiri, and Kazutada Ikenaga, Nippon Sanso Corporation, Japan

[FrB1–3]

11:05–11:20

Evaluation of Vertical B GaN Neutron Detectors Using Free-Standing GaN Substrate for Neutron Imaging

S. Takenaka¹, R. Kudo¹, K. Ando¹, Y. Maeda¹, E. Kokubo², K. Takagi¹, T. Oda³, M. Hino⁴, Y. Honda², H. Amano², Y. Inoue¹, T. Aoki¹, and T. Nakano¹, ¹Shizuoka University, Japan, ²Nagoya University, Japan, ³The University of Tokyo, Japan, ⁴Kyoto University, Japan

[FrB1–4]

11:20–11:35

Thickness Dependence of Structural and Radiation Detection Characteristics of B GaN Neutron Detectors for In-Core Nuclear Instrumentation

R. Kudo¹, E. Kokubo², K. Takagi¹, Y. Sakurai³, H. Yashima³, T. Makino⁴, T. Ohshima⁴, Y. Honda², H. Amano², Y. Inoue¹, T. Aoki^{1,3}, and T. Nakano^{1,3}, ¹Shizuoka University, Japan, ²Nagoya University, Japan, ³Kyoto University, Japan, ⁴National Institutes for Quantum Science and Technology, Japan

[FrB1–5]

11:35–11:50

Fabrication and Evaluation of BAlGaN Neutron Detector Designed for Operation in Harsh Environments

Ryusuke Suzuki¹, Ryohei Kudo¹, Toru Oikawa¹, Hinata Nakanishi¹, Eito Kokubo², Genichiro Wakabayashi³, Yoshio Honda², Hiroshi Amano², Yoku Inoue¹, Toru Aoki¹, and Takayuki Nakano¹,
¹Shizuoka University, Japan, ²Nagoya University, Japan, ³Kindai University, Japan

[FrB1–6]

11:50–12:05

Thickness-Dependent Compensation in Polarization-Doped Graded AlGaIn Grown by MOVPE

Abhishek Chatterjee¹, Z. S. Pehlivan¹, M. Frentrop¹, B. Harding¹, G. Kusch¹, M. J. Kappers¹, D. J. Wallis^{1,2}, and R. A. Oliver¹, ¹University of Cambridge, United Kingdom, ²Cardiff University, United Kingdom