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The primary goal of	this workshop was t	he promotion of scient	ce by providing a foru	im for exchange	of knowledge among scientists and
engineers working in	n the field of III-nitri	de semiconductor mat	erials and devices. IV	VN 2016 was the	e year's prime forum for research results
in this fascinating m	aterial system.				
ONR funding suppo	rt allowed the confe	rence to offer a reduce	d registration fee for	student participa	nts, who gained exposure to the new
advances in semicor	ductor growth fabri	cation technology dev	vice physics, and entr	epreneurship in a	electronics and optoelectronics. The
timing of this works	hon was nerfect for t	this generation of stud	ents to learn how the	new science and	technology of semiconductors is
developing. In addit	tion the Workshon	also featured for the fir	ents to rear now the	courses focused	on important topics of III-N research
including advanced	motorial abaractorize	tion Gall on Si david	and nowar alactro	nice These lass	one will be useful beyond
somioonductor roson	rah as these student	a will be able to apply	them to any future n	mes. These less	technologies that they will encounter
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cc: Defense Technical Information Center

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FINAL REPORT

2016 International Workshop on Nitride Semiconductors

Award No.: N00014-16-1-2845

P.I.- Prof. Tomás Palacios

Department of Electrical Engineering and Computer Science Massachusetts Institute of Technology

Submitted to:

Dr. Paul Maki Office of Naval Research

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January 2017

2016 International Workshop on Nitride Semiconductors

P.I.- Prof. Tomás Palacios

Department of Electrical Engineering and Computer Science Massachusetts Institute of Technology

Summary

Nitride-based semiconductors are among the most promising materials for the next generation of electronic and optoelectronic applications. Through this project, ONR supported the organization of the 2016 International Workshop on Nitride Semiconductors (IWN). Thanks to the ONR funding, we were able to reduce the registration cost of 26 graduate students who attended this Conference. This support allowed the student participants to gain exposure to the new concepts of gallium nitride materials and devices.

2017 IWN

Nobel laureate Prof. I. Akasaki started the International Workshop on Nitride Semiconductors (IWN) and it is the preeminent international conference in the field of III-Nitride semiconductors. The conference is truly international with more than 33 countries represented in the 2016 edition. All types of research institutions (academia, government research institutes and industrial laboratories) are represented.

United States	189	Germany	89
Canada	8	United Kingdom	51
Mexico	3	France	41
Bahamas	1	Poland	32
		Switzerland	11
Japan	124	Spain	9
China	65	Sweden	9
South Korea	59	Ireland	5
India	23	Italy	5
Taiwan	11	Lithuania	5
Saudi Arabia	10	Slovakia	3
Singapore	8	Finland	2
Hong Kong	5	Albania	1
Israel	3	Belgium	1
Malaysia	2	Brazil	1
Russian Federation	2	Denmark	1
Qatar	1	Netherlands	1

Figure 1. Number of accepted papers per country.

According to their guiding principles, the International Advisory Committee (IAC) tasks suitable workshop organizers with the duty to organize, arrange, and execute the workshop every two years in alternating locations of its





Figure 2. Plenary session of the IWN 2016.

North America. Along those principles, workshops have been held: 2000 Nagoya (K. Kishino and S. Sakai); 2002 Aachen (H. Lueth, A. Hoffmann, and B.K. Meyer); 2004 Pittsburgh, (R.M. Feenstra and T.H. Myers); 2006 Kyoto, Japan (Y. Nanishi and H. Amano); 2008 Montreux, Switzerland (N. Grandjean and M. Ilegems); 2010 Tampa, USA (Christian Wetzel and Asif Khan); 2012, Sapporo, Japan (H. Amano and Y. Kawakami); 2014 Wroclaw, Poland (T. Suski and D. Hommel).

The IAC charged Prof. Alan Doolittle and Prof. Tomás Palacios as chairs to organize, arrange and execute IWN 2016 on the East coast of the U.S.A. to responsibly continue the line of events with its imperative to provide a forum for all fundamental issues surrounding the group-III nitrides for efficiency applications. The Materials Research Society was contracted for all administrative tasks of the workshop, including bookkeeping and fiscal responsibility.

As a workshop venue, the Hilton Orlando Buena Vista, Orlando, Florida, U.S.A. was contracted during the week of October 2 - 7, 2016. Prof. Siddharth Rajan (Ohio State University) and Dr. Stacia Keller (University of California - Santa Barbara) have taken on the charge as Program co-Chairs and will be assisted by Prof. Debdeep Jena (Cornell University) as Program Chair USA, Prof. Kei May Lau (Hong Kong University of Science and Technology, China) as Program Chair Asia, and Prof. Nicolas Grandjean (Ecole Polytechnique Federale de Lausanne, Switzerland) as Program Chair Europe.

Prof. Daniel Feezell (University of New Mexico) has taken on the charge as Proceedings Chair. Proceedings have been contracted to Wiley-VCH Verlag GmbH & Co. KGaA for a special issue in physica status solidi, the journal that has published a continuous sequence number of previous proceedings of IWN.

The technical

program



Figure 3. Short course on TCAD device simulation.

conference was composed by a total of 781 accepted papers, selected from all the submissions by an international technical program committee led by Dr. Stacia Keller and Prof. Siddharth Rajan. 436 of those papers were selected for oral talks, while there were 345 posters. These papers were divided into 6 topical areas: Growth, Optical Devices, Electronic Devices, Basic Material Properties, Nanostructures, and Novel Materials and Devices. The table below shows the number of papers in each topic.

the

of

A	Growth	151
в	Optical Devices	114
с	Electronic Devices	139
D	Basic Material Properties	186
E	Nanostructures	106
F	Novel Materials and Devices	85

Figure 4. Number of papers per topical area.

The conference also hold two short courses, for the first time in its history. The first short course focused on "TCAD for Nitride Semiconductor Device Design and Analysis", while the second one was on "(Al, Ga, In)N Characterization Using X-Ray Diffraction", with a total of 80 attendees. The following three rump sessions were also organized:

Rump Session I:	Is There a Suitable Future for Ordered Nanostructures as Real Devices?
International North	Chair: Enrique Calleja
Rump Session II:	Do We Really Need Better LEDs?
International Center	Chair: Michael Krames
Rump Session III:	The Future of Wide-Bandgap Electronics
International South	Chair: Robert Coffie

Intellectual merit

This ONR award was key for the successful organization of the 2016 International Workshop on Nitride Semiconductors. With close to 800 attendees, this was the largest event of the year for the III-nitride community. This conference was very effective in introducing the materials science and device physics communities to the most recent innovations and developments in the field of GaN material growth, characterization and devices.

Thanks to the ONR support, we were able to reduce the student registration fee for the short course and to provide partial travel support to 26 students. The name of these students is available upon request.

These students were selected by contacting numerous universities (University of Notre Dame, University of Maryland, University of California – Santa Barbara, MIT, Penn State...) and asking them to submit student papers and send their best students to the conference. Among all the students attending the conference and presenting posters, the conference organizers selected three for the "2016 IWN Best Student Paper Award."

Broader Impact

IWN provided student participants with an opportunity to gain exposure to the most advanced and novel concepts in gallium nitride research, both in materials and devices.

The timing of the conference was ideal for this generation of students to learn how this new family of semiconductors has developed and how companies all around the world are positioning themselves to take advantage of the new opportunities enabled by GaN. These lessons will be useful beyond current GaN devices, as these students will be able to apply them to any future new materials and technologies that they will encounter during their career.

Financial Information

The budget provided by this ONR grant allowed reducing the registration fees of 26 graduate students by approximately 50% with respect to the fees paid by the regular attendees.



SPECIAL THANKS!

IWN 2016 has been funded, in part, by the generous contributions of these organizations.

CONFERENCE SUPPORT



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WELCOME TO THE CONFERENCE

On behalf of the Conference Chairs and Committee Members, it is with great pleasure that we welcome you to the International Workshop on Nitride Semiconductors (IWN 2016). We are confident this Conference will continue the IWN tradition of communicating the newest results in all aspects of III-nitride semiconductor science, engineering and industry.

Honorary Chair

M. Asif Khan, University of South Carolina

Conference Co-Chair Alan Doolittle, Georgia Institute of Technology

Conference Co-Chair

Tomás Palacios, Massachusetts Institute of Technology

Technical Program Co-Chair

Stacia Keller, University of California, Santa Barbara

Technical Program Co-Chair Siddharth Rajan, The Ohio State University

Invited Regional Chairs Americas

Debdeep Jena, Cornell University

Asia

Kei May Lau, Hong Kong University of Science and Technology

Europe

Nicolas Grandjean, École Polytechnique Fédérale de Lausanne

Proceedings Chair

Daniel Feezell, University of New Mexico

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Technical Program

CONFERENCE HIGHLIGHTS

THE IWN PROGRAM

Scientists from around the world will converge in Orlando, Florida, this week to share ideas, present technical information and contribute to the advancement of III-nitride semiconductors. Featuring 802 oral/poster presentations, IWN 2016 offers a strong program of plenary, invited and contributed talks and poster presentations covering the newest results on materials, optoelectronic devices, electronic devices, advanced new device concepts and applications and theory.

CONFERENCE BADGE

Badges are required at all times within the Conference venue.

RECORDING/PHOTO POLICY

Recording or photographing Conference presentations, posters or displays is strictly prohibited without prior permission of the presenter.

SHORT COURSES

Start the Conference off on Sunday afternoon with one of two short courses. Featured topics are TCAD for Nitride Semiconductor Device Design & Analysis and (AI,Ga,In)N Characterization Using X-Ray Diffraction. Short courses are not included in your registration fee, and require additional purchase at the Registration Desk. Due to limited space available, registration will be on a first-come, first-served basis.

WELCOME RECEPTION

Conference attendees are invited to the Welcome Reception on Sunday evening from 5:00 pm - 6:30 pm in the Grand Foyer. Before a full week of technical sessions, this is a great time to enjoy light snacks and refreshments, meet with old colleagues, make new connections and share information. The Welcome Reception is included in your registration fee.

POSTER SESSIONS/RECEPTIONS

Authors will be available for in-depth discussions Monday and Wednesday in the Grand Ballroom. These popular sessions are open to all Conference attendees. Complimentary refreshments will be served.

EXHIBIT

Be sure to visit the IWN exhibitors Monday through Thursday in the Grand Ballroom. Learn more about the latest products and services in the rapidly evolving world of III-nitride semiconductors. See page 31 for exhibit hours.

CONFERENCE BANQUET

Make time for this year's Conference Banquet on Wednesday evening from 7:00 pm - 9:30 pm at Epcot®'s World Showplace Pavilion and Courtyard. Tickets for this event are required and may be purchased at the Registration Desk at the on-site fee of \$75 per person for attendees and \$150 per person for companions. Admission to the Banquet is not included in the Conference registration fee. Round-trip transportation will be provided from The Hilton Orlando Lake Buena Vista. Buses will depart for the Banquet at approximately 6:30 pm.

RUMP SESSIONS

Thursday evening, choose to attend one of three Rump Sessions. Attendance for these thought-provoking sessions is free to Conference attendees.

Rump Session I: Is There a Suitable Future for Ordered Nanostructures as Real Devices? Chair: Enrique Calleja Pardo,

Universidad Politécnica de Madrid

Rump Session II: Do We Really Need Better LEDs? Chair: Michael Krames, Arkesso

Rump Session III: The Future of Wide-Bandgap Electronics Chair: Debdeep Jena, Cornell University

IWN 2016 has been managed by



CONFERENCE SERVICES www.mrs.org/conference-services Because the Experience Matters

TECHNICAL PROGRAM COMMITTEE

A: Fundamentals of Material Growth

A1: Bulk Growth

Topic Chair: Izabella Grzegory, UNIPRESS Matthias Bickermann, Institut für Kristallzüchtung Berlin Yoshihiro Kangawa, Kyushu University Elke Meissner, Fraunhofer Institute Siddha Pimputkar, University of California, Santa Barbara

A2: Epitaxial Growth

Topic Chair: Michael Kneissl, Technical University of Berlin Russell Dupuis, Georgia Institute of Technology Hiroshi Fujioka, University of Tokyo Jung Han, Yale University Ferdinand Scholz, University of Ulm Bo Shen, Peking University Euijoun Yoon, Seoul National University

B: Optical Devices

B1: Visible Devices Topic Chair: Michael Krames, Arkesso Aurelien David, SORAA Jong Kyu Kim, Pohang University of Science and Technology Katsumi Kishino, Sophia University Martin Strassburg, OSRAM Opto Semiconductors GmbH

B2: UV Devices

Topic Chair: Hideki Hirayama, RIKEN Koh Matsumoto, Taiyo Nippon Sanso Corporation Zetian Mi, McGill University Leo Schowalter, Crystal IS Inc Max Shatalov, Sensor Electronic Technology Inc.

B3: Photodetectors, Photovoltaics, Intersubband Devices

Topic Chair: Eva Monroy, Centre d'Études Nucléaires de Grenoble Ray-Hua Horng, National Chiao Tung University Oana Malis, Purdue University

C: Electronic Devices

C1: RF/mm Wave Devices

Topic Chair: Geok Ing Ng, Nanyang Technological University Colombo Bolognesi, ETH Zurich Eduardo Chumbes, Raytheon Company Masaaki Kuzuhara, Fukui University Farid Medjdoub, University of Lille Grace Xing, Cornell University

.

C2: Power Devices

Topic Chair: Tetsu Kachi, Toyota Subramaniam Arulkumaran, Nanyang Technological University Srabanti Chowdhury, University of California, Davis Matteo Meneghini, University of Padova Jun Suda, Kyoto University Chang Soo Suh, Texas Instruments Inc.

D: Basic Material Properties

D1: Materials Characterization Topic Chair: Yoichi Kawakami, Kyoto University Ulrich T. Schwarz, Technische Universität Chemnitz Jong-In Shim, Hanyang University Christian Wetzel, Rensselaer Atsushi A. Yamaguchi, Kanazawa Institute of Technology

D2: Theory and Simulation

Topic Chair: Chris Van de Walle, University of California, Santa Barbara Izabela Gorczyca, UNIPRESS Yuh-Renn Wu, National Taiwan University

E: Nanostructures

Topic Chair: Enrique Calleja, Technical University of Madrid Yasuhiko Arakawa, University of Tokyo Kris Bertness, National Institute of Standards and Technology Sergey Ivanov, loffe Institute Andreas Waag, Braunschweig University of Technology

F: Novel Materials and Devices

Topic Chair: Martin Eickhoff, University of Giessen Volker Cimalla, Fraunhofer Institute Yvon Cordier, Centre de Recherche sur l'HétéroEpitaxie et ses Applications Pierre Lefebvre, Centre National de la Recherche Scientifique / University of Montpellier Fan Ren, University of Florida

INTERNATIONAL ADVISORY COMMITTEE

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Tadeusz Suski, UNIPRESS

PLENARY SESSIONS

MONDAY 8:45 am – 12:30 pm, International Ballroom



9:00 am - 9:45 am

Martin Strassburg OSRAM Opto Semiconductors GmbH

Perspectives of III-N Optoelectronics



9:45 am - 10:30 am

Umesh Mishra University of California, Santa Barbara

Current Status and Future Directions in GaN-Based Electronics



11:00 am - 11:45 am

Hideki Hirayama RIKEN

Current Status and Future of III-Nitride Ultraviolet and THz Emitters



11:45 am - 12:30 pm

Thomas Kazior Raytheon Company

Wafer Scale Integration of GaN with Si CMOS for RF Applications

FRIDAY 9:00 am – 12:00 pm, Grand Ballroom



9:00 am – 9:45 am **Jy Bhardwaj** Lumileds

Progress in LED Technology for Solid-State Lighting



9:45 am - 10:30 am

Takashi Egawa Nagoya Institute of Technology

Heteroepitaxial Growth of GaN-on-Si and Power Device Applications

TRAVEL RESOURCES

The Conference does not endorse or sponsor any of the listings below. Information is provided as a courtesy to attendees.

PARKING

Self-parking is available at the Hilton Orlando Lake Buena Vista for \$17.00 per day, per vehicle. Valet service is also available for \$22.00 per day, per vehicle.

PUBLIC TRANSPORTATION

The LYNX is the area's public transit provider, with direct service to Disney World, downtown Orlando, Kissimmee, Sea World and more. **Ride all day for \$4.50 per person** (pay for your trip as you board the bus). Visit golynx.com for a list of stops and service schedule.

BUSINESS CENTER

A FedEx Business Center, located in the Hilton Orlando Lake Buena Vista lobby, is accessible to all Conference attendees. Relevant fees will apply.

Hours of operation:

Monday – Friday 7:30 am – 6:00 pm Saturday 8:00 am – 1:00 pm

INTERNET ACCESS

Conference attendees will have complimentary wireless internet access in their sleeping rooms at the Hilton Orlando Lake Buena Vista.

ON-SITE DINING OPTIONS

Andiamo-authentic and unique Italian bistro and grille, offering freshly prepared pasta dishes, traditional meats and grilled fish

Covington Mill Restaurant—family-friendly eatery serving breakfast buffet and lunch specials, including salads, pastas and sandwiches

John T's Sports Bar-cocktails and light meals in a relaxed atmosphere, complete with big-screen TVs for every sporting event

Rum Largo—poolside bar and café offering daily drink specials, delectable salads and sandwiches

Mainstreet Market—gourmet deli and ice cream shop all rolled into one meats, cheeses, fresh fruit, snacks, and of course, hand-scooped ice cream with freshly made waffle cones

In addition to these Hilton Orlando Lake Buena Vista dining options, there are many restaurants within walking distance of the hotel. Visit the Registration Desk for a directory of nearby restaurants.

FLOOR PLANS



DAILY SCHEDULE OF EVENTS



SUNDAY

Registration	12:00 pm - 5:00 pm	International Ballroom Foyer
Short Course I: TCAD for Nitride Semiconductor Device Design & Analysis (presented by SILVACO)	1:00 pm - 5:00 pm	Narcissus
Short Course II: (AI,Ga,In)N Characterization Using X-Ray Diffraction (presented by PANalytical B.V.)	1:00 pm - 5:00 pm	Orange Blossom
Break	3:00 pm - 3:30 pm	Grand Foyer
Welcome Reception	5:00 pm - 6:30 pm	Grand Foyer

MONDAY

Registration	7:30 am - 5:00 pm	International Ballroom Foyer
PL.1: Plenary Session I	8:45 am - 12:30 pm	International Ballroom
Break	10:30 am - 11:00 am	Grand Foyer
Lunch (not provided by Conference)	12:30 pm - 2:00 pm	
A1.1: Bulk Growth I: Bulk Crystal Growth	2:00 pm - 6:00 pm	Azalea/Begonia
A2.1: Epitaxial Growth I	2:00 pm - 3:45 pm	Camellia/Dogwood
B1.1: Visible Devices I: Visible Light Emitters	2:00 pm - 3:45 pm	International South & Center
C0.1: Electronic Devices I	2:00 pm - 6:00 pm	Narcissus/Orange Blossom
D2.1: Theory & Simulation I: Basic Materials Properties—Theory	2:00 pm - 3:45 pm	International North
F0.1: Novel Materials & Devices I	2:00 pm - 3:45 pm	Poinsettia/Quince
Exhibit	3:00 pm - 8:30 pm	Grand Ballroom
Monday Poster Session Set-up	3:00 pm - 6:30 pm	Grand Ballroom
Break	3:45 pm - 4:15 pm	Grand Ballroom
B2.1: UV Devices I: UV Emitters	4:15 pm - 6:00 pm	International South & Center
B3.1: Photodetectors, Photovoltaics, Intersubband Devices I: Photodetectors & Photovoltaics I	4:15 pm - 6:00 pm	Poinsettia/Quince
D1.1: Materials Characterization I: Basic Materials Properties—Characterization	4:15 pm - 6:00 pm	Camellia/Dogwood
E0.1: Nanostructures I	4:15 pm - 6:00 pm	International North
PS1: Poster Session I (Posters will remain through Tuesday at 4:00 pm)	6:30 pm - 8:30 pm	Grand Ballroom

Submit Your Paper for Publication

Papers from this year's International Workshop on Nitride Semiconductors (IWN 2016) will be published in two regular special issues (not conference proceedings) in *pss (a)*—*applications and materials science and pss (b)*—*basic solid state physics*.

The Guest Editors and pss Editorial Office invite IWN 2016 presenters to contribute a Feature Article (topical review) or Original Paper manuscript based on, or related to, their Conference presentation(s).

Submission Deadline—October 17, 2016

Please see the Publication page on the Conference website at www.mrs.org/iwn-2016-publication for more information, including submission instructions.

GUEST EDITORS

CHAIR Daniel Feezell Srabanti Chowdhury Shyh-Chiang Shen Jonathan Wierer

TUESDAY

Registration	7:30 am - 5:00 pm	International Ballroom Foyer
A2.2: Epitaxial Growth II: Epitaxial Growth for UV Emitters	8:30 am - 10:15 am	International South
B1.2: Visible Devices II: Long Wavelength Emitters	8:30 am - 10:15 am	International Center
C1.1: RF/mm Wave Devices I: Electronic Devices for RF Applications & Late News	8:30 am - 10:15 am	Narcissus/Orange Blossom
D1.2: Materials Characterization II: Characterization of InGaN Films & QWs	8:30 am - 10:15 am	International North
E0.2: Nanostructures II: GaN Nanostructures Synthesis & Characterization	8:30 am - 12:30 pm	Camellia/Dogwood
F0.2: Novel Materials & Devices II: Nitride MEMS & Other Novel GaN Device Architectures	9:00 am - 10:15 am	Azalea/Begonia
Exhibit	9:00 am - 12:30 pm	Grand Ballroom
Break	10:15 am - 10:45 am	Grand Ballroom
A1.2: Bulk Growth II: Bulk (AI,Ga)N Growth & Optoelectronic Devices on Bulk AIN Substrates	10:45 am - 12:30 pm	Azalea/Begonia
A2.3: Epitaxial Growth III: Growth of Semipolar & Cubic GaN	10:45 am - 12:30 pm	International South
B1.3: Visible Devices III: Visible LEDs & LDs	10:45 am - 12:30 pm	International Center
C0.2: Electronic Devices II: Devices for Power Electronics, Traps & Dielectrics	10:45 am - 12:30 pm	Narcissus/Orange Blossom
D1.3: Materials Characterization III: Characterization of (Al,Ga,In)N Films & QWs	10:45 am - 12:30 pm	International North
Lunch (not provided by Conference)	12:30 pm - 2:00 pm	
A2.4: Epitaxial Growth IV: Growth of Light Emitters & (In,Ga)N	2:00 pm - 3:45 pm	International South
B2.2: UV Devices II: UV LEDs	2:00 pm - 3:45 pm	International Center
B3.2: Photodetectors, Photovoltaics, Intersubband Devices II: Photovoltaics & Photodetectors II	2:00 pm - 3:45 pm	Azalea/Begonia
C0.3: Electronic Devices III: Electronic Devices for RF & Power Applications	2:00 pm - 3:45 pm	Narcissus/Orange Blossom
D1.4: Materials Characterization IV: Atomic Structure & Dislocation Effects & Late News	2:00 pm - 3:45 pm	International North
D2.2: Theory & Simulation II: Theory: Carrier Localization, Ordering Phenomena & Crystal Growth/ Radiative & Non-Radiative Processes in Optoelectronic Devices	2:00 pm - 6:00 pm	Camellia/Dogwood
Exhibit	3:00 pm - 5:00 pm	Grand Ballroom
Break	3:45 pm - 4:15 pm	Grand Ballroom
A2.5: Epitaxial Growth V: Growth for Electronic Devices & Basic Growth Studies	4:15 pm - 6:00 pm	International South
B2.3: UV Devices III: UV Lasers & Lasing & Late News	4:15 pm - 6:15 pm	International Center
C2.1: Power Devices I: Devices for Power Electronics I	4:15 pm - 6:15 pm	Narcissus/Orange Blossom
D1.5: Materials Characterization V: Characterization of GaN & InN	4:15 pm - 6:00 pm	International North
F0.3: Novel Materials & Devices III: Epitaxial Lift Off & Group-V Alloys	4:15 pm - 6:00 pm	Azalea/Begonia

WEDNESDAY

Registration	7:30 am - 11:30 am	International Ballroom Foyer
Wednesday Poster Session Set-up	7:30 am - 10:00 am	Grand Ballroom
A1.3: Bulk Growth III: Bulk Growth & Late News	8:00 am - 10:00 am	Azalea/Begonia
A2.6: Epitaxial Growth VI: Molecular Beam Epitaxy of III-Nitrides	8:00 am - 10:00 am	International South
B1.4: Visible Devices IV: Visible Emitters: Alloy Disorder, Loss Mechanisms & Strain Engineering	8:00 am - 10:00 am	International Center
C2.2: Power Devices II: Devices for Power Electronics II	8:00 am - 10:00 am	Narcissus/Orange Blossom
E0.3: Nanostructures III: Characterization of Nanostructures Including Tomography	8:00 am - 10:00 am	Camellia/Dogwood
D1.6: Materials Characterization VI: Characterization of Electronic Devices & Late News	8:15 am - 10:00 am	International North
F0.4: Novel Materials & Devices IV: Boron Containing & Computational Nitrides	8:15 am - 10:00 am	Poinsettia/Quince
Exhibit	9:00 am - 11:30 am	Grand Ballroom
Break	10:00 am - 11:30 am	Grand Ballroom
PS2: Poster Session II (Posters will remain through Thursday at 11:00 am)	10:00 am - 11:30 am	Grand Ballroom
Optional Tours (Buses depart between 11:30 am – 11:45 am from the Convention Entrance next to Grand Ballroom Salon 6)	11:30 am - 5:10 pm	
Conference Banquet (Buses depart at 6:30 pm from the Convention Entrance next to Grand Ballroom Salon 6)	7:00 pm - 9:30 pm	Epcot®'s World Showplace Pavilion & Courtyard

THURSDAY

Registration	7:30 am - 5:00 pm	International Ballroom Foyer
A2.7: Epitaxial Growth VII: Epitaxial Growth of (AI,Ga)N	8:00 am - 9:45 am	International South
B1.5: Visible Devices V: Visible Light Emitters: Contacts, Tunnel Junctions & Monolithic Integration & Late News	8:00 am - 10:00 am	International Center
B3.3: Photodetectors, Photovoltaics, Intersubband Devices III/F0.5: Novel Materials & Devices V: Photodetectors & Novel Devices	8:00 am – 9:45 am	Poinsettia/Quince
CO.4: Electronic Devices IV: Quantum Devices & Sensors & Late News	8:00 am - 12:30 pm	Narcissus/Orange Blossom
D1.7: Materials Characterization VII: Characterization of Electronic Devices	8:00 am – 9:45 am	International North
D2.3: Theory & Simulation III: Theory of Point Defects & Modeling of Optoelectronic Devices	8:00 am - 12:15 pm	Azalea/Begonia
E0.4: Nanostructures IV: (In,Ga)N Nanostructures: Optoelectronic Devices & Properties	8:00 am - 12:30 pm	Camellia/Dogwood
Exhibit	9:00 am - 11:00 am	Grand Ballroom
Break	9:45 am - 10:45 am	Grand Ballroom
A1.4: Bulk Growth IV/A2.8: Epitaxial Growth VIII: Tri-Halide Vapor Epitaxy of (In,Ga)N & Doping of GaN	10:45 am - 12:30 pm	International South
B1.6: Visible Devices VI: Light Emitters: Lasers	10:45 am - 12:30 pm	International Center
D1.8: Materials Characterization VIII: Characterization of (AI,Ga)N	10:45 am - 12:30 pm	International North
F0.6: Novel Materials & Devices VI: Watersplitting & Sensors	10:45 am - 12:30 pm	Poinsettia/Quince
Lunch (not provided by Conference)	12:30 pm - 2:00 pm	
A2.9: Epitaxial Growth IX: Epitaxial Growth of N-Polar Nitrides & GaN-on-Si	2:00 pm - 3:45 pm	International South
B1.7: Visible Devices VII: Light Emitters & Their Degradation	2:00 pm - 3:45 pm	International Center
B2.4: UV Devices IV: UV Emitters	2:00 pm - 3:45 pm	Azalea/Begonia
C2.3: Power Devices III: Devices for Power Electronics III	2:00 pm - 3:45 pm	Narcissus/Orange Blossom
D1.9: Materials Characterization IX: Characterization of Optical Processes in (In,Ga)N	2:00 pm - 3:45 pm	International North
E0.5: Nanostructures V: Nanostructures for Electronic Applications	2:00 pm - 3:45 pm	Camellia/Dogwood
F0.7: Novel Materials & Devices VII: Novel Sensing Devices & Magnetism	2:00 pm - 3:45 pm	Poinsettia/Quince
Break	3:45 pm - 4:15 pm	Grand Foyer
A2.10: Epitaxial Growth X: Growth of UV Devices & Thick AIN & GaN Films	4:15 pm - 5:45 pm	Azalea/Begonia
B3.4: Photodetectors, Photovoltaics, Intersubband Devices IV: Characterization of Intersubband Structures & Late News	4:15 pm – 5:45 pm	Poinsettia/Quince
C0.5: Electronic Devices V: Doping, Implantation & Isolation & Late News	4:15 pm - 6:15 pm	Narcissus/Orange Blossom
D1.10: Materials Characterization X: Characterization of Low Dimensional Nitrides & Defects	4:15 pm – 6:15 pm	International Center
D1.11: Materials Characterization XI: Wear of Nitride Materials & Properties of GaN Based Structures & Late News	4:15 pm – 6:00 pm	International North
E0.6: Nanostructures VI: III-N Quantum Dots	4:15 pm - 6:00 pm	Camellia/Dogwood
F0.8: Novel Materials & Devices VIII/A2.11: Epitaxial Growth XI: Growth of Novel Materials & Devices	4:15 pm - 6:00 pm	International South
Rump Session I: Is There a Suitable Future for Ordered Nanostructures as Real Devices?	6:15 pm - 8:00 pm	International North
Rump Session II: Do We Really Need Better LEDs?	6:15 pm - 8:00 pm	International Center
Rump Session III: The Future of Wide-Bandgap Electronics	6:15 pm - 8:00 pm	International South

FRIDAY

Registration	8:30 am - 11:30 am	International Ballroom Foyer
PL.2: Plenary Session II	9:00 am - 10:30 am	Grand Ballroom
Break	10:30 am - 11:00 am	Grand Foyer
Closing Remarks	11:00 am - 12:00 pm	Grand Ballroom

MONDAY PROGRAM AT-A-GLANCE

* Invited Talk

PL.1: Plena	ary Session I		International Ballroom
8:45 am	Opening Remarks		
9:00 am	Martin Strassburg	*PL.1.01	Perspectives of III-N Optoelectronics
9:45 am	Umesh Mishra	*PL.1.02	Current Status and Future Directions in GaN-Based Electronics
10:30 am	Break	A Party	
11:00 am	Hideki Hirayama	*PL.1.03	Current Status and Future of III-Nitride Ultraviolet and THz Emitters
11:45 am	Thomas Kazior	*PL.1.04	Wafer Scale Integration of GaN with Si CMOS for RF Applications
A1.1: Bulk	Growth I: Buik Crystal Growth		Azalea/Begonia
2:00 pm	Michal Bockowski	*A1.1.01	Recent Progress in Bulk GaN Growth by HVPE on Native Substrates
2:30 pm	Jianfeng Wang	A1.1.02	Low-Dislocation Density and 4 Inch GaN Substrates Grown by Hydride Vapor Phase Epitaxy
2:45 pm	Shin Goubara	A1.1.03	Bulk GaN Substrate with Overall Dislocation Density in the Order of $10^4-10^5/\mbox{cm}^2$ by Hydride Vapor Phase Epitaxy
3:00 pm	Mikolaj Amilusik	A1.1.04	Study of Homoepitaxial Non-Polar and Semi-Polar Growth of GaN by HVPE— Influence of Lateral Growth on HVPE-GaN Grown in the c-Direction
3:15 pm	Takehiro Yoshida	A1.1.05	Development of GaN Substrate with Large Diameter and Low Orientation Deviation
3:30 pm	Tomasz Sochacki	A1.1.06	Highly Conductive HVPE-GaN Grown on Native Seeds
3:45 pm	Break		
4:15 pm	Makoto Saito	*A1.1.07	High Quality Bulk GaN Crystal Grown by Acidic Ammonothermal Method
4:45 pm	Marcin Zajac	*A1.1.08	Recent Developments on Growth and Applications of Ammonothermal GaN Substrates
5:15 pm	Mark D'Evelyn	A1.1.09	Optical, Electrical, and Thermal Properties of N-Type Bulk Ammono-Acidic GaN
5:30 pm	Masatoshi Hayashi	A1.1.10	Enhancement of Lateral Growth of GaN Crystal with Extremely Low Dislocation Density by Na-Flux Point Seed Technique
5:45 pm	Michal Fijalkowski	A1.1.11	Free-Standing HVPE-GaN Crystals—Slicing, Wafering and Preparation of Seeds
A2.1: Epita	xial Growth I		Camellia/Dogwood
2:00 pm	Andrew Allerman	*A2.1.01	Low Dislocation Density AlGaN Epilayers on Sapphire for UV Laser Diodes and Power Electronics
2:30 pm	Konrad Bellmann	A2.1.02	Phase Diagram for Island Growth, Step Flow Growth, and Step Bunching Growth of AIN Layers
2:45 pm	Hideto Miyake	A2.1.03	Fabrication of High-Quality AIN Template on Sapphire by High-Temperature Annealing
3:00 pm	Tetsuya Akasaka	A2.1.04	N-Face InN/GaN (000-1) Double Heterostructures Grown by Metalorganic Vapor Phase Epitaxy
3:15 pm	Armelle Even	A2.1.05	Green and Amber Emission Thanks to Full InGaN Structure on Relaxed InGaN Substrate
3:30 pm	Fedor Ketzer	A2.1.06	High Internal Quantum Efficiency Long Wavelength Semipolar Quantum Wells with and without Strain Controlling AllnN Layers
3:45 pm	Break		
01.1: Mate	rials Characterization 1: Basi	c Materials Pr	operties—Characterization Camellia/Dogwood
4:15 pm	Youngwoon Kim	*D1.1.01	Cathodoluminescence Characteristic of InGaN/GaN MQWs Grown on Polar and Semi-Polar Substrates
4:45 pm	Filip Tuomisto	*D1.1.02	Positron Spectroscopy of III-Nitrides
5:15 pm	Julita Smalc-Koziorowska	D1.1.03	Basal Stacking Fault Domains as a Source of a-Type Threading Dislocations in Nitride Epitaxial Layers
5:30 pm	Ruslan Ivanov	D1.1.04	Spatial Variations of Photoluminescence Polarization in m-Plane InGaN Quantum Wells
5:45 pm	Felix Feix	D1.1.05	Localization of Individual Electrons and Holes in Submonolayer InN Quantum Sheets Embedded in GaN
02.1: Theo	ry and Simulation I: Basic Ma	terials Propert	ies—Theory International North
2:00 pm	Chris Van de Walle	*D2.1.01	Correct Implementation of Polarization Constants in Nitride Semiconductors
2:30 pm	Yoshihiro Kangawa	*D2.1.02	Ab Initio-Based Approach to Crystal Growth of Nitride Semiconductors— Contribution of Growth Orientation and Surface Reconstruction
3:00 pm	Mario Ancona	D2.1.03	Nonlinear Thermoelectromechanical Analysis of III-N Devices
3:15 pm	Parijat Sengupta	D2.1.04	Tuning the Topological Character of Wurtzite III-Nitrides— Interplay of Crystal-Field Splitting, Spin-Orbit Coupling, and p-d Hybridization Induced Repulsion
3:30 pm	Giacomo Miceli	D2.1.05	Self-Compensation Due to Point Defects in Mg-Doped GaN
3:45 pm	Break	1000	

4.15	Engine Colleit Desta	+50 4 04	MPE Crewth of Ordered InCoN/(Col) Negrocolumna	
4:15 pm	Enrique Calleja Pardo	*E0.1.01	MBE Growth of Ordered InGaN/GaN Nanocolumns— Applications to Classical/Quantum Light Sources and Pseudosubstrates	
4:45 pm	Mark Holmes	E0.1.02	The Extreme Emission Properties of III-Nitride Quantum Dots and the Effects of Extreme Environments on Those Properties	
5:00 pm	Yuzo Matsui	E0.1.03	Optical Pumped Lasing at Amber Region in Short Period Nanocolumn Arrays	
5:15 pm	Marcus Mueller	E0.1.04	Nanoscale Cathodoluminescence Mapping of Three-Dimensional InGaN/GaN Core-Shell Microrod Light Emitting Diodes	
5:30 pm	Naoki Sakakibara	E0.1.05	Closely-Packed Two-Dimensional Arrangement of Microscopic Area (10×10 mm ²) InGaN-Based Nanocolumn LEDs with Different Emission Colors	
5:45 pm	Jan Mussener	E0.1.06	Optical Properties of Externally Biased AlGaN/GaN Nanowire Heterostructures	
1.1: Visib	le Devices I: Visible Light Em	itters	International South & Center	
2:00 pm	Shingo Masui	*B1.1.01	High Power Blue and Green AllnGaN Laser Diodes	
2:30 pm	Aurelien David	*B1.1.02	Recombination and Transport Dynamics of III-Nitride LEDs-New Experimental Insights	
3:00 pm	Charles Forman	B1.1.03	Nonpolar III-Nitride Vertical-Cavity Surface-Emitting Lasers	
3:15 pm	Kenjo Matsui	B1.1.04	3-mW RT-CW GaN-Based VCSELs and Their Temperature Dependence	
3:30 pm	Stephan Reitzenstein	B1.1.05	Thresholdless Lasing of Nitride Nanobeam Cavities on Silicon	
3:45 pm	Break	in a with		
2.1: UV D	evices I: UV Emitters	18 18 ST 07	International South & Center	
4:15 pm	Michael Kneissl	*B2.1.01	Exploring the Limits of AlGaN-Based Deep UV LEDs	
4:45 pm	Yuewei Zhang	B2.1.02	Engineering of Hole Transport in Tunneling Injected UV-A LEDs	
5:00 pm	Mohamed Lachab	B2.1.03	Optical Polarization Control of Photo-Pumped Stimulated Emission at 238 nm from AlGaN Multiple Quantum Wells on Bulk AlN	
5:15 pm	Craig Moe	B2.1.04	Pseudomorphic LEDs on AIN Substrates Emitting at 235 nm	
5:30 pm	Theeradetch Detchprohm	B2.1.05	Ultraviolet Micro-Cavity Light Emitting Diodes with an Electrically Conducting n-AlGaN/GaN DBR Grown b Metalorganic Chemical Vapor Deposition	
5:45 pm	Shigefusa Chichibu	B2.1.06	Defect-Resistant Emission Properties of Nonpolar m-Plane Al, In N Epilayers for Deep-Ultraviolet to Visible Polarized-Light-Emitting Vacuum Fluorescent Display Devices	
0.1: Elect	ronic Devices I		Narcissus/Orange Blosson	
2:00 pm	Andrea Corrion	*C0.1.01	GaN MMIC Technology for mm-Wave Applications	
2:30 pm	Matteo Meneghini	*C0.1.02	Key Reliability Issues and Degradation Mechanisms of GaN-Based Power HEMTs	
3:00 pm	Masanobu Hiroki	C0.1.03	Transferred-Substrate AlGaN/GaN HEMTs with Thermal Resistance Comparable with HEMTs on SiC Substrate	
3:15 pm	Farid Medjdoub	C0.1.04	Q-Band High Power AIN/GaN HEMTs With Over 45% PAE	
3:30 pm	Jimy Encomendero	C0.1.05	Dependence of Resonant Tunneling Current on Barrier Thickness in GaN/AIN Resonant Tunneling Diodes Operating at Room Temperature	
3:45 pm	Break	1.51		
4:15 pm	Steven Tom	*C0.1.06	Rethinking Power Density—How GaN is Changing the Game in Power Electronics	
4:45 pm	Tetsu Kachi	*C0.1.07	Current Status of Vertical GaN Power Devices	
5:15 pm	Mingda Zhu	C0.1.08	GaN MOSHEMT on Free-Standing GaN Substrate with p-Al Ga, N Back Barrier and 1010 On/Off Ratio	
5:30 pm	Chirag Gupta	C0.1.09	Regrown Mg Doped GaN Interlayer to Enhance Breakdown Voltage in Trench MOSFET	
5:45 pm	Shireen Warnock	CO.1.10	Time-Dependent Dielectric Breakdown in High-Voltage GaN MIS-HEMTs-The Role of Temperature	
0.1: Nove	I Materials & Devices I	· · · · · · · · · · · · · · · · · · ·	Poinsettia/Quince	
2:00 pm	Agne Zukauskaite	*F0.1.01	AISCN, AIYN, and InYN—Emerging Nitride Solid Solutions	
2:30 pm	Debbie Senesky	*F0.1.02	Gallium Nitride Sensing Technology for Extreme Harsh Environments	
3:00 pm	Gordon Callsen	F0.1.03	Many-Particle Complexes Stabilized by a Degenerate Electron Gas in Highly Ge-Doped, Bulk GaN	
3:15 pm	Mohamed Mohamed	F0.1.04	Gallium Nitride-on-Silicon Photonic Crystal Platform for Second Harmonic Generation	
3:30 pm	Mary Crawford	F0.1.05	Excitonic Properties of Hexagonal BN Grown by High-Temperature Metal-Organic Vapor-Phase Epitaxy	
3:45 pm	Break	In the second		
3.1: Photo	odetectors, Photovoltaics, Int	ersubband Dev	ices I: Photodetectors & Photovoltaics I Poinsettia/Quinc	
4:15 pm	Masatomo Sumiya	*B3.1.01	Key Factors for Improvement of InGaN Photovoltaic Performance	
4:45 pm	Manijeh Razeghi	*B3.1.02	III-Nitride Based Avalanche Photodetectors	
5:15 pm	Russell Dupuis	B3.1.03	Demonstration of Uniform and Reliable GaN p-i-n Ultraviolet Avalanche Photodiode Arrays with Large Detection Area on Free-Standing GaN Substrates	
5:30 pm	Christophe Durand	Durand B3.1.04 Influence of the Active Region Thickness on the Performance of InGaN/GaN Multi-Quantum-Well Solar Cells		

MONDAY POSTER SESSION

Tear Down

Posters not removed by **4:00 pm, Tuesday** will be discarded.

Poster Authors Set-Up
3:00 pm - 6:30 pm, Grand Ballroom

General Viewing 6:30 pm – 8:30 pm, Grand Ballroom Authors should stand with their posters.

ABSTRACT	PRESENTER	πημε
PS1.01	Jang Bo Shim	Growth & Characterization of Bulk GaN Single Crystals by Basic Ammonothermal Method
PS1.02	Guoqiang Ren	Bulk GaN Growth by HVPE & Ammonothermal in SINANO
PS1.03	Yumin Zhang	Optical Properties of HVPE Grown Fe-Doped GaN Substrates
PS1.04	Toshio Kitamura	Study of Manufacturing Process for Free-Standing GaN Substrates Grown by HVPE Method with Hybrid Tiling Technique
PS1.05	DoHun Kim	Improvement of Crystallinity of (11-22) GaN on Multi Point-Seed by Promotion of Lateral Growth Using the Na Flux Method
PS1.06	Zongliang Liu	Effect of Nitrogen-Doped Carbon Additives on the LPE-Growth of GaN Single Crystal Using the Na Flux Method
PS1.07	Tongbo Wei	High Quality Semipolar (10-1-3) GaN Grown on Carbon Nanotube Patterned Sapphire by Hydride Vapor Phase Epitaxy
PS1.08	Carsten Hartmann	Strongly Enhanced Deep UV Transparency of AIN Bulk Crystals Grown by Physical Vapor Transport
PS1.09	Young Kuk Lee	Ammonothermal Growth of Aluminum Nitride Crystals Employing Basic Mineralizer
PS1.10	John Farah	Rapid Thinning & Wafering of Wide Bandgap Substrates
PS1.11	Victor Gomez	Comparative Study of InGaN Layers Grown by PA-MBE on Si(111) Using Different Buffer Layers & Growth Conditions
PS1.12	Evan Clinton	High Growth Rate, Low Residual Doped Metal Modulated Epitaxy of GaN at ~10µm/hr
PS1.13	Evan Clinton	Thick, Rapidly Grown (1.8 µm/hr) IngGa _{1-x} N—Towards Templates for Optoelectronics
PS1.14	Lars Grieger	Fully Automated Measurement & Analysis of Reciprocal Space Maps
PS1.15	Rohit Pant	Reciprocal Space Mapping of InGaN Epilayers on Bare & Nitrided Si(111) by PAMBE
PS1.16	Yuxia Feng	Evolution of Anisotropic Lattice Misfit Strain of III-Nitrides on Si(110)
PS1.17	Shibin Krishna	Stress Relaxation via Defect Minimization in Epitaxial GaN Film on c-Sapphire Substrate Grown by Molecular Beam Epitaxy
PS1.18	Haiding Sun	Growth Mode of III-Nitride Materials on Nano-Patterned Sapphires by MBE
PS1.19	Henryk Turski	Growth of N-Polar GaN under N-Rich Conditions in Plasma-Assisted MBE
PS1.20	Sergei Novikov	Unintentional Boron Incorporation in GaN & AlGaN Layers During Plasma-Assisted Molecular Beam Epitaxy Using Highly Efficient RF Plasma-Sources
PS1.21	Marc Hoffmann	Control of Doping & (Self-) Compensation in Highly Mg Doped GaN Grown by Metalorganic Vapor Phase Epitaxy
PS1.22	Felix Kaess	Suppression of Mg Migration & Surface Accumulation by Fermi Level Control in GaN Grown by MOCVD
PS1.23	Junyan Jiang	Study on Electrical Property, Wet Etching, & Strain State of Mg-Doped N-Polar GaN
PS1.24	Chih-Chung Yang	Mg Buildup, Memory, & Diffusion in MOCVD Growth of p-GaN
PS1.25	Ewa Grzanka	Properties of Semipolar GaN p-Type Layers—From Background Doping To Metal Contact Resistance
PS1.26	Akira Buma	Study on Microstructure & Thermal Stability of rf-plasma Nitridated α -(AlGa) ₂ O ₃ Grown by Mist-CVD
PS1.27	Kazutada Ikenaga	Regrowth of High-AI-Content AIGaN & AIN on High-Quality AIN Template Fabricated by Annealing at 1700 °C under Nitrogen Ambient
PS1.28	Abheek Bardhan	Integration of Micron-Thick Crack-Free Al _{gs} Ga _{g4} N with Si(111) Substrate for Deep UV Photodetection
PS1.29	Jianpeng Cheng	Nanoscale Fissure Formation during Tensile Epitaxy of Hexagonal Nitride Semiconductor
PS1.30	Arne Knauer	Influence of Silicon Doping on Defects in MOVPE-Grown AIN/Sapphire Templates
PS1.31	Sebastian Tamariz Kaufmann	High Temperature Growth of AIN by Ammonia MBE on Si(111)
PS1.32	Xuqiang Shen	Thin AIN Films with High Quality Directly Grown on Si(110) Substrates by Metalorganic Chemical Vapor Deposition
PS1.33	Dabing Li	Growth of AIN on Sputtered AIN/Sapphire by High-Temperature MOCVD
PS1.34	Daiki Jinno	High Temperature Annealing of Sputtered AIN Buffer Layer on r-Plane Sapphire Substrate & its Effect on Crystalline Quality of a-Plane GaN
PS1.35	Tae-Yeon Seong	Effect of the In Situ Annealing of an Ex Situ Sputtered AIN Buffer Layer on the Crystal Quality of GaN Grown on Si Substrate
PS1.36	Yu Xu	Mechanically Transferrable AIN Films Grown on Graphene by HVPE
PS1.37	Jungyoung Jung	High Quality AIN Epi-Layer Grown by HVPE System
PS1.38	Jun Huang	Reduction of Threading Dislocation Densities in AIN/Sapphire Epilayers Grown by Hydride Vapor Phase Epitaxy
PS1.39	Quanzhong Jiang	Instability of Low-Temperature AIN during Metalorganic Vapour Phase Epitaxy for Potential Increase of Interfacial Thermal Resistance
PS1.40	Jongmyeong Kim	Study on Epitaxial Growth of AIN Layer on Si(111) Substrate by DC Magnetron Sputtering at Room Temperature
PS1.41	Daeyoung Moon	Study on Highly Polarized Photoluminescence Emission from c-Plane InGaN/GaN Multiple Quantum Wells
PS1.42	Erkan Berkman	Analysis of Spatial Indium Incorporation in Green Emitting In, Ga, N Multi-Quantum Wells Grown by MOCVD
PS1.43	Tae-Hoon Chung	High Efficient InGaN/GaN Blue Light-Emitting Diodes by Using the P-Type InGaN Layer for V-Pit Passivation

ABSTRACT	PRESENTER	TITLE			
PS1.44	Xiaobiao Han	Optical Properties of InGaN/GaN Multiple Quantum Wells Grown by Selective Area Epitaxy along Master Stripes with Modulation Stripes on Si(111) Substrate			
PS1.45	Suman-Lata Sahonta	Phase Purity Analysis of MOVPE-Grown Cubic GaN Epilayers			
PS1.46	Michael Deppe	Incorporation of Germanium for n-Type Doping of Cubic GaN			
PS1.47	Chao Wu	Effects of Diffusion Length on Surface Roughness & Defects in Low-Temperature Growth of Gallium Nitride			
PS1.48	Shugo Nitta	In-Line NH ₃ Reactant Analysis on Nitride Semiconductor Metalorganic Vapor Phase Epitaxy via High-Resolution Mass Spectrometry			
PS1.49	Yasuhiro Kusakabe	Improvement of GaN Regrowth by MOMBE using Low Pressure Nitrogen Microplasma			
PS1.50	Yvon Cordier	Selective Epitaxy on Patterned Sapphire for High Quality Semipolar GaN Templates			
PS1.51	Necmi Biyikli	Self-limiting Growth Optimization of Wurtzite GaN & InN Thin Films by Low-Temperature Plasma-Assisted Atomic Layer Deposition Utilizing Organo-Metallic Group-III Precursors			
PS1.52	Necmi Biyikli	Optical Properties of GaN Thin Films Grown by Hollow-Cathode Plasma-Assisted Atomic Layer Deposition— Impact of Film Thickness			
PS1.53	Xu Yang	The Influence of Residual Boron in Reactor on the Quality of GaN Crystal Grown via MOVPE			
PS1.54	Baijun Zhang	Migration Characterizations of Ga & In Adatoms on Dielectric Surface in Selective Area Growth of MOVPE			
PS1.55	Kentaro Nagamatsu	Decomposition of Trimethyl Gallium in a Metal Organic Vapor-Phase Epitaxy Reactor using an In-Line High-Resolution Gas Monitoring System			
PS1.56	Dimiter Alexandrov	Low-Temperature Deposition of InN Layers on High-Temperature MOCVD Grown AIN Layers			
PS1.57	Dimiter Alexandrov	Low-Temperature Epitaxial Deposition of InN Layers on ITO Glass Substrates			
PS1.58	Barun Barick	Structural & Electronic Properties of InN Epilayer Grown on c-Plane Sapphire by CVD Technique			
PS1.59	Hongwei Liang	High Resistivity GaN Layers with an InGaN Interlayer Grown by MOCVD			
PS1.60	Ping Ma	Growth & Characterization of AlGaN/GaN HEMT on SiC Substrate			
PS1.61	Susumu Hatakenaka	The Mechanism of Strain Control for GaN on Si HEMTs with Fe-Doped GaN by Using Un-Doped GaN Interlayer			
PS1.62	Yasushi lyechika	AlGaN Uniformity in HEMT Structure Grown on 200 mm Si Substrate by Fast Rotating Single-Wafer MOCVD Tool			
PS1.63	Jie Zhang	High Mobility InAlGaN/GaN Heterostructures Grown on Si Substrates Using Low-Temperature AIN Spacer Layer			
PS1.64	Roy Chung	Investigation of Intermixing between GaN & 4H-SiC with Ultrathin AIN Grown by PAMBE for Hetero-Junction Device			
PS1.65	Ahmad Shuhaimi	The Selective Nucleation Phenomena in Initial Growth of GaN on PSS			
PS1.66	Ahmad Shuhaimi	Enhancement of Semipolar (11-22) GaN Grown on m-Plane Sapphire Substrate by MOCVD			
PS1.67	Shunsuke Okada	Structural Study of GaN Grown on Nonpolar Bulk GaN Substrates with Trench Patterns			
PS1.68	Yun Zhang	Overgrowth & Microstructural Investigation of Semi-Polar (11-22) GaN on Arrayed Micro-Rods with Different Diameters			
PS1.69	Zheng Sun	GaN Growth on M-Plane SiC Substrate with an Ultrathin Interlayer			
PS1.70	Kenji Iso	Quasi-Equilibrium Crystal Shape & Kinetic Wulff Plot for GaN Grown by Tri-Halide Vapor Phase Epitaxy Using GaCl ₃			
PS1.71	Francisco Ramirez Gonzalez	Gallium Nitride Obtained from Gallium Arsenide Nitridation in a RTA System at Atmospheric Pressure			
PS1.72	Pramod Reddy	Point Defect Control in III-Nitrides—Increasing the Defect Formation Energy by Defect Quasi Fermi Level (DQFL) Control			
PS1.73	Franziska Beyer	Origin of Orange Color in Nominally Undoped HVPE GaN Crystals			
PS1.74	Franziska Beyer	Deep Levels in Thick Nominally Un-Doped HVPE-GaN Layers			
PS1.75	Matthias Lamprecht	Signatures of the Si Related Shallow DX State in a Defect Related PL Band at 2.4 eV in AIN			
PS1.76	Friederike Zimmermann	Photoluminescence Study on GaN Grown by High Temperature Vapor Phase Epitaxy			
PS1.77	William Willoughby	A Model for Photo-Absorption & Electron Capture in Compensated Be:GaN Substrates			
PS1.78	Stefan Mohn	Photoluminescence of GaN Lateral Polarity Structures			
PS1.79	Pierre Negri	3D Stress Characterization of Novel GaN Structures Using Raman Spectroscopy			
PS1.80	Lorenzo Rigutti	Assessing Advantages & Limitations of Atom Probe Tomography for the Nanoscale Interpretation of the Optical Properties of III-Nitride Heterostructures			
PS1.81	Ustun Sunay	Detection of Strain on the Mg Acceptor in GaN by Magnetic Resonance			
PS1.82	Manolo Ramirez Lopez	Carbon-Induced Optical Quenching on Nitride Based High Electron Mobility Transistor			
PS1.83	Maciej Matys	Characterization of Interface States from Frequency Dispersion in Capacitance-Voltage Curves of Al ₂ O ₃ /AlGaN/GaN Heterostructures			
PS1.84	Bobby Hancock	UV Micro-Raman & Photoluminescence Stress-Mapping on a GaN HEMT-on-Diamond Wafer			
PS1.85	Min Khanal	Effects of Gamma-Ray Irradiation on Electronic Characteristics of AlGaN/GaN Heterostructures			
PS1.86	Dipankar Jana	A Fast & Non-Destructive Probing of 2-Dimentional Electron Gas in AlGaN/GaN Heterostructures			
PS1.87	Xiaoguang He	Electron Blocking by AllnN Back Barrier in GaN HEMT			

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PS1.88	Matthew Rosenberger	(LATE NEWS) Atomic Force Microscope Measurements of Thermomechanical and Inverse-Piezoelectric Strain in AlGaN/GaN High Electron Mobility Transistors
PS1.89	Elke Meissner	Investigation of Structural Defects in GaN HEMT Layers, Relevant for the Electrical Performance & Reliability of the Devices
PS1.90	Eiji Kojima	Theoretical Investigation of GaN/SiC(0001) Band Offset
PS1.91	Thoria Baeraky	Microwave Effect on Nitride Semiconductors at High Temperature
PS1.92	Mariia Anikeeva	Indium Incorporation into (In,Ga)N/GaN Short Period Superlattices Studied by Transmission Electron Microscopy
PS1.93	Jeonghwan Jang	Study on Solid Phase Epitaxy of 3-Dimensional Al ₂ O ₃ Membrane Structure on Sapphire Substrate
PS1.94	Mufasila Mumthaz Muhammed	Carrier Dynamics of High-Quality InGaN/GaN Quantum Wells Grown on (-201) β -Ga ₂ O ₃ Substrates for Vertical Devices by Time-Resolved Photoluminescence
PS1.95	MinKwan Kim	Nanoscopic Study of InGaN/GaN-Based Light-Emitting Diodes Using Near-Field Scanning Optical Microscopy & Cathodoluminescence
PS1.96	Alec Fischer	Origin of High Hole Concentrations in Mg-Doped GaN Films
PS1.97	Alec Fischer	The Band Gap Bowing of Thick InGaN Alloys
PS1.98	Hoi Wai Choi	Indium-Content Dependent Strain-Relaxation Mechanisms in InGaN/GaN Micropillars
PS1.99	Juras Mickevicius	Influence of Growth Temperature on Emission Properties of InGaN/GaN MQWs Deposited on Strain-Relieving Buffer
PS1.100	F.C.P. Massabuau	Preventing Trench Defect Formation in InGaN Quantum Wells Using Hydrogen
PS1.101	F.C.P. Massabuau	Characterization of InGaN Quantum Well Interface by X-Ray Techniques
PS1.102	F.C.P. Massabuau	Impact of InGaN Composition on Carrier Localization at Dislocations
PS1.103	Weiguo Hu	Stress Tuned Carrier Dynamic Process in InGaN/GaN Quantum Well & Its Application in Visible Light Communication
PS1.104	Kazimieras Nomeika	Carrier Diffusivity as the Key Parameter Behind the Peak Quantum Efficiency in (In,Ga)N Quantum Structures
PS1.105	Aniela Dunn	Investigation of Carrier Localization in InGaN/GaN Multiple Quantum Well Structures using Terahertz Spectroscopy
PS1.106	James Griffiths	Nanocathodoluminescence Reveals the Mitigation of the Stark Shift in InGaN Quantum Wells by Silicon Doping
PS1.107	Yu-Ming Chiu	Structure & Photoluminescence Properties of Flower-Like Spiral AIN Micro-Crystal Array
PS1.108	Robert Rounds	Thermal Conductivity of Bulk AIN
PS1.109	Houston Dycus	Direct Determination of Structure & Chemistry in Aluminum Nitride Based Device Structures Using Scanning Transmission Electron Microscopy
PS1.110	Shun Washiyama	Misfit Strain Relaxation of High Al-Content AlGaN on AIN/Sapphire
PS1.111	Shun Washiyama	Hillock Formation on High Al-content AlGaN Epitaxial Layers Grown on Single Crystal AlN Substrates
PS1.112	Bo Monemar	Low Temperature Photoluminescence in Highly Si-Doped Al _x Ga _{1x} N with x < 0.09
PS1.113	Joshua Harris	Compensation in Silicon-Doped AIN & AlGaN
PS1.114	Pietro Pampili	Evidence of Room-Temperature Hopping Conduction in Aluminum-Rich AlGaN:Si
PS1.115	Caroline Lim	Effect of Si & Ge Doping in GaN/AlGaN Multi-Quantum-Wells with Intersubband Transitions
PS1.116	Akhil Ajay	Ge & Si Dopants for GaN/AIN MQWs in the Short Wavelength Infrared—Case of Nanowires & 2D Layers
PS1.117	Weiying Wang	Enhancement of Transverse-Electric Polarized Optical Emission in Staggered AlGaN Quantum Wells
PS1.118	Thomas Schratwieser	Time-Resolved Cathodoluminescent & Photoluminescent Measurement of a Deep-UV AlGaN Multiple Quantum Well Heterostructure
PS1.119	Idris Ajia	Improved Radiative Recombination of GaN/AIGaN MWQ on Transparent (-201) β-Ga ₂ O ₃ Substrate
PS1.120	Chenguang He	Mechanism of Stress-Driven Composition Evolution During Hetero-Epitaxy in a Ternary AlGaN System
PS1.121	Chenguang He	Free & Bound Excitonic Effects in Al _{0.5} Ga _{0.5} N/Al _{0.35} Ga _{0.65} N MQWs with Different Si-Doping Levels in the Well Layers
PS1.122	Zydrunas Podlipskas	Two-Way Connection between Quality of Layers in AlGaN/GaN Template
PS1.123	Wanxin Zhu	Selective Excitation of Emission Centers in of GaN/Eu-Doped GaN Multiple-Nanolayer Structures LED— Nanoscale Design of Active Layer for Dynamical Control of Injection Charges
PS1.124	Detlef Hommel	X-Ray Absorption Fine Structure (XAFS) & Density Functional (DFT) Investigation of Defects in Epitaxial GaMnN Layers
PS1.125	Akhilesh Singh	Hysteretic Photochromic Switching of Eu-Mg Defects in GaN—The Ninja Experiments
PS1.126	Pratim Saha	Radiative Atomic Transition from Sparsely Rare Earth Doped GaN
PS1.127	Shengxiang Jiang	Study of Deep Level Defects in GaN:Mn Grown by Metalorganic Chemical Vapor Deposition
PS1.128	Muhammad Maqbool	Super-Luminescence in Wide Bandgap Nitride Semiconductors
PS1.129	Yulong Feng	Study on Modulation Bandwidth for GaN-Based Plasmonic LED
PS1.130	Jochen Bruckbauer	Optical Properties of Semipolar (11-22) AlGaN on GaN Microrod Templates
PS1.131	Philipp Ebert	Polarity Dependent Fermi Level Pinning on GaN m-Plane Surfaces
PS1.132	Richard Smith	A Confocal Photoluminescence Investigation of Basal Plane Stacking Faults (BSFs) in (11-22) Semi-Polar InGaN/InGaN Quantum Wells on Overgrown Semi-Polar GaN
PS1.133	Carol Trager-Cowan	Hyperspectral Cathodoluminescence Imaging of Semi-Polar (11-22) GaN

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PS1.134	Rohit Pant	Investigation of Directional-Polarization with Photoelectric Effect in Rotated IDEs on Non-Polar GaN Thin Films			
PS1.135	Rohit Pant	Effect of Dislocations on Non-Polar a-GaN Schottky Photodetectors Aligned along In-Plane Polarized c-Direction			
PS1.136	Plamen Paskov	Multi-Color Emission from InGaN/GaN Quantum Wells on Polar & Semipolar Facets Grown by Lateral Sidewall Epitaxy			
PS1.137	Jie Chen	Schottky Contacts on r-Plane & c-Plane of Truncated Pyramid GaN Grown by Selective Area MOVPE			
PS1.138	Stephen Church	Influence of Hexagonal Inclusions & Stacking Faults on the Photoluminescence Spectrum of Cubic GaN Grown via MOCVD upon Large Area 3C-SiC/Si Substrates			
PS1.139	S.C. Lee	Strain Relief of Epitaxial Cubic Phase GaN under Uniaxial Stress on a Nanoscale V-Grooved Si(001)			
PS1.140	Yutian Cheng	Anisotropic Fracture Toughness of Bulk GaN & Its Guidance on Self-Separation of Thick GaN from Sapphire Substrate			
PS1.141	Marco Jimenez- Rodriguez	Effect of AIN Buffer Layer on the Properties of AlInN Layers Grown on Si(111) by RF-Sputtering			
PS1.142	Marco Jimenez- Rodriguez	Nonlinear Optical Measurements at Telecom Wavelength of InN-Thin-Films grown by MBE			
PS1.143	Izabela Gorczyca	Similarities of the Band Gaps of GaN/AIN & ZnO/MgO Short Period Superlattices			
PS1.144	Shiyou Chen	Cation-Mutation Design of Quaternary Nitride Semiconductors Lattice-Matched to GaN			
PS1.145	Jonathan Sculley	Monte Carlo Simulation of the Gunn Effect in AlGaN/GaN 2DEG			
PS1.146	Fetene Yigletu	On the Compact Modeling of CAVETs for Circuit Simulation			
PS1.147	Sandeep Sankaranarayanan	Giant Peak to Valley Ratio in a GaN Based Tunnel Diode with Barrier Width Modulation			
PS1.148	Angela Dyson	Monte-Carlo Simulation of a GaN Gunn Diode			
PS1.149	Jonathan Marini	Design & Simulation of III-Nitride Based Photocathode			
PS1.150	Christina Jones	Impact of Alloy Fluctuations on Radiative Recombination Rates & Efficiency of InGaN Quantum Wells			
PS1.151	Iskander Batyrev	Simulations of Dislocation Core in Pyramidal Plane of n- & p- Doped Wurtzite GaN & AlGaN			
PS1.152	Assa Aravindh Sasikala Devi	Ab Initio Investigations on the Structural & Electronic Properties of GaN in the Presence of a 45° Grain Boundary			
PS1.153	Toru Akiyama	Effects of Atomic Arrangements on Electronic Structure of Threading Dislocations in III-Nitride Alloy Semiconductors— A First-Principles Study			
PS1.154	Bertrand Rouet-Leduc	Optimisation of GaN LEDs & the Reduction of Efficiency Droop Using Active Machine Learning			
PS1.155	Yuh-Renn Wu	Modeling & Optimization of InGaN Blue Light Laser Diodes			
PS1.156	Ricardo Leon Restrepo Arango	The Second & Third Harmonic Generation Coefficients in InGaN/GaN Single Quantum Wells			
PS1.157	Antonio Ferreira da Silva	First Principles Study of the Optical Properties of Indium Oxynitride			
PS1.158	Naoki Umehara	Film Formation Process of Hexagonal Boron Nitride on a c-Plane Sapphire Substrate Grown by Low Pressure Chemical Vapor Deposition			
PS1.159	Thushan Wickramasinghe	Prospect of Developing ac-Driven Deep Ultra-Violet Electroluminescence Devices Based on Boron Nitride			
PS1.160	Thi-Quynh- Phuong Vuong	Phonon Sidebands in the Emission Spectrum of a Deep Level in Hexagonal Boron Nitride			
PS1.161	Shuo Wang	Crystal Structure of BAIN Thin Films—Effect of Boron Concentration in the Gas Flow			
PS1.162	Alexander Franke	Nitride Micro-Columnar DBR & Monolithic Microcavites for the UV-C Spectral Range			
PS1.163	Swanand Solanke	Large Area MoS 2-AIGaN Heterojunction towards Dual Band Near IR & Solar Blind Deep UV Photodetector			
PS1.164	Shulin Gu	Ga Diffusion Induced Changes of GaN Based FM/NMS Heterostructures			
PS1.165	Lukasz Janicki	Optical Spectroscopy & Hall Measurements of Ambient Sensitivity of Ga- & N-polar GaN UN+ & HEMT Structures			
PS1 166	Lukasz Janicki	Fermi Level Position in GaMoN Studied by Contactless Electroreflectance			
PS1.167	Yuki Kurisaki	Theoretical Investigation of Nitride Nanowire-Based Quantum-Shell Lasers			
PS1.168	Alexander Usikov	Investigation of Water Splitting Using III-N Structures			
PS1.169	Purushothaman	Molecular Level Surface Passivation for Enhanced Photo-Electrochemical Water Splitting In III-Nitride Nanowires			
DC1 170	Tohru Honda	Estrication of Vertical-Injection Type CaN-Raced MIC Diodes with Near IN/ Transported Ovide Electrodes			
01.170	Grant Jugan	Sunthanian or ventual impediately local and a second who blocks with weat ov mansparent uside Electrodes			
001 470	Kethleen Keeh	Operate and a reasonary of a reasonary of the second secon			
PS1.172	Muhammad-Sadeeo	Enaracterization of Zhee _x Sn _{1x} N ₂ Alloys Synthesized by Vapor-Liquid-Solid Growth Fe.N Nanoparticles on a Carbon Cloth with High-Power Density for Flexible Lithium Ion Ratteries			
	Balogun				
PS1.174	Angela Fioretti	Defeating N-Type Degeneracy in Zinc Tin Nitride via Off-Stoichiometry & Post-Growth Annealing			
PS1.175	Angela Fioretti	Using Native Point Defects to Control Bipolar Self-Doping in Copper Nitride			
PS1.176	Tetyana Torchynska	Variety of Light Emitting Mechanisms in Si-Rich-SiN, Films versus Silicon Nitride Stoichiometry			

TUESDAY PROGRAM AT-A-GLANCE

		All states and states a		
Materials & Devices II: Nitride I	MEMS & Other	Novel GaN Device Architectures Azalea/Begonia		
Marc Faucher	*F0.2.01	A GaN Technology for High-Performance MEMS Accelerometers		
Hoi Wai Choi	F0.2.03	Monolithically-Integrated GaN Photonic Systems		
Sween Butler	F0.2.04	Second Harmonic Generation from a Three Dimensional GaN Micro-Cavity Emitter		
Can Bayram	F0.2.05	Polarization-Free Integrated Gallium Nitride Photonics		
Break				
Growth II: Bulk (AI,Ga)N Growth	& Optoelectron	ic Devices on Bulk AIN Substrates Azalea/Begonia		
Toru Kinoshita	*A1.2.01	Recent Progress in the Growth of AIN by HVPE on Native AIN Substrates		
Jianfeng Chen A1.2.02 2-Inch AlN Single Crystal Growth with Low UV Absorption				
Carsten Hartmann A1.2.03 Epitaxial Growth and Characterization of Deep UV AlGaN Devices on Bulk AlN Substrates				
Simon Fleischmann	Simon Fleischmann A1.2.04 AlGaN Layers Grown on Patterned Sapphire by HVPE			
Sakari Sintonen	A1.2.05	Dislocation Generation during Homoepitaxial Growth of Bulk AIN by Physical Vapour Transport		
Taishi Kimura	A1.2.06	Nanopipe Formation via a Boron Impurity Segregation in GaN Grown by Halogen-Free Vapor Phase Epitaxy		
structures II: GaN Nanostructure	Synthesis & Ch	varacterization Camellia/Dogwood		
Achim Trampert	*E0.2.01	Advanced Nanofocus X-Ray Diffraction and Electron Microscopy Study of 3D GaN Nanostructures		
Ana Cros	E0.2.02	GaN Nanowire p-n Junctions Investigated by Kelvin Probe Force Microscopy		
Jumpei Kamimura	E0.2.03	P-Type Doping of GaN Nanowires Characterized by Photoelectrochemical Measurements		
Matt Brubaker	E0.2.04	Selective Area Growth and Optical Characterization of Ordered GaN Nanowire Arrays		
Mariia Rozhavskaia	E0.2.05	MOCVD of GaN Micro- and Nanowires on Sapphire Substrates Initiated by Ti Thin Film		
Gabriele Calabrese	E0.2.06	GaN Nanowires Free of Inhomogeneous Strain Grown on a Metallic TiN Film		
Break	12.27			
Juergen Christen	*E0.2.07	STEM-CL Analysis of 3D GaN Nanostructures		
Blandine Alloing	E0.2.08	Ultra-Thin GaN-Based Nanowires Fabricated via a Selective Area Sublimation Approach		
Andreas Liudi Mulyo	E0.2.09	Growth of Self-Organized Vertical GaN Nanocolumns Utilizing AIN as Nucleation Sites on Single Layer Graphene/Silica Glass by Molecular Beam Epitaxy		
Vishnuvarthan Kumaresan	E0.2.10	Epitaxy of GaN Nanowires on Graphene		
Sergio Fernandez-Garrido	E0.2.11	Molecular Beam Epitaxy of GaN Nanowires on Graphene Layer Structures Synthesized on SiC		
Bruno Daudin	E0.2.12	Comprehensive Study of the Growth Mode of InGaN Nanoparasols		
e Devices II: Long Wavelength E	mitters	International Center		
Matthias Auf der Maur	*B1.2.01	Green Gap and Droop in InGaN/GAN LEDs—The Role of Random Alloy Fluctuations		
Abdullah Alhassan	B1.2.02	High Luminous Efficacy InGaN/AIGaN LED in the Green Spectral Region		
Markus Pristovsek	B1.2.03	What Limits the Efficiency of Green (0001) InGaN LEDs		
Thi Huong Ngo	B1.2.04	The Comparative Internal Quantum Efficiency and Thresholds for Auger Recombination in Green, Yellow and Red InGaN-Based Light Emitters Grown along the Polar Direction		
David Wallis	B1.2.05	Cubic InGaN MQWs for Efficient Green LEDs		
Jianping Liu	B1.2.06	Suppressing the Incorporation of Carbon Impurity in AlGaN:Mg for Green LDs with Low Operation Voltage		
Break	Call Section			
le Devices III: Visible LEDs & LD	S	International Center		
Thomas Frost	*B1.3.01	InGaN/GaN Quantum Dot Visible Lasers		
Jonathan Wierer	B1.3.02	Ultra-Efficient Solid-State Lighting Using III-Nitride Quantum Dots		
Nan Guan	B1.3.03	Flexible White Light Emitting Diodes Based on Nitride Nanowires and Nanophosphors		
Thierry Guillet	B1.3.04	Nitride-on-Silicon Microdisk Lasers Covering the Blue to UV-C Spectral Range		
Danging Wang	B1.3.05	Ultra-Low-Threshold Quantum Dot Micro-Ring Lasers		
Ge Yuan	B1.3.06	III-Nitride Laser Diode with Nanoporous GaN as Cladding Lavers		
rials Characterization II: Charact	erization of InG	GaN Films & OWs International North		
Stefan Schulz	*D1.2.01	Electronic and Optical Properties of c- and m-Plane InGaN Quantum Wells-		
Steran Schulz		Influence of Structural Inhomogeneities and Random Alloy Fluctuations		
Saulius Marcinkevicius	D1.2.02	Influence of Structural Inhomogeneities and Random Alloy Fluctuations Carrier Diffusion in m-Plane InGaN Single Quantum Well Measured by Dual Mode Scanning Near-Field Optical Microscopy		
	Materials & Devices II: Nitride I Marc Faucher Hoi Wai Choi Sween Butler Can Bayram Break rowth II: Bulk (AI, Ga)N Growth Toru Kinoshita Jianfeng Chen Carsten Hartmann Simon Fleischmann Sakari Sintonen Taishi Kimura tructures II: GaN Nanostructure Achim Trampert Ana Cros Jumpei Kamimura Matt Brubaker Martia Rozhavskaia Gabriele Calabrese Break Juergen Christen Blandine Alloing Andreas Liudi Mulyo Vishnuvarthan Kumaresan Sergio Fernandez-Garrido Bruno Daudin e Devices II: Long Wavelength E Matthias Auf der Maur Abdullah Alhassan Markus Pristovsek Thi Huong Ngo David Wallis Jianping Liu Break e Devices II: Visible LEDs & LD Thomas Frost Jonathan Wierer Nan Guan Thierry Guillet Danqing Wang Ge Yuan rials Characterization II: Charact	Materials & Devices II: Nitride MEMS & OtherMarc Faucher*F0.2.01Hoi Wai ChoiF0.2.03Sween ButlerF0.2.04Can BayramF0.2.05BreakSrowth II: Bulk (AI.Ga)N Growth & OptoelectronToru Kinoshita*A1.2.01Jianfeng ChenA1.2.02Carsten HartmannA1.2.03Simon FleischmannA1.2.04Sakari SintonenA1.2.05Taishi KimuraA1.2.06tructures II: GaN Nanostructure Synthesis & CtAchim Trampert*E0.2.01Ana CrosE0.2.02Jumpei KamimuraE0.2.03Matt BrubakerE0.2.03Matt BrubakerE0.2.04Mariia RozhavskaiaE0.2.05Gabriele CalabreseE0.2.06Break		

			A CONTRACT OF A		
9:30 am	Christian Mounir	D1.2.04	Influence of Inhomogeneous Broadening on the Optical Polarization Properties of m-Plane, (20-2-1) and (20-21) InGaN Quantum Wells		
):45 am	Gordon Schmidt	D1.2.05	Probing the Inhomogeneity of In-Rich InGaN Layers on Top of InGaN Compositional Grades by Nanosca Cathodoluminescence		
0:00 am	Joanna Moneta	D1.2.06	Strain Relaxation via (a+c)-Type Misfit Dislocation Formation in InGaN Epilayers Grown on (0001) GaN by Plasma-Assisted Molecular Beam Epitaxy		
0:15 am	Break				
1.3: Mater	rials Characterization III: Chara	acterization of (A	I,Ga,In)N Films & QWs International North		
10:45 am	Shigetaka Tomiya	*D1.3.01	Structural Characterization of GaInN Quantum Wells using Transmission Electron Microscope and Atom Probe Tomography		
11:15 am	Grzegorz Staszczak	D1.3.02	Bandgap Dependence of InGaN/GaN Short Period Superlattices Grown by Metal-Organic Vapor Phase Epitaxy (MOVPE)		
11:30 am	Tobias Schulz	D1.3.03	Limitations for Indium Incorporation in Coherently Grown (In,Ga)N Layers		
1:45 am	Julita Smalc-Koziorowska	D1.3.04	Mechanism of Thermal Degradation of InGaN Quantum Wells		
2:00 pm	Bastien Bonef	D1.3.05	Atom Probe Tomography Characterization of Alloy Fluctuations in InAIN Grown by Plasma Assisted Molecular Beam Epitaxy		
12:15 pm	Ryoma Seiki	D1.3.06	Local Structural Analysis around In Atoms in $AI_{\rm 0.82}In_{\rm 0.18}N$ alloy by Using X-Ray Absorption Fine-Structure Measurements		
2.2: Epita	xial Growth II: Epitaxial Growth	h for UV Emitters	International South		
8:30 am	Zlatko Sitar	*A2.2.01	Progress and Remaining Challenges in UVC Laser Development		
9:00 am	Maryam Khalilian	A2.2.02	AIGaN Material Structures for UV-LEDs Based on Dislocation-Free GaN Platelets		
9:15 am	Mohammad Tollabi Mazraehno	A2.2.03	Effect of Optimized Buffers on Electro-Optical Characteristics of AlGaN-Based Deep-Ultraviolet PIN Photodetectors		
9:30 am	Takuma Matsumoto	A2.2.04	Growth of Deep-UV (11-22) AlGaN Quantum Wells on m-Plane (1-100) Sapphire Substrates		
9:45 am	Oliver Rettig	A2.2.05	Boron Containing AlGaN Layers for UV Lighting		
0:00 am	Ronny Kirste	A2.2.06	Ge Doping of AlGaN—Growth, Characterization and Applications		
0:15 am	Break				
2.3: Epita:	kial Growth III: Growth of Semi	ipolar & Cubic Ga	aN International South		
0:45 am	Jung Han	*A2.3.01	Progress in Heteroepitaxy of Semipolar GaN on Sapphire		
1:15 am	Frank Bertram	A2.3.02	Effect of Nano-Porous SiNx Interlayer on Propagation of Extended Defects in Semi-Polar (11-22)-Orientated GaN		
11:30 am	Michel Khoury	A2.3.03	Defect Reduction via Laterally Induced Growth of Semipolar (10-11) GaN on Patterned Silicon Substrates		
11:45 am	Kenjiro Uesugi	A2.3.04	Reduction of Basal Plane Stacking Faults in (11-22) Semipolar InGaN/GaN MQWs Fabricated on Patterned Si(113) Substrates by Introducing AlGaN Barrier Layers		
12:00 pm	Ferdinand Scholz	A2.3.05	Investigations about Parasitic n-Type Doping in Semipolar GaN		
2:15 pm	Lok Yi Lee	A2.3.06	Structural and Morphological Characterisation of Cubic GaN Grown on 3C-SiC/Si Substrates		
.1: RF/m	m Wave Devices I: Electronic I	Devices for RF A	pplications & Late News Narcissus/Orange Blossom		
8:30 am	Peter Brueckner	*C1.1.01	High Frequency Gan HEMTs and MMICs with AIN-Interlayer Epitaxy		
9.00 am	Sanyam Bajaj	C1 1.02	Ultra-Wide Bandoap AlGaN Channel MISEET with Low-Besistance Ohmics		
9:15 am	Junji Kotani	C1.1.03	Control of Polarization Charges for Leakage Current Reduction in InAIN/AIN/GaN Heterostructures with <i>In Situ</i> AIN Cap		
9:30 am	Yufei Wu	C1.1.04	Anomalous Source-Side Degradation of InAIN/GaN HEMTs under ON-State Stress		
9:45 am	Weichuan Xino	C1.1.05	Planar-Nanostrip-Channel InAIN/GaN HEMTs on Si with Improved am and fT Linearity		
0:00 am	Wenwen Li	C1.1.06	(LATE NEWS) Design and Fabrication of Self-Aligned GaN Static Induction Transistors		
0:15 am	Break				
.2: Electr	ronic Devices II: Devices for Pr	ower Electronics	, Traps & Dielectrics Narcissus/Orange Blossom		
0:45 am	Hiroji Kawai	*C0.2.01	Low-Cost High-Voltage GaN Lateral-Superjunction Power Transistors		
1:15 am	Ben Rackauskas	C0.2.02	Processes behind Suppressed Current Collapse Buffer Architectures		
1:30 am	Shlomo Mehari	C0.2.03	Identification of Electron Trap Energy at Different Spatial Locations and Dynamics of Charge Redistribution in AlGaN/GaN HEMT Structures		
11:45 am	Milan Tapajna	C0.2.04	On the Origin of Surface Donors in AlGaN/GaN Metal-Oxide-Semiconductor Heterostructures with Al ₂ O ₃ Gate Dielectric—Correlation of Electrical, Structural, and Chemical Properties		
12:00 pm	Hong Zhou C0.2.05 AlGaN/GaN MOSHEMT with POUT=4.18 W/mm at f=35 GHz Enabled by Atomic Layer Epitaxy				
12:15 pm	Jun-Hyeok Lee	C0.2.06	Effect of Proton Irradiation on the Characteristics of AlGaN/GaN MISHEMT— Comparison between ALO, and SI,N, Gate Insulator		

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B3.2: Pho	odetectors, Photovoltaics, Inter	rsubband Devic	es II: Photovoltaics & Photodetectors II Azalea/Begonia
2:00 pm	Evan Gilitton	B3.2.01	High Indium-Content MBE-Grown Indan Solar Cells
2:15 pm	Xuanqi Huang	B3.2.02	a Semi-Analytical Model
2:30 pm	Szymon Grzanka	B3.2.03	Nitride Photovoltaic—Exploring the Concept
2:45 pm	Govind Gupta	B3.2.04	Ultrafast Indium Nitride Based VIS-NIR Photo-Detector
8:00 pm	Shashwat Rathkanthiwar	B3.2.05	Record High Responsivity in III-Nitride Solar Blind MSM Photodetectors
:15 pm	Moritz Brendel	B3.2.06	Impact of Internal Interfaces on AIGaN Metal-Semiconductor-Metal Photodetectors
:30 pm	Anisha Kalra	B3.2.07	Highest Responsivity in III-Nitride sub-260 nm Photodetectors
:45 pm	Break		
).3: Nov	el Materials & Devices III: Epita	axial Lift Off & (Group-V Alloys Azalea/Begonia
:15 pm	Patrick Fay	*F0.3.01	GaN-Based Epitaxial Lift-off for Device Applications
45 pm	Suresh Sundaram	F0.3.02	Realization of GaN, InGaN/GaN MQW and Semi-Bulk Based PIN Structures on the Ultrathin 2D Layered h-BN for Simple Mechanical Lift-Off
:00 pm	Takao Miyajima	F0.3.03	Determination of the Site of Sb Occupation in MOCVD-Grown $GaN_{t,x}Sb_x$ Using X-Ray Absorption Fine-Structure Measurements
:15 pm	Fung Sing Choi	F0.3.04	Nanoscale Electrical Characterisation of GaNAs/GaN PN Junction Diode
30 pm	Louis Guido	F0.3.05	Behavior of Arsenic in GaN at Densities Ranging from Isovalent Doping to Dilute Ternary Alloys
45 pm	Chee-Keong Tan	F0.3.06	How Can Dilute-Anion III-Nitride Be Used for Light Emitters
2.2: The & N	ory & Simulation II: Theory: Car on-Radiative Processes in <u>Opto</u>	rier Localizatio electronic Devi	n, Ordering Phenomena & Crystal Growth/ Radiative Camellia/Dogwood ces
.00 pm	Marcel Filoche	*D2.2.01	A New Approach to Carrier Localization in Disordered Random Alloy Structures
30 pm	Liverios Lymperakis	*D2.2.02	Ordering Phenomena in InGaN Alloys—An Ab-Initio Thermodynamics Study
00 pm	Kazuki Sekiguchi	D2.2.03	Consideration of MOVPE Growth Process of GaN by First Principles Calculations and Thermodynamic Analysis
15 pm	Akira Kusaba	D2.2.04	Influence of Growth Orientation on Driving Force for InN Deposition by MOVPE
30 pm	Takahiro Kawamura	D2.2.05	First-Principles Study of Surface Phase Diagrams of GaN(0001) and (000-1) under the Oxide Vapor Phase Epitaxy Growth Conditions
45 pm	Break	W. Devil	
15 pm	Sergey Karpov	*D2.2.06	Radiative and Non-Radiative Processes in InGaN-Based LEDs
5 pm	Emmanouil Kioupakis	*D2.2.07	Role of Auger Recombination and Extreme Quantum Confinement in Nitrides
15 pm	Nathan Young	D2.2.08	Electrical Properties of III-Nitride LEDs—Recombination-Based Injection Model and Theoretical Limits to Electrical Efficiency and Electroluminescent Cooling
30 pm	Karan Mehta	D2.2.09	Solutions to Carrier Leakage in III-N Based Light Emitters by Numerical Simulation
45 pm	Bei Ma	D2.2.10	Simulation of Carrier-Exciton-Phonon Dynamics in GaN in Non-Equilibrium State
2: UV I	evices II: UV LEDs		International Center
0 pm	Cyril Pernot	*B2.2.01	Status of DUV LED on Sapphire and Their Applications
30 pm	Yoshihiko Sakane	B2.2.02	Underfilling and Encapsulation for AlGaN-Based DUV-LED
15 pm	Donghyun Lee	B2.2.03	Improved Performance of AlGaN-Based Deep Ultraviolet Light-Emitting Diodes with Nano-Patterned AlN/Sapphire Substrates
mq 00	Michael Heuken	B2.2.04	Close Coupled Showerhead MOCVD Tool for AlGaN UVC LEDs
15 pm	Frank Mehnke	B2.2.05	Development of Deep UV LEDs for Nitrogen Oxide Sensing
30 pm	Chen-Sheng Lin	B2.2.06	Efficient UV Emission from Simple Tunnelling MIS Diodes
45 pm	Break		
.3: UV I	Devices III: UV Lasers & Lasing	& Late News	International Center
5 pm	Noble Johnson	*B2.3.01	Toward Deep-UV AIGaN-Based Lasers via Electron-Beam Excitation
45 pm	Carsten Netzel	B2.3.02	Opposing Approaches for Low Threshold in AlGaN-Based UV-C Laser— High Internal Quantum Efficiency vs Homogeneity
00 pm	Songrui Zhao	B2.3.03	AlGaN Nanowire Deep UV LEDs and Lasers Operating Below 240 nm
5 pm	Shuhei Ichikawa	B2.3.04	Stimulated Emission at 250 nm from Optically-Pumped Semipolar (1-102) AlGaN/AIN Quantum Wells
30 pm	Haiding Sun	B2.3.05	Observation of Stimulated Emission of AlGaN-Based GRINSCH Structures Grown by MBE Emitting in Deep UV Spectrum
45 pm	Dorian Alden	B2.3.06	Second Harmonic Generation of UV Laser Light in AIN Periodic Lateral Polar Structures
.00 pm	Burhan SaifAddin	B2.3.07	(LATE NEWS) Epi-Transfer Technology for High EQE UV LEDs Grown on SiC
.4: Mat	erials Characterization IV: Atom	ic Structure & I	Dislocation Effects & Late News International North
.00 pm	Colin Humphreys	*D1.4.01	The Atomic Structure of Polar and Non-Polar InGaN Quantum Wells Revealed by Combining Different Microscopy and Spectroscopy Methods
.:30 pm	Frank Bertram	D1.4.02	Pronounced Blue-Shift at Threading Dislocations in a Thick, Nanostripe-Patterned InGaN/GaN MQW Stack Directly Evidenced by Nano-Cathodoluminescence
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2:45 pm	F.C.P. Massabuau	D1.4.03	A Comparative Study of the Optoelectronic Properties of Dislocations in AlGaN and InGaN
3:00 pm	M. Nouf-Allehiani	D1.4.04	Quantitative Analysis of Threading Dislocations in Si-Doped Low Resistivity AlGaN Layers Using Electron Channeling Contrast Imaging
8:15 pm	Shigeyoshi Usami	D1.4.05	Effect of Dislocations on the Growth of p-Type GaN and Device Characteristics
:30 pm	Anna Kafar	D1.4.06	(LATE NEWS) Spontaneous and Stimulated Emission in InGaN Edge Emitters and Their Competition with Auger Processes
8:45 pm	Break		
1.5: Mai	erials Characterization V: Cha	racterization of	GaN & InN International North
:15 pm	Kazunobu Kojima	D1.5.01	Quantifying Absolute Value of Quantum Efficiency of Radiation in High Quality GaN Single Crystals
:30 pm	Sami Suihkonen	D1.5.02	Infrared Absorption of Hydrogen-Related Defects in Ammonothermal GaN
4:45 pm	Jaime Freitas	D1.5.03	Optical and Electronic Properties HVPE GaN Wafers with Improved Crystallinity
5:00 pm	Michael Slomski	D1.5.04	Thermal Conductivity of Bulk GaN Grown by HVPE—Effect of Si Doping
5:15 pm	Qingbin Ji	D1.5.05	Raman Scattering Study of the High-Pressure Wurtzite to Rocksalt Phase Transition of GaN Grown on Serpentine Channel Patterned Sapphire Substrate
5:30 pm	Masataka Imura	D1.5.06	Surface and Bulk Electronic Structures of Heavily Mg-Doped InN Epilayer by Hard X-Ray Photoelectron Spectroscopy
5:45 pm	Holger Eisele	D1.5.07	Tunneling Spectroscopy at Clean Non-Polar InN Surfaces-Absence of Electron Accumulation
2.4: Epit	axial Growth IV: Growth of Lig	pht Emitters & (I	n.Ga)N International South
2:00 pm	Yongjo Park	*A2.4.01	Characteristics of GaN-Based LED on Alumina Cavity Engineered Sapphire Substrate
2:30 pm	John Howell-Clark	A2.4.02	Polarization Control for Direct Emitting LEDs across the Visible Spectrum— Nanopatterning and Cubic Structure Growth
2:45 pm	Xiaohui Feng	A2.4.03	Grouped and Multistep Nanoheteroepitaxy-Towards High-Quality GaN on Quasi-Periodic Nano-Mask
3:00 pm	Shahab Shervin	A2.4.04	Direct Growth of Single-Crystal-Like III-Nitride Structures on Metal Tape for Flexible Wide-Bandgap Semiconductor Devices
3:15 pm	Karine Hestroffer	A2.4.05	Compositionally Graded InGaN Layers on Vicinal N-Face GaN Substrates
3:30 pm	Takuya Ozaki	A2.4.06	Compositional Pulling Effect of InGaN Films Grown on ScAlMgO ₄ (0001) Substrates by Metal-Organic Vapor Phase Epitaxy
3:45 pm	Break	Note Canada	
3:45 pm 12.5: Epit	Break axial Growth V: Growth for Ele	ectronic Devices	& Basic Growth Studies International South
3:45 pm 1 <mark>2.5: Epi</mark> t 4:15 pm	Break axial Growth V: Growth for Ele Birte-Julia Godejohann	ectronic Devices A2.5.01	& Basic Growth Studies International South AIN/GaN HEMTs Grown by MBE and MOCVD—Impact of AI Distribution
3:45 pm 42.5: Epit 4:15 pm 4:30 pm	Break axial Growth V: Growth for Ele Birte-Julia Godejohann Haoran Li	A2.5.02 A2.5.02	Basic Growth Studies International South AIN/GaN HEMTs Grown by MBE and MOCVD—Impact of Al Distribution Pure N-Polar AIN in GaN/AIN/GaN Heterostructures Grown by Metal-Organic Chemical Vapor Deposition
3:45 pm 1 <mark>2.5: Epi1</mark> 4:15 pm 4:30 pm 4:45 pm	Break axial Growth V: Growth for Ele Birte-Julia Godejohann Haoran Li Ryousuke Kanayama	A2.5.01 A2.5.02 A2.5.03	& Basic Growth Studies International South AIN/GaN HEMTs Grown by MBE and MOCVD—Impact of AI Distribution Pure N-Polar AIN in GaN/AIN/GaN Heterostructures Grown by Metal-Organic Chemical Vapor Deposition Characterization of AlGaN/GaN Heterostructure by <i>In Situ</i> X-Ray Diffraction Attached Metal Organic Vapor Phase Epitaxy
3:45 pm 42.5: Epit 4:15 pm 4:30 pm 4:45 pm 5:00 pm	Break axial Growth V: Growth for Ele Birte-Julia Godejohann Haoran Li Ryousuke Kanayama Jeong-Gil Kim	A2.5.01 A2.5.02 A2.5.03 A2.5.04	& Basic Growth Studies International South AIN/GaN HEMTs Grown by MBE and MOCVD—Impact of AI Distribution Pure N-Polar AIN in GaN/AIN/GaN Heterostructures Grown by Metal-Organic Chemical Vapor Deposition Characterization of AlGaN/GaN Heterostructure by <i>In Situ</i> X-Ray Diffraction Attached Metal Organic Vapor Phase Epitaxy Growth of 10 nm-Thick AlInN/GaN Heterostructure with High Electron Mobility and Low Sheet Resistance
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WEDNESDAY PROGRAM AT-A-GLANCE

* Invited Talk

Duna u	Growth III: Bulk Growth & I	ate News	Azalea/Benoni
8:00 am	Bainer Niewa	*A1.3.01	Chemistry of the Ammonothermal Method for Growth of Nitrides as GaN. InN and Zn.N.
8:30 am	Saskia Schimmel	A1.3.02	GaN Solubility and Dissolution Kinetics Investigated Using Direct Insight into Ammonothermal Autoclaves by In Situ X-Ray Imaging
8:45 am	Boleslaw Lucznik	A1.3.03	Detailed Study of Homoepitaxial HVPE-GaN Growth in c-Direction
9:00 am	Yohei Yamaguchi	A1.3.04	Study on Reduction of H ₂ O in OVPE Process for Improving GaN Crystallinity
9:15 am	Masayuki Imanishi	A1.3.05	Na-Flux Growth on the Tiling HVPE Wafer for the Suppression of V-Shape Valley Formation at the Coalescence Boundary
9:30 am	Yamada Takumi	A1.3.06	Evaluation of Freestanding GaN Substrates by Dissolution of Sapphire Substrates Using Li after the Na-Flux Growth
9:45 am	J. Hertrampf	A1.3.07	(LATE NEWS) Ammonothermal Synthesis and Crystal Growth of Indium Nitride
10:00 am	Break		
EO.3: Nanos	structures III: Characterizat	tion of Nanostruc	tures Including Tomography Camellia/Dogwoo
8:00 am	Rachel Oliver	E0.3.01	Electron Microscopy and Tomography of Nitride Micro- and Nano-Devices
8:15 am	Norman Sanford	E0.3.02	Laser-Assisted Atom Probe Tomography Study of InGaN and Mg:GaN Test Structures
8:30 am	Lorenzo Mancini	E0.3.03	Transition Energies and Charge Carriers Localization Study of GaN/AIN Stranski-Krastanov Quantum Dots by Atom Probe-Based Correlative Multi-Microscopy
8:45 am	Jinwan Kim	E0.3.04	High Quantum Efficiency UVC AlxGa _{1-X} N/AlyGa _{1-X} N Multiple Quantum Wells Grown on AlN Nanostructures with Polarization Free Non-Polar Facet
9:00 am	Jonas Laehnemann	E0.3.05	UV Photosensing Characteristics of Nanowire-Based GaN/AIN Superlattices
9:15 am	D. Laleyan	E0.3.06	Molecular Beam Epitaxial Growth and Characterization of B(Ga,AI)N Nanowire Heterostructures
9:30 am	Matthias Belloeil	E0.3.07	Quantum Dot-Like Behavior of Compositional Fluctuations in AlGaN Nanowires
9:45 am	Zhihua Fang	E0.3.08	Visualization and Quantitative Analysis of Axial p-n Junction on Single GaN Nanowire by Three Electron Beam Based Techniques
10:00 am	Break	and the second	
B1.4: Visibl	le Devices IV: Visible Emitt	ters: Alloy Disord	er, Loss Mechanisms & Strain Engineering International Cente
8:00 am	Contractory contractory		COLOR DE COLOR DE COLOR DE LA COLOR DE
oree unit	Yuh-Renn Wu	*B1.4.01	Impact of Atomic Disorder in InGaN MQW LEDs
8:30 am	Yuh-Renn Wu Axel Hoffmann	*B1.4.01 *B1.4.02	Impact of Atomic Disorder in InGaN MQW LEDs Recombination Coefficients in InGaN Quantum Well Light-Emitting Diodes
8:30 am 9:00 am	Yuh-Renn Wu Axel Hoffmann Tomohiko Sugiyama	*B1.4.01 *B1.4.02 B1.4.03	Impact of Atomic Disorder in InGaN MQW LEDs Recombination Coefficients in InGaN Quantum Well Light-Emitting Diodes Performance of InGaN-Based Light Emitting Diodes under High Current Density on Low Dislocation Densit Liquid Phase Grown GaN Substrates
8:30 am 9:00 am 9:15 am	Yuh-Renn Wu Axel Hoffmann Tomohiko Sugiyama Agata Bojarska	*B1.4.01 *B1.4.02 B1.4.03 B1.4.04	Impact of Atomic Disorder in InGaN MQW LEDs Recombination Coefficients in InGaN Quantum Well Light-Emitting Diodes Performance of InGaN-Based Light Emitting Diodes under High Current Density on Low Dislocation Densit Liquid Phase Grown GaN Substrates Is the Electron Blocking Layer Still Needed in Modern Designs of InGaN Laser Diodes
8:30 am 9:00 am 9:15 am 9:30 am	Yuh-Renn Wu Axel Hoffmann Tomohiko Sugiyama Agata Bojarska David Sotta	*B1.4.01 *B1.4.02 B1.4.03 B1.4.04 B1.4.05	Impact of Atomic Disorder in InGaN MQW LEDs Recombination Coefficients in InGaN Quantum Well Light-Emitting Diodes Performance of InGaN-Based Light Emitting Diodes under High Current Density on Low Dislocation Densit Liquid Phase Grown GaN Substrates Is the Electron Blocking Layer Still Needed in Modern Designs of InGaN Laser Diodes Relaxed InGaN Engineered Substrate for LED Droop Reduction
8:30 am 9:00 am 9:15 am 9:30 am 9:45 am	Yuh-Renn Wu Axel Hoffmann Tomohiko Sugiyama Agata Bojarska David Sotta Francois Levy	*B1.4.01 *B1.4.02 B1.4.03 B1.4.04 B1.4.05 B1.4.06	Impact of Atomic Disorder in InGaN MQW LEDs Recombination Coefficients in InGaN Quantum Well Light-Emitting Diodes Performance of InGaN-Based Light Emitting Diodes under High Current Density on Low Dislocation Densit Liquid Phase Grown GaN Substrates Is the Electron Blocking Layer Still Needed in Modern Designs of InGaN Laser Diodes Relaxed InGaN Engineered Substrate for LED Droop Reduction Vertical Thin Film LEDs from Island Patterned Epilayers Grown on Relaxed InGaN Engineered Substrates
8:30 am 9:00 am 9:15 am 9:30 am 9:45 am 10:00 am	Yuh-Renn Wu Axel Hoffmann Tomohiko Sugiyama Agata Bojarska David Sotta Francois Levy Break	*B1.4.01 *B1.4.02 B1.4.03 B1.4.04 B1.4.05 B1.4.06	Impact of Atomic Disorder in InGaN MQW LEDs Recombination Coefficients in InGaN Quantum Well Light-Emitting Diodes Performance of InGaN-Based Light Emitting Diodes under High Current Density on Low Dislocation Densit Liquid Phase Grown GaN Substrates Is the Electron Blocking Layer Still Needed in Modern Designs of InGaN Laser Diodes Relaxed InGaN Engineered Substrate for LED Droop Reduction Vertical Thin Film LEDs from Island Patterned Epilayers Grown on Relaxed InGaN Engineered Substrates
8:30 am 9:00 am 9:15 am 9:30 am 9:45 am 10:00 am D1.6: Mate	Yuh-Renn Wu Axel Hoffmann Tomohiko Sugiyama Agata Bojarska David Sotta Francois Levy Break rials Characterization VI: C	*B1.4.01 *B1.4.02 B1.4.03 B1.4.04 B1.4.05 B1.4.06 Characterization o	Impact of Atomic Disorder in InGaN MQW LEDs Recombination Coefficients in InGaN Quantum Well Light-Emitting Diodes Performance of InGaN-Based Light Emitting Diodes under High Current Density on Low Dislocation Densit Liquid Phase Grown GaN Substrates Is the Electron Blocking Layer Still Needed in Modern Designs of InGaN Laser Diodes Relaxed InGaN Engineered Substrate for LED Droop Reduction Vertical Thin Film LEDs from Island Patterned Epilayers Grown on Relaxed InGaN Engineered Substrates It Electronic Devices & Late News
8:30 am 9:00 am 9:15 am 9:30 am 9:45 am 10:00 am D1.6: Mate 8:15 am	Yuh-Renn Wu Axel Hoffmann Tomohiko Sugiyama Agata Bojarska David Sotta Francois Levy Break rials Characterization VI: C Matthew Laurent	*B1.4.01 *B1.4.02 B1.4.03 B1.4.04 B1.4.05 B1.4.06 Characterization o D1.6.01	Impact of Atomic Disorder in InGaN MQW LEDs Recombination Coefficients in InGaN Quantum Well Light-Emitting Diodes Performance of InGaN-Based Light Emitting Diodes under High Current Density on Low Dislocation Densit Liquid Phase Grown GaN Substrates Is the Electron Blocking Layer Still Needed in Modern Designs of InGaN Laser Diodes Relaxed InGaN Engineered Substrate for LED Droop Reduction Vertical Thin Film LEDs from Island Patterned Epilayers Grown on Relaxed InGaN Engineered Substrates If Electronic Devices & Late News International Nort Physical Explanation of Richardson Constant Values Observed in J-V-T Measurements of III-N Schottky Diodes
8:30 am 9:00 am 9:15 am 9:30 am 9:45 am 10:00 am 01.6: Mate 8:15 am 8:30 am	Yuh-Renn Wu Axel Hoffmann Tomohiko Sugiyama Agata Bojarska David Sotta Francois Levy Break rials Characterization VI: C Matthew Laurent Monir Rychetsky	*B1.4.01 *B1.4.02 B1.4.03 B1.4.04 B1.4.05 B1.4.06 B1.4.06 Characterization of D1.6.01 D1.6.02	Impact of Atomic Disorder in InGaN MQW LEDs Recombination Coefficients in InGaN Quantum Well Light-Emitting Diodes Performance of InGaN-Based Light Emitting Diodes under High Current Density on Low Dislocation Densit Liquid Phase Grown GaN Substrates Is the Electron Blocking Layer Still Needed in Modern Designs of InGaN Laser Diodes Relaxed InGaN Engineered Substrate for LED Droop Reduction Vertical Thin Film LEDs from Island Patterned Epilayers Grown on Relaxed InGaN Engineered Substrates If Electronic Devices & Late News International North Schottky Diodes Determination of Polarization Fields in (0001) AllnN/GaN and AlGaN/GaN Heterostructures by Capacitance-Voltage-Measurements
8:30 am 9:00 am 9:15 am 9:30 am 9:45 am 10:00 am 01.6: Mate 8:15 am 8:30 am 8:30 am	Yuh-Renn Wu Axel Hoffmann Tomohiko Sugiyama Agata Bojarska David Sotta Francois Levy Break rials Characterization VI: C Matthew Laurent Monir Rychetsky Lukasz Janicki	*B1.4.01 *B1.4.02 B1.4.03 B1.4.04 B1.4.05 B1.4.06 Characterization o D1.6.01 D1.6.02 D1.6.03	Impact of Atomic Disorder in InGaN MQW LEDs Recombination Coefficients in InGaN Quantum Well Light-Emitting Diodes Performance of InGaN-Based Light Emitting Diodes under High Current Density on Low Dislocation Densit Liquid Phase Grown GaN Substrates Is the Electron Blocking Layer Still Needed in Modern Designs of InGaN Laser Diodes Relaxed InGaN Engineered Substrate for LED Droop Reduction Vertical Thin Film LEDs from Island Patterned Epilayers Grown on Relaxed InGaN Engineered Substrates IElectronic Devices & Late News International North Physical Explanation of Richardson Constant Values Observed in J-V-T Measurements of III-N Schottky Diodes Determination of Polarization Fields in (0001) AlInN/GaN and AlGaN/GaN Heterostructures by Capacitance-Voltage-Measurements Electromodulation Spectroscopy of N-Polar GaN HEMT Structures
8:30 am 9:00 am 9:15 am 9:30 am 9:45 am 10:00 am D1.6: Mate 8:15 am 8:30 am 8:45 am 9:00 am	Yuh-Renn Wu Axel Hoffmann Tomohiko Sugiyama Agata Bojarska David Sotta Francois Levy Break rials Characterization VI: C Matthew Laurent Monir Rychetsky Lukasz Janicki Kohei Tachi	*B1.4.01 *B1.4.02 B1.4.03 B1.4.04 B1.4.05 B1.4.06 B1.4.06 Characterization o D1.6.01 D1.6.02 D1.6.03 D1.6.04	Impact of Atomic Disorder in InGaN MQW LEDs Recombination Coefficients in InGaN Quantum Well Light-Emitting Diodes Performance of InGaN-Based Light Emitting Diodes under High Current Density on Low Dislocation Densit Liquid Phase Grown GaN Substrates Is the Electron Blocking Layer Still Needed in Modern Designs of InGaN Laser Diodes Relaxed InGaN Engineered Substrate for LED Droop Reduction Vertical Thin Film LEDs from Island Patterned Epilayers Grown on Relaxed InGaN Engineered Substrates 1 Electronic Devices & Late News International Nort Physical Explanation of Richardson Constant Values Observed in J-V-T Measurements of III-N Schottky Diodes Determination of Polarization Fields in (0001) AlInN/GaN and AlGaN/GaN Heterostructures by Capacitance-Voltage-Measurements Electromodulation Spectroscopy of N-Polar GaN HEMT Structures Characterization of Electrical Properties of n-Type GaN Layer Using Terahertz Time-Domain Spectroscopic Ellipsometry
8:30 am 9:00 am 9:15 am 9:30 am 9:45 am 10:00 am 01.6: Mate 8:15 am 8:30 am 8:45 am 9:00 am 9:15 am	Yuh-Renn Wu Axel Hoffmann Tomohiko Sugiyama Agata Bojarska David Sotta Francois Levy Break rials Characterization VI: C Matthew Laurent Monir Rychetsky Lukasz Janicki Kohei Tachi Ye Jia	*B1.4.01 *B1.4.02 B1.4.03 B1.4.04 B1.4.05 B1.4.06 B1.4.06 Characterization o D1.6.01 D1.6.02 D1.6.03 D1.6.04 D1.6.05	Impact of Atomic Disorder in InGaN MQW LEDs Recombination Coefficients in InGaN Quantum Well Light-Emitting Diodes Performance of InGaN-Based Light Emitting Diodes under High Current Density on Low Dislocation Densit Liquid Phase Grown GaN Substrates Is the Electron Blocking Layer Still Needed in Modern Designs of InGaN Laser Diodes Relaxed InGaN Engineered Substrate for LED Droop Reduction Vertical Thin Film LEDs from Island Patterned Epilayers Grown on Relaxed InGaN Engineered Substrates 1 Electronic Devices & Late News International Nort Physical Explanation of Richardson Constant Values Observed in J-V-T Measurements of III-N Schottky Diodes Determination of Polarization Fields in (0001) AlInN/GaN and AlGaN/GaN Heterostructures by Capacitance-Voltage-Measurements Electromodulation Spectroscopy of N-Polar GaN HEMT Structures Characterization of Electrical Properties of n-Type GaN Layer Using Terahertz Time-Domain Spectroscopic Ellipsometry Band Offset Characterization of Atomic Layer Deposited Al ₂ O ₃ on m-Plane GaN by X-Ray Photoelectron Spectroscopy
8:30 am 9:00 am 9:15 am 9:30 am 9:45 am 10:00 am 01.6: Mate 8:15 am 8:30 am 8:45 am 9:00 am 9:15 am 9:30 am	Yuh-Renn Wu Axel Hoffmann Tomohiko Sugiyama Agata Bojarska David Sotta Francois Levy Break rials Characterization VI: C Matthew Laurent Monir Rychetsky Lukasz Janicki Kohei Tachi Ye Jia Martin Stutzmann	*B1.4.01 *B1.4.02 B1.4.03 B1.4.04 B1.4.05 B1.4.06 B1.4.06 C C C C C C C C C C C C C C C C C C C	Impact of Atomic Disorder in InGaN MQW LEDs Recombination Coefficients in InGaN Quantum Well Light-Emitting Diodes Performance of InGaN-Based Light Emitting Diodes under High Current Density on Low Dislocation Densit Liquid Phase Grown GaN Substrates Is the Electron Blocking Layer Still Needed in Modern Designs of InGaN Laser Diodes Relaxed InGaN Engineered Substrate for LED Droop Reduction Vertical Thin Film LEDs from Island Patterned Epilayers Grown on Relaxed InGaN Engineered Substrates Itectronic Devices & Late News International Nort Physical Explanation of Richardson Constant Values Observed in J-V-T Measurements of III-N Schottky Diodes Determination of Polarization Fields in (0001) AlInN/GaN and AlGaN/GaN Heterostructures by Capacitance-Voltage-Measurements Electromodulation Spectroscopy of N-Polar GaN HEMT Structures Characterization of Electrical Properties of n-Type GaN Layer Using Terahertz Time-Domain Spectroscopic Ellipsometry Band Offset Characterization of Atomic Layer Deposited Al ₂ O ₃ on m-Plane GaN by X-Ray Photoelectron Spectroscopy Band Offsets at Diamond/III-Nitride Heterojunctions

A2.6: Epita:	xial Growth VI: Molecular Be	am Epitaxy of II	I-Nitrides International South
8:00 am	Xinqiang Wang	*A2.6.01	Atomic Level Manipulation in Molecular Beam Epitaxy of III-Nitrides
8:30 am	Marcin Siekacz	A2.6.02	The Impact of Barrier Width on Photoluminescence Wavelength in InGaN/InGaN Short Period Superlattices Grown by Plasma Assisted MBE
8:45 am	Akhil Ajay	A2.6.03	Ge Doping of GaN beyond Mott Transition Using Plasma Assisted Molecular Beam Epitaxy
9:00 am	Evan Clinton	A2.6.04	Metal Modulated Epitaxy of High Carrier Concentration Mg Doped p-Type and Ge Doped n-Type AlGaN
9:15 am	S.M. Islam	A2.6.05	Impact of Substrate Temperature on Magnesium Incorporation in MBE Grown AI-Rich Al _x Ga _{1-x} N
9:30 am	Christopher Hein	A2.6.06	Impact of Surfactant Gallium on the Morphology of III-Nitrides Grown by MBE
9:45 am	Chih-Chung Yang	A2.6.07	Combining High Hole Concentration in p-GaN and High Hole Mobility in u-GaN for High p-Type Conductivity in a p-GaN/u-GaN Alternating-Layer Nanostructure
10:00 am	Break	1.1.2	
C2.2: Powe	er Devices II: Devices for Po	wer Electronics	II Narcissus/Orange Blossom
8:00 am	Peter Moens	*C2.2.01	AIGaN/GaN-on-Si Power Device Technology—From Simple 1D Characterization Techniques to Reliable and Current-Collapse Free Large Area Power Devices
8:30 am	Min Sun	C2.2.02	Low-Cost and High-Performance Vertical GaN Power Transistors on Bulk GaN Substrates
8:45 am	Dong Ji	C2.2.03	Demonstration of Normally off GaN Trench-CAVET for High Power Application
9:00 am	Anneli Munkholm	C2.2.04	Vertical GaN Transistors on Bulk-GaN Substrates
9:15 am	Hongtu Qian	C2.2.05	Novel GaN-Based Vertical Heterostructure Field Effect Transistor Structures Using Crystallographic KOH Etching and Channel Overgrowth
9:30 am	Georges Pavlidis	C2.2.06	Electrical and Thermal Characterization of Vertical GaN PIN Diodes
9:45 am	Hutomo Suryo Wasisto	C2.2.07	Towards Vertical GaN Power Electronics—Nanowire Arrays for Vertical Field-Effect Transistors
10:00 am	Break		
FO.4: Novel	I Materials & Devices IV: Be	ron Containing &	& Computational Nitrides Poinsettia/Quince
8:15 am	Guillaume Cassabois	*F0.4.01	Indirect Excitons, Electron-Phonon Interaction and Intervalley Scattering in Hexagonal Boron Nitride
8:45 am	Xin Li	F0.4.02	Layered Hexagonal BN Thin Films Grown by MOVPE for UV Optical Applications
9:00 am	Brendan Gunning	F0.4.03	Phase Degradation in B _x Ga _{1-x} N Films Grown at Low Temperature by Metalorganic Vapor Phase Epitaxy
9:15 am	Xiaohang Li	F0.4.04	100-nm Thick Single-Phase Wurtzite BAIN with B Contents up to 14.4% Grown by MOCVD
9:30 am	Sergei Novikov	F0.4.05	High-Temperature Molecular Beam Epitaxy of Boron-Nitride Layers
9:45 am	Wenhao Sun	F0.4.06	Computational Discovery of Novel Stable and Metastable Nitride Semiconductors
10:00 am	Break	- V 12 6 1	

Upcoming Meetings of Interest to the IWN Community



2016 MRS Fall Meeting & Exhibit Boston, Massachusetts November 27–December 2, 2016



2017 MRS Spring Meeting & Exhibit Phoenix, Arizona April 17–21, 2017



75th Device Research Conference South Bend, Indiana June 25–28, 2017



59th Electronic Materials Conference) South Bend, Indiana June 28–30, 2017



International Conference on Silicon Carbine and Related Materials Washington, DC September 17–22, 2017



12th International Conference on Nitride Semiconductors Strasbourg, France July 24–28, 2017

WEDNESDAY POSTER SESSION

Poster Authors Set-Up 7:30 am – 10:00 am, Grand Ballroom

General Viewing 10:00 am – 11:30 am, Wednesday, Grand Ballroom Authors should stand with their posters.

Tear Down

Posters not removed by 11:00 am, Thursday will be discarded.

ADOTTAGT	THESENTEN				
PS2.01	Jinglin Zhan	Effects of Strain & Etching Damages in Micron Light Emitting Diodes on the Distinguish Performance under High Injection Level			
PS2.02	Carlo De Santi	Investigation of the Thermal Droop in InGaN-Layers & Blue LEDs			
PS2.03	Daesung Kang	Improvement of Output Power of Vertical InGaN/GaN-Based Light-Emitting Diodes by Using Patterned SiO2 Lens Sapphire Substrate			
PS2.04	Manish Mathew	Effect of Lateral Hole Injection on the Efficiency Droop of InGaN/GaN Multiple Quantum Well Blue Light-Emitting Diodes			
PS2.05	Margaret Hopkins	Measurement & Evaluation of the Effect of Changing the Threading Defect Density on Efficiency Droop in InGaN/GaN LEDs			
PS2.06	Tongxing Yan	Experimentally Study Electron Spillover from the Quantum Wells into p-Side GaN & Its Effect on the Efficiency Droop in InGaN/GaN Blue-Light-Emitting-Diodes			
PS2.07	Sun-Kyung Kim	Momentum Representation of Leaky Light for the Identification of Light Escape Routes			
PS2.08	Han Xiong	Air-Voids Embedded GaN Films Laterally Overgrown on Direct Laser Drilling Bowl-Shaped Patterned Sapphire Substrates			
PS2.09	Marcin Sarzynski	Multicolor Light Emitting Diode on Patterned GaN/Sapphire Template			
PS2.10	Seung-Jae Lee	High-Efficiency, High-Reliability GaN-Based Light-Emitting Diodes Fabricated on V-Pit-Embedded Structures			
PS2.11	Junyoung Jin	Gradually Size-Controlled Dot Contact Current Spreading Structure for High Luminance InGaN/GaN-Based LED			
PS2.12	Jeeyun Lee	Enhancement of Light Extraction Efficiency in GaN-Based Blue Light-Emitting Diodes by Using Transparent p-Pad			
PS2.13	Sung-Nam Lee	Study of GaN-Based Light-Emitting Diodes Using Ag Nanowires as a Transparent Conductive Electrode			
PS2.14	Jumpei Yamada	Direct Growth of Multilayer Graphene as Transparent Electrode on GaN-Based Light Emitting Diode			
PS2.15	Jung-Hong Min	Rational Design of Graphene-Metal Mesh Hybrid Films for High-Performance Transparent Conductive Lavers			
PS2.16	Yoon Jong Moon	Diffraction Analysis of High-Index-Contrast Air-Cavities Substrates for InGaW/GaN Light-Emitting Diodes			
PS2 17	Yifan Chen	Enhancement of Light Emission & Becombination Bate for CdSe/ZnS Quantum Dots on Blue LED Embedded by An Nanoparticles			
02219	Soong- lu Park	Tio Nanotubes for High Linbt Extraction Efficiency of InCeNI/CeNI Vertical Linbt-Emitting Diodes			
DC2 10	Huun Jung Dark	Improvement of Light Extraction Efficiency on Illtrathin Side Emitting LEDe (LISE-LEDe)			
02.13	Ingentium Han	Improvement of Light Extraction Enclosivy on Ortalinin Side Enricing LEDS (USE-LEDS)			
P52.20	Jangnwan Han	nhanced Optical Output Power of InGaN/GaN Multiple Quantum Wells Light-Emitting Diodes by Vertical Magnetic Fields f Co/Pt Multilayers			
PS2.21	Yufeng Li	nvestigation on the Resonant Interaction between Surface Plasmon & InGaN/GaN Quantum Wells			
PS2.22	Arup Neogi	Enhancement of Light Emission from GaN/InGaN Quantum Wells Induced by Resonant & Off-Resonant Plasmonic Interaction with Palladium Nanoparticles			
PS2.23	Zhina Gong	Polystyrene-Catalytic Indium-Tin-Oxide Nanorods Grown on Green Light Emitting Diodes for Enhancing Light Extraction			
PS2.24	Hong Chen	Polarization-Dependent Emission Properties of InGaN Light-Emitting Diodes Modified by Metallic Grating			
PS2.25	Seung-Young Lim	Depth Dependent Strain Analysis in GaN-Based Light Emitting Diodes Using Surface-Plasmon Enhanced Raman Spectroscopy			
PS2.26	Kwang Jae Lee	Controlled Refractive Index of Nanoporous GaN Layer for High Optical Output Power of GaN-Based Flip-Chip Light-Emitting Diodes			
PS2.27	Jun Hyuk Park	External Quantum Efficiency Variation on Temperature & Current Density in Red, Blue, & Deep Ultraviolet Light-Emitting Diode			
PS2.28	Jun Hyuk Park	Facet-Dependent Optical Properties & Carrier Recombination Behavior of Hendeca-Facet Panchromatic Light Emitter			
PS2.29	Md Saiful Alam	Influence of Indium in Barriers of Multi Quantum Wells (MQWs) with Novel InGaN Pre-Layer Emitting in Blue to Green Regime			
PS2.30	Zhen Huang	Vertical Conducting Green Light-Emitting Diodes with n-InGaN Stress-Relieved Layer Grown on n-SiC Substrates			
PS2.31	Juras Mickevicius	Spatial Variation of Photoluminescence in InGaN/GaN MQWs Emitting in 450-600 nm Spectral Range			
PS2.32	Gaogiang Deng	N-Polar GaN-Based Blue-Green Light-Emitting Diodes with p-AIGaN Electron Blocking Layer			
PS2.33	Christian Wetzel	The Green Gap in Biological Systems—Why Green Matters			
PS2.34	Martin Vallo	In-Rich InGaN/GaN Multiple Quantum Wells in Core-Shell Nanowires for Green Emission			
PS2.35	Talal Al Tahtamouni	1.54 µm Light Emitting Devices Based on Er-Doped GaN/AlGaN Multiple Quantum Well Structures Grown by Metal-Organic Chemical Vapor Deposition			
PS2.36	Bin Liu	Fabrication & Optical Properties of Single Nanorod InGaN/GaN Light-Emitting Devices			
PS2.37	Chang-Mo Kang	Fabrication of a Dual Color Display with a Vertically-Stacked Passive-Matrix Micro-LED Array Structure			
PS2.38	Jochen Bruckbauer	Hybrid White Inorganic/Organic LEDs using Organic Colour Converters			
PS2.39	Lungang Feng	Freestanding GaN-Based Light Emitting Diode Membranes on Y ₃ Al ₅ O ₁₂ : Ce ³⁺ Crystal Phosphor Plate for Efficient White Light Emission			
PS2.40	Yibin Zhang	Demonstration of Wafer-Level White Light Emitting Diode with 92000Im Luminous Flux			
PS2.41	Modestos Athanasiou	Monolithically Integrated White Light Microdisk Laser from InGaN / GaN MQWs On Si Substrate			
PS2.42	Haitao Lu	Monolithic Integration of Light-Emitting Diode & Photodetector for Self-Monitoring of Light Output			
PS2.43	Seonghoon Jeong	Monolithic Heterojunction White Light Emitting Diodes			



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PS2.44	Li Zhang	High Brightness GaN LEDs on 200 mm Si for Si CMOS Integration				
PS2.45	Zhijian Lu	The Effect of Reflection on Visible Light Communication System Using a Gallium Nitride µLED & IEEE 802. 11ac				
PS2.46	Lai Wang	V-Shaped Semipolar InGaN/GaN Multi-Quantum-Well Light-Emitting Diodes Directly Grown on C-Plane Patterned Sapphire Substrates				
PS2.47	Keundong Lee	Selective Area, Metal-Organic Vapor Phase Epitaxial Growth of GaN Microstructures on Graphene Film for Transferable & Color Tunable Inorganic LEDs				
PS2.48	Won-sik Choi	Characterization of InGaN LEDs on a Flexible Substrate Fabricated by a Simple Transfer Method				
PS2.49	Young-Chul Sim	Fabrication of InGaN/GaN Ring Structure with High Efficiency Broad-Band Emission				
PS2.50	Seyed Ehsan Hashemi	Effect of Interlayers on the Vertical Electrical Conductivity of Si-Doped AIN/GaN DBRs Grown by PA-MBE				
PS2.51	Saadat Mishkat- Ul-Masabih	Thermal Analysis of Flip-Chip GaN-Based VCSELs with Dielectric Distributed Bragg Reflectors				
PS2.52	Camille Tardy	Comparison of the Optical Confinement between Standard & Lateral Top Contact Laser Diode				
PS2.53	Yu Lim Lee	Optical Property of 375nm Near-Ultraviolet Light Emitting Diodes				
PS2.54	Haiding Sun	Enhancement of Yellow Light Extraction Efficiency of Y ₃ AI ₅ O ₁₂ :Ce ³⁺ Ceramic Converters Using a 2D TiO ₂ Hexagonal-Lattice Nano-Cylinder Photonic Crystal Layer for Light-Emitting Diodes				
PS2.55	Haiding Sun	Deep Ultraviolet AlGaN Multiple Quantum Well Graded-Index Separate-Confinement Heterostructures Grown by MBE on SiC Substrates				
PS2.56	Pietro Pampili	Optimization Study of the Fabrication Steps of Deep-UV LED Emitting at 240 nm				
PS2.57	Guo Dong Hao	Enhancement of Light Output Power in AlGaN-Based Deep-Ultraviolet Light-Emitting Diodes by Uniform Current Density Electrodes				
PS2.58	Hoe-Min Kwak	Graphene Oxide Mesh for a High-Performance Current Spreading Layer in Ultra-Violet Light-Emitting Diodes				
PS2.59	Sang-Hyun Hong	Effect of p-GaN Spacer Layer on Optical Properties of Localized Surface Plasmon-Enhanced Near-Ultraviolet Light-Emitting Diodes with Colloidal Ag Nanoparticles				
PS2.60	Byoungjun Choi	Improved Output Power of NUV AlGaN-Based Light-Emitting Diodes by Using Silver Nanowires				
PS2.61	Sung Joo Song	Improving the Output Power of Ultraviolet AlGaN-Based Light Emitting Diode Using Ag Nanowire-Based Electrode				
PS2.62	Jun-Beom Park	Enhanced Output Power of AlGaN-Based UV LEDs Using Transparent Conductive Electrode in UV Region				
PS2.63	TaeHo Lee	Glass Electrodes for Nitride-Based Ultraviolet Light-Emitting Diodes				
PS2.64	Dae-Hyun Kim	licro-Mesh Contact-Embedded p-Type Reflector for AlGaN-Based UV Light Emitting Diode				
PS2.65	Mengjun Hou	Localized Surface Plasmon Enhanced Deep-UV Emission in AlGaN Multiple Quantum Wells				
PS2.66	Hwan Kyo Kim	Improvement of Output Power of Near Ultraviolet Light-Emitting Diodes by Using ITO-Based Transparent n-Type Electrode				
PS2.67	Christian Kuhn	Smooth & Uniform Al _{ps} Ga _{p2} N:Si Superlattice Cladding Layers for Deep UV Laser Diodes				
PS2.68	Pengchong Li	Enhanced Light Emission in Near-Ultraviolet Vertical-Conducting LEDs with AlGaN/GaN Distributed Bragg Reflectors				
PS2.69	Jun-Youn Won	Improved Light Output of GaN-Based Ultraviolet Light-Emitting Diode with GaN/SiO2/AI Omnidirectional Reflector				
PS2.70	Semi Oh	Self-Formed Periodic Air-Nanodisk as an Omnidirectional Reflector in III-Nitride UV Emitter				
PS2.71	Wei Guo	The Influence of Strain Modulated Photonic-Crystal (PhC) on Light Extraction Efficiency Enhancement of AlGaN Deep UV Light-Emitting-Diodes (DUV-LEDs)				
PS2.72	Jong Won Lee	Preferential Outcoupling of Strong in-Plane Emission from AlGaN Deep-Ultraviolet Light-Emitting Diodes				
PS2.73	Piotr Laskowski	Verification of the GaN Diode Design Aspects Influencing the Intensity of the Electron Energy Deposition				
PS2.74	Marco Jimenez- Rodriguez	Electrical Simulations of AlInN on Silicon Heterojunctions for Photovoltaic Applications				
PS2.75	Yi Fang	Numerical Simulation of InGaN-Based High Temperature Concentrator Solar Cells				
PS2.76	Dong-Ju Seo	Properties of Photoelectrodes Consisting of In Ga12 Nanodots & GaN Nanowires on Si by PA-MBE				
PS2.77	Yiming Zhao	Materials Properties Characterization & Device Simulation on a Nonuniform AI Component Al _x Ga _{1-x} N Metal-Semiconductor- Metal Photodetector				
PS2.78	Neha Aggarwal	Fabrication of GaN Nanoflowers Based UV Photodetector				
PS2.79	Swanand Solanke	Demonstration of N-Polar III-Nitride UV Detector on Non-Vicinal Sapphire				
PS2.80	Pallabi Pramanik	Wavelength-Specific Ultraviolet Photodetectors Based on Lateral Transport in AlGaN/AlGaN MQWs Grown by Molecular Beam Epitaxy Effect of Compositional Inhomogeneities				
PS2.81	Mingzeng Peng	Enhanced On/Off Photoresponse of Flexible Self-Powered GaN Ultraviolet Photoswitch by Local Field Modulation				
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PS2.83	Andrzej Taube	AlGaN/GaN High Electron Mobility Transistors on Semi-Insulating Ammono-GaN Substrates with Regrown Ohmic Contacts				
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PS2.85	Ke Wei	Short Channel Effect of AlGaN/GaN HEMT with a Super-Lattice Barrier Layer				
PS2.86	Weijun Luo	An X-Band High Power 22.5° Phase Shifter Based on GaN HEMT				
PS2.87	Hady Yacoub	Single & Multi-Channel GaN-Based HFETs for RF-Switching Applications				
PS2.88	JunShuai Xue	E-Mode InAIN/AIGaN MOS-HEMT with Enhanced Breakdown Voltage				
PS2.89	Pirouz Sohi	Impact of In-Rich InGaN Back-Barrier on the Two-Dimensional Electron Gas Mobility in InAIN/GaN HEMTs				

ABSTRACT	PRESENTER	TITLE
PS2.90	Konstantinos Floros	A Dual Barrier InAIN/AIGaN/GaN HEMT on Si Substrate with Pt Based Gates
PS2.91	Subramaniam Arulkumaran	High Linearity Performance of InAIN/GaN HEMTs on Si at Elevated Temperature
PS2.92	Wardhana Sasangka	Threading Dislocation Movement in AlGaN/GaN-on-Si High Electron Mobility Transistors under High Temperature Reverse Bias Stressing
PS2.93	Abdalla Eblabla	MMIC-Compatible Microstrip Technology for GaN-HEMTs on Low Resistivity Silicon Substrate
PS2.94	Valentin Garbe	Ohmic Ti/Al/TiN Contacts to n-GaN Fabricated by Sputter Deposition
PS2.95	Daniel Piedra	GaN Ohmic Contact Optimization for CMOS Compatible Processing
PS2.96	Avi Shriki	Non-Uniformity of Gold Free Ohmic Contacts Induced by Non-Uniformity of the AIN Spacer Layer in AlGaN/GaN HFETs
PS2.97	Michael McCurdy	DC, RF & Transient Response of GaN RF Power Transistors to 1.8 MeV Proton & 14 MeV Oxygen Ion Irradiation
PS2.98	Zhan Gao	Effects of High-k Gate Dielectrics on the Electrical Behavior of AllnN/GaN Based Diodes & HEMTs
PS2.99	Tae-Soo Kim	Investigation of Trap Levels in SiO _z /AlGaN/GaN High-Electron-Mobility Transistor by Capacitance-Voltage Measurement with Resonant Optical Excitation
PS2.100	Kuldeep Takhar	Non-Alloyed Ohmic Contacts to AlGaN/GaN High Electron Mobility Transistors for Better Scalability of Source Extension Region
PS2.101	Kuldeep Takhar	Performance Improvement & Better Scalability of Wet-Oxide AlGaN/GaN High Electron Mobility Transistors
PS2.102	Ming Xiao	Degeneration & Recovery of the Two-Dimensional Electron Gas in AlGaN(AIN)/GaN Heterostructure
PS2.103	Kazushige Horio	Similarities of Lags & Current Collapse in Field-Plate AlGaN/GaN HEMTs with Different Types of Buffer Layers
PS2.104	Kazushige Horio	Buffer Layer's Acceptor-Density Dependence of Lags & Current Collapse in Field-Plate AlGaN/GaN HEMTs
PS2.105	Kazushige Horio	The Role of Buffer Leakage Current in Breakdown Voltage of AlGaN/GaN HEMTs with a High-k Passivation Layer
PS2.106	Anqi Hu	Spatial Identification of Traps in AlGaN/GaN Heterostructures by the Combination of Lateral & Vertical Electrical Stress Measurements
PS2.107	Ray Hua Horng	Corona Discharge Treated AlGaN/GaN High Electron Mobility Transistor
PS2.108	Ray Hua Horng	Study on Angular Correlated-Color-Temperature Uniformity of Flip-Chip White LEDs with Various Geometries Fabricated by Model Conformal Coating
PS2.109	Amit Shah	Temperature-Dependence of ICP-RIE Etching of (0001), (11-22) & (11-20) GaN in Cl_/Ar Plasma
PS2.110	Fan Yang	The Influence of Low Pressure GaN Insertion Layer on Subthreshold Characteristic in SAG AIGaN/GaN HFET for Normally-Off Application
PS2.111	Alex Yudin	Comprehensive Electrical & Thermal TCAD Simulation of GaN HEMTs as a Device Design Tool
PS2.112	Ahmed Chakroun	Normally-Off AlGaN/GaN MOSHEMTs Using Ultra-Thin Al _{p45} Gap ₅₅ N Barrier & PECVD-SiO _x as Gate Insulator
PS2.113	Kota Sugamata	Normally-Off Operation of Ion Implanted MISFET on Freestanding GaN Substrates
PS2.114	Zhili Zhang	Normally-Off AlGaN/GaN MIS-HEMTs by Ionic Liquid Wet Etching & LPCVD-Si ₃ N ₄ Gate Insulator
PS2.115	Subramaniam Arulkumaran	Improved Device Isolation in AlGaN/GaN HEMTs by Multi-Energy ¹³¹ Xe* Implantation
PS2.116	Zhibo Guo	Second Breakdown & Ruggedness of Lateral & Vertical GaN Power Field-Effect Transistors
PS2.117	Fung Sing Choi	Impact of Buffer Layer Structure on the Vertical Leakage Current in Nitride HEMT Devices
PS2.118	Won-Sang Park	Improvement of Off-State Performance in AlGaN/GaN HEMT with TMAH Surface Treatment
PS2.119	Yiqiang Ni	Research on the Strain Issues of High Blocking Voltage GaN Epitaxial Material Grown on Si Substrate with AIN/GaN Superlattices Buffer
PS2.120	Dominik Jaeger	AIN-Templates on Si(111) for GaN-Power Devices
PS2.121	Liang He	The Influence of AI Composition in AIGaN Back Barrier Layer on Leakage Current & Dynamic RON Characteristics of AIGaN/GaN HEMTs
PS2.122	Yuya Yamaoka	Impact of Crystal Quality of AIN Nucleation Layer on the Vertical Direction Breakdown Voltage of AlGaN/GaN High-Electron-Mobility Transistor Structures on Si
PS2.123	MyoungJin Kang	High-Performance Normally-Off Recessed SiN_AIGaN/GaN-on-Si HEMTs Combined Partially Recessed Gate Structures
PS2.124	Yue-ming Hsin	Comparison of Different Layouts in AlGaN/GaN HEMTs on Si Substrates
PS2.125	Yue-ming Hsin	Performance Improvement of AIGaN/GaN HEMTs Using p-GaN Cap Layers
PS2.126	G. S. Karthikeyan	Effect of GaN Channel Thickness on the Device Characteristics of DH-HEMT on 100 mm Si Grown by MOCVD
PS2.127	Sridhar Majety	Reduction of Interface Trap Density by Wet-Oxidation in Al _z O ₃ /AIGaN/GaN MOS-HEMTs
PS2.128	Masamichi Akazawa	Reduction of Interface State Density at SiO ₂ /InAIN Interface by Inserting Ultrathin Interlayers
PS2.129	Jozef Osvald	Frequency Dispersion of Al ₂ O ₃ /GaN/AlGaN/GaN Heterostructures Capacitance
PS2.130	Michitaka Yoshino	High-k Dielectric Passivation for Reduction of Peak Electric Field in GaN p-n Diodes
PS2.131	Hiroshi Ohta	Process-Damage Recovered Fabrication of High Breakdown Voltage GaN p-n Junction Diodes over 4 kV
PS2.132	Fumimasa Horikiri	Fatigue Characteristics by the Current Stress in Vertical GaN p-n Junction Diodes Fabricated on Free-Standing GaN Substrate
PS2.133	Liuan Li	Temperature-Dependent Electrical Transport Characteristics of a NiO/GaN Heterojunction Diode
PS2.134	Toshihide Ide	Recovery Current Characteristics of Diode Mode Operation in GaN Gate Injection Transistor Bi-Directional Switch
PS2.135	Erica Douglas	Ohmic Contacts to Al _{pass} Ga _{p,15} N/Al _{p3} Ga _{ps} N Heterostructure

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ABSTRACT	PRESENTER	TITLE
PS2.136	Kenji Shiojima	Effect of Surface Treatment in Au/Ni Schottky Diodes Formed on Cleaved m-Plane Surfaces of Free-Standing n-GaN Substrates
PS2.137	Kenji Shiojima	Observation of Initial Stage of Degradation in Ni/n-GaN Schottky Diodes Using Scanning Internal Photoemission Microscopy
S2.138	Shirong Zhao	A Study of the High Temperature Lifetime of Ohmic Contacts to p-GaN by Accelerated Lifetime Tests
S2.139	Marko Tadjer	AIGaN/GaN HEMT Membranes for Flexible Power Electronics
S2.140	Carina Maliakkal	Understanding the Growth Mechanism of MOVPE-Grown Ni-Catalyzed GaN Nanowires
S2.141	Assa Aravindh Sasikala Devi	Ab Initio Investigations on Defect Mediated Magnetism in GaN Nanowires
S2.142	Alexana Roshko	Observations of Inversion Domains in GaN Nanowires by Scanning Transmission Electron Microscopy
S2.143	An Bao	Properties of GaN Nanowires with Sc _x Ga _{1-x} N Insertion
S2.144	Martin Hetzl	Luminescence Properties of Heteroepitaxial Selective Area Grown GaN Nanowires
S2.145	Si-Young Bae	Morphological Transformation of Selectively Grown GaN Nanorods by Controlling a Dopant Flow in a Pulsed-Mode MOCVD
S2.146	Zhihua Fang	Structural & Electrical Transport Properties of Si Doped GaN Nanowires
S2.147	Joel Eymery	Silane Addition for the MOVPE Growth of GaN Wires—Mechanisms & Benefits
S2.148	George Wang	Nanowires, Nanosheets, & Beyond-Geometry Controlled High Aspect Ratio Nanostructures by Top-Down Fabrication
S2.149	Chih-Chung Yang	Internal Quantum Efficiency Enhancement of Deep-UV LED through Surface Plasmon Coupling with Al Nanostructures
S2.150	Chih-Chung Yang	Growth of GaN Nanorod with Cross-Sectional Size Variation
S2.151	Kyuseung Lee	Self-Assembled Growth & Structural Analysis of Uni-Directionally Inclined GaN Nanorods on Nanoimprinted m-Sapphire Using Catalyst-Free Metal-Organic Chemical Vapor Deposition
S2.152	Julia Winnerl	Homoepitaxial Selective Area Growth of GaN Nanowires on Light Emitting Diode Structures
S2.153	Martina Morassi	Growth & Characterization of InGaN/GaN Nanowires
S2.154	Necmi Biyikli	Fabrication of Long-Range Ordered III-Nitride Nanostructures on Si Substrates via Template-Assisted Atomic Layer Deposition
S2.155	Necmi Biyikli	Temperature-Dependent Photoluminescence of Low-Temperature Plasma-Assisted ALD-Grown Ordered GaN Nanostructures on Si Substrates
S2.156	Necmi Biyikli	Fabrication of Flexible Core/Shell Nylon/III-Nitride Nanofibers by Electrospinning & Low-Temperature Plasma-Assisted Atomic Laye Deposition for Photocatalysis & Gas Sensing Applications
S2.157	Andreas Zeidler	Growth of Self-Assembled In Sa _{1-x} N Nanowires on Si(111) by Plasma Assisted Molecular Beam Epitaxy for Electrochemical Applications/Photocatalysis
S2.158	Saskia Weiszer	Structural & Electrical Characterization of In, Gat., N Nanowires Grown on Si(111) by Molecular Beam Epitaxy
S2.159	Jin-Kyu Yang	Optical Characteristics of Single-Crystal InGaN Nanowires Grown via MOCVD with a Ni Catalyst
S2.160	Elissa Roche	Controlled Composition in Indium-Rich In, Ga, N Nanowires Grown by HVPE
S2.161	Qiming Chen	InN/In(Ga)N Dot-in-Nanowire Heterostructures Emitting at 1.55 µm
S2.162	Atsushi Tanaka	(LATE NEWS) Facet Distribution of Leakage Current and Carrier Concentration in m-Plane GaN Schottky Barrier Diode Fabricate with MOVPE
S2.163	Chao Zhao	High-Performance InGaN/GaN Quantum-Disks-in-Nanowires Light-Emitters on Metal Substrates
S2.164	Sebastian Metzner	Nanoscopic Optical & Structural Properties of Thick InGaN Grown on GaN Microrods Investigated by Cathodoluminescence Microscopy
S2.165	Greeshma K	InGaN Quantum Dots by Droplet Epitaxy
S2.166	Stefan Schulz	Electronic & Optical Properties of Nonpolar InGaN/GaN Quantum Dots—Insights from Experiment & Theory
S2.167	Helen Springbett	Cross-Sectional Analysis of InGaN Quantum Dot-Like Formations at Non-Polar (11-20) Nano-Rings Grown by Modified Droplet Epitaxy
S2.168	Tong Wang	A Comparison of Optical Properties between Non-Polar (11-20) InGaN Quantum Dots Grown by Two Different Methods
S2.169	Pierre-Marie Coulon	Evolution of the m-Plane Quantum Well Morphology within a GaN/InGaN Core-Shell Structure
S2.170	Nasir Alfaraj	Effective Surface Passivation of InGaN/GaN Nanowires Studied by Photoluminescence & Photothermal Deflection Spectroscopy
S2.171	Shahab Norouzian Alam	Growth & Characterisation of InGaN/GaN QWs on Defect-Free & Uniformly Formed GaN Nanopyramids for Visible LED Applications
S2.172	Julien Brault	UV Light Emitting Diodes Using Quantum Dot Active Regions
S2.173	Samuel Matta	Epitaxial Growth of (Al,Ga)N Quantum Dots for Ultra-Violet LEDs
S2.174	Valerio Piazza	Electron Beam Induced Current Investigation of GaN Nanowires Containing AIN/GaN Multiple Quantum Discs
S2.175	Lei Jin	The Morphology Evolution of AIN Nanostructure-Influence of Growth Temperature & Growth Duration in Physical Vapor Transport
S2.176	Dae-Woo Jeon	Low Impurities AIN Layer Regrown on AIN Nanopillar/Patterned SiO, by Hydride Vapor Phase Epitaxy
S2.177	Kiseok Kim	Well-Aligned Various ZnO Nano-Structures for High Light-Extraction Efficiency InGaN/GaN-Based Light Emitting Diodes
S2.178	Rajib Mandal	Gas-Phase Synthesis of Gallium Nitride (GaN) Nanocrystals Using Non-Thermal Plasma Reactor
S2.179	Issei Oshima	Structural & Electrical Properties of Semipolar (11-22) AlGaN Grown on m-Plane (1-100) Sapphire Substrates
S2 180	Kenii Iso	Dependence of GaN Growth on the Substrates with Various Surface Orientations by Tri-Halide Vanor Phase Enitaxy Using GaCI

THURSDAY PROGRAM AT-A-GLANCE

 Invited Talk 					
D2.3: Theory	& Simulation III: Theory of I	Point Defects &	Modeling of Optoelectronic Devices Azalea/Begonia		
8:00 am	Audrius Alkauskas	*D2.3.01	Point-Defect-Assisted Nonradiative Recombination in Nitride Light Emitters		
8:30 am	Kirk Lewis	D2.3.02	Predicting the Influence of Point Defects on the Optoelectronic Properties of Gallium Nitride Using a First-Principles Approach		
8:45 am	Darshana Wickramaratne	D2.3.03	Implications of Point Defects on III-Nitride Tunnel Devices		
9:00 am	Alexandros Kyrtsos	D2.3.04	First Principles Study of the Formation Energies and Diffusion Barriers of Carbon and Native Defects in Gat		
9:15 am	Dimiter Alexandrov	D2.3.05	Carbon in Gallium Nitride—Resolving of a Longstanding Mystery		
9:30 am	Shigeta Sakai	D2.3.06	Enhancement of Optical Gain by Controlling Waveguide Modes in Semipolar InGaN Quantum Well Laser Diodes		
9:45 am	Break	e ⁿ eletiw			
10:45 am	Elaheh Ahmadi	D2.3.07	Model to Explain the Behavior of 2DEG Mobility with Respect to Charge Density in N-Polar and Ga-Polar AlGaN-GaN Heterostructures		
11:00 am	Angela Dyson	D2.3.08	The Effects of Non-Equilibrium Phonons on Transport in GaN		
11:15 am	Ajit Vallabhaneni	D2.3.09	Multiscale Modeling of Thermal and Electrical Transport in Gallium Nitride High Electron Mobility Transistor		
11:30 am	Shaloo Rakheja	D2.3.10	Challenges and Opportunities in Modeling Gallium Nitride High Electron Mobility Transistors— From Numerical Simulations to Compact Transistor Model		
11:45 am	Nadim Chowdhury	D2.3.11	GaN-Based Digital Electronics beyond '3.5 nm' Technology Node		
12:00 pm	Shahab Shervin	D2.3.12	Multifunctional Flexible III-Nitride-Based Electronic and Photonic Devices— Numerical Study on Device Performance Characteristics and New Functionality by External Bending Strain		
E0.4: Nanosti	uctures IV: (In.Ga)N Nanost	ructures: Optoe	electronic Devices & Properties Camellia/Dogwood		
8:00 am	Lars Samuelson	*E0.4.01	Nanowire-Based Blue-, Green- and Red-Emitting LEDs for Displays and Lighting		
8:30 am	Wolf Quitsch	E0.4.02	Interplay of Internal and Build-In Fields in GaN/InGaN Core-Shell Nanocolumn Devices		
8:45 am	Valerio Piazza	E0.4.03	Correlated Electroluminescence, Cathodoluminescence and Electron Beam Induced Current Mapping of Core-Shell Nanowire InGaN/GaN LEDs		
9:00 am	Mohsen Nami	E0.4.04	Anomalous Behavior of Temperature-Dependent Photoluminescence in GaN/InGaN Core-Shell Nanostructures		
9:15 am	Takao Oto	E0.4.05	Systematic Investigation of Influence of Nanostructural Effect on Optical Properties in InGaN Nanocolumns		
9:30 am	Angelina Vogt	E0.4.06	Recombination Dynamics in Planar and 3D InGaN/GaN LED Structures		
9:45 am	Break	Stores !!			
10:45 am	Yong-Hoon Cho	*E0.4.07	Group III-Nitride Nanostructures for Solid State Lighting and Quantum Photonics		
11:15 am	Serdal Okur	E0.4.08	Spectrally-Resolved Internal Quantum Efficiency and Carrier Dynamics in Semipolar (10-11) Triangular Nanostripe InGaN/GaN LEDs		
11:30 am	George Wang	E0.4.09	Fabrication and Control of III-Nitride Nanowire Lasers		
11:45 am	Pierre-Marie Coulon	E0.4.10	Optimisation of the Fabrication of InGaN/GaN Nanoring/Nanotube for Whispering Gallery Modes (WGMs) Based Laser		
12:00 pm	lan Rousseau	E0.4.11	Far-Field Enhancement in High-Q Blue III-Nitride Photonic Crystal Nanobeam Cavities on Silicon		
12:15 pm	George Wang	E0.4.12	Facet Evolution in GaN Chemical Etching for 3D Structures and Optical Microcavities		
B1.5: Visible	Devices V: Visible Light Em	itters: Contacts	, Tunnel Junctions & Monolithic Integration & Late News International Center		
8:00 am	Nicolas Grandjean	*B1.5.01	Transparent Conductive Nitride p-Contacts		
8:30 am	Yasuto Akatsuka	B1.5.02	Buried Tunnel Junctions Using Low Resistive GaInN Tunnel Junctions with High Si Concentrations		
8:45 am	Fatih Akyol	B1.5.03	3 Ultra-Low Resistance GaN/InGaN/GaN Tunnel Junctions with Indium Content < 15%		
9:00 am	Silvio Neugebauer	B1.5.04	MOVPE Growth of GaN-Based Tunnel Junctions for Lateral Current Spreading in InGaN LEDs		
9:15 am	Czeslaw Skierbiszewski	B1.5.05	Light Emitting Diodes with Tunnel Junctions for Hole Injection Grown by Plasma-Assisted MBE		
9:30 am	Yuefei Cai	B1.5.06	Voltage-Controlled Light Modulation Enabled by Monolithically Integrated HEMT-LED Device		
9:45 am	Marco Jimenez- Rodriguez	B1.5.07	(LATE NEWS) First Ultrafast Mode-Locked Fiber Laser Using InN Saturable Absorber at Telecom Wavelength		
10:00 am	Break				

1.6: Visible	Devices VI: Light Emitters	: Lasers	International Center		
10:45 am	Qian Sun	B1.6.01	GaN-on-Si UV LED and Blue/Violet Laser Diode		
11:00 am	Junichiro Ogimoto	B1.6.02	Design and Fabrication of Modulation-Doped GaN-Based Vertical Cavities for Blue Surface-Emitting Lasers		
11:15 am	Grzegorz Muziol	B1.6.03	Aluminum-Free Blue Laser Diodes Grown by Plasma Assisted Molecular Beam Epitaxy		
11:30 am	Cheng Zhang	B1.6.04	All-Nitride, Optically Pumped VCSELs in Blue and Near UV		
11:45 am	Ji Hye Kang	B1.6.05	Optically Pumped Distributed Feedback Lasers Based on GaN with 10 th -Order Laterally Coupled Surface Gratings		
12:00 pm	Szymon Stanczyk	B1.6.06	Opto-Electrical Properties of (Al,In)GaN Laser Diodes with Tapered Waveguide		
12:15 pm	Stephane Trebaol	B1.6.07	Impact of Mode-Hopping Noise on InGaN Edge Emitting Laser RIN Properties		
1.7: Materia	als Characterization VII: C	haracterization of	Electronic Devices International North		
8:00 am	Steven Ringel	*D1.7.01	Traps and Their Effects in High Voltage GaN/Si HEMTs and Ultra-Wide Bandgap Semiconductors		
8:30 am	Suguru Mase	D1.7.02	Analysis of Carrier Trapping and Emission in AlGaN/GaN HEMT with Bias-Controllable Field Plate		
8:45 am	Masahiro Horita	D1.7.03	Wafer-Level Mapping of Net Donor and Deep-Level Trap Concentrations in MOVPE-Grown Homoepitaxial n-Type GaN		
9:00 am	Kevin Galiano	D1.7.04	Spatially Correlating the Ec-0.57 eV Trap in GaN with Edge Dislocations		
9:15 am	Takuya Maeda	D1.7.05	Photocurrent Induced by Sub-Bandgap-Wavelength Light Absorption Due to Franz-Keldysh Effect in n-Type GaN Schottky Barrier Diode under Large Reverse Bias		
9:30 am	Tommaso Brazzini	D1.7.06	Hot Electron Electroluminescence in GaN-Based Transistors-Origin of the Emission		
9:45 am	Break				
01.8: Materia	als Characterization VIII: (Characterization o	f (Al,Ga)N International North		
10:45 am	Yoichi Kawakami	*D1.8.01	Radiative and Nonradiative Recombination Processes in AlGaN-Based Quantum Wells		
11:15 am	Chelsea Haughn	D1.8.02	Well Width Dependence of Radiative Lifetime in Ultrathin Al-Rich AlGaN/AIN Multiple Quantum Wells		
11:30 am	Yoichi Yamada	D1.8.03	Confinement-Enhanced Biexciton Binding Energy in AlGaN-Based Quantum Wells		
11:45 am	Carsten Netzel	D1.8.04	Surface-Related Effects on the Temporal Change in (AI)GaN Photoluminescence Intensity		
12:00 pm	Towhidur Razzak	D1.8.05	Investigation of Deep Levels in High-Al Mole Fraction AlazsGaasN		
12:15 pm	Dorian Alden	D1.8.06	Detailed Photoluminescence Excitation Study of the 3.9 eV and 2.7 eV Defect Luminescence Bands and the Commonly Observed Deep UV Absorption at 4.7 eV		
2.7: Epitaxia	al Growth VII: Epitaxial Gr	owth of (AI,Ga)N	International South		
8:00 am	Markus Weyers	*A2.7.01	Low Defect Density AIN and AlGaN for Deep UV Emitters		
8:30 am	Mitsuaki Kaneko	A2.7.02 Strain Controls of High-Quality AIN Layers by Misfit Dislocations Introduced at Step Edges of SiC(0001) Substrates			
8:45 am	Lisheng Zhang	A2.7.03	High-Quality AIN Epitaxy on Nano-Patterned Sapphire Substrates Prepared by Nano-Imprint Lithography		
9:00 am	Hualong Wu	A2.7.04	Improved Nucleation of AIN Template Layer on Sapphire Substrate by Using TMGa Pulse Flow		
9:15 am	Daniel Koleske	A2.7.05	Low Etch Pit Density AIN on Sapphire		
9:30 am	Tinh Tran	A2.7.06	Improvement of AIN Crystal Quality on Si Substrate for Deep UV-LED Applications		
9:45 am	Break	s Sinteren	ENERGY INTERACTION AND ADDRESS OF ADDRE		
1.4: Bulk Gr	owth IV/A2.8: Epitaxial G	rowth VIII: Tri-Hal	ide Vapor Epitaxy of (In,Ga)N & Doping of GaN International Sout		
10:45 am	Hisashi Murakami	*A1.4.01/ A2.8.01	Recent Progress in Tri-Halide Vapor Phase Epitaxy of Thick GaN and InGaN		
11:15 am	Andreas Lesnik	A1.4.02/ A2.8.02	Carbon Doping by Propane for the Compensation of n-Type GaN Layers		
11:30 am	Felix Kaess	A1.4.03/ A2.8.03	Control of Carbon in MOCVD-Grown GaN for Power Devices by Supersaturation and Fermi Level Control		
11:45 am	Anchal Agarwal	A1.4.04/ A2.8.04	Mg Blocking by GaN Grown via Low Temperature Flow Modulation Epitaxy		
12:00 pm	Andrew Klump	A1.4.05/ A2.8.05	Electrical Characteristics and Control of Compensating Point Defects for Mg-Doped GaN		
10.10	Kohei Heno	A1 4 06/	High Hole Mobility n-Type GaN with Extremely Low Residual Hydrogen Concentration Prenared		
12:15 pm	Nonci Deno	A2.8.06	by Pulsed Sputtering		

400 am Eison Matioli *00.4.01 Anostructured GaN Devices—From Ballistic Transport to Superior Device Performance 830 am Zhichao Yang 0.0.4.02 III-Nitride Tiunelling i tot Electron Transistors with Current Gan above 10 9400 am Haowen Hou 00.4.03 Modeling and Demonstration of High Current MoS, GaN Internation Transport MoS, GaN Internation Molitogi Devis 500 V 9.45 am Saptarshi Mandal 00.4.07 (LATE NEWS) First Demonstration of Hy Actor GaN InterNatis Multiple Field Plates Exhibiting Breakdown Voltage Dever 500 V 11:00 am James Pomeroy 00.4.08 Mastriantal Machanical Characterisation of GaN-on-Sici HEMTs via Wafer Bonding 11:00 am James Pomeroy 00.4.10 High Temperature Operation of Dialmond Coated AllaMGaN High Electron Mobility Transistor 11:13 am Huani Sun Co.4.11 Low Thermal Tem Constants of GaN HeMTs 11:20 pm James Pomeroy 00.4.13 Thermal Time Constants of GaN HeMTs 12:15 pm Luke Yates CO.4.14 Investigation of the Thermal	CO.4: Electronic De	evices IV: Quantum Devi	ces & Sensors	& Late News Narcissus/Orange Blossom		
8:30 am Zhickao Yang C0.4.02 III-Nitride Tunneling Hot Electron Transistors with Current Gain above 10 8:45 am Sriram Krishnanorthy C0.4.03 Modelling and Demonstration of High Current MoS_GAM Interhand Tunnel Junctions 9:00 am Hawen Hou C0.4.04 A. Sub-TH2 Broadband Detector Based on Gail HEMTs with Multiple Field Plates Exhibiting 9:15 am Shawn Gibb C0.4.06 (LATE NEWS) First Demonstration of H-Polar Gain HEMTs with Multiple Field Plates Exhibiting 9:45 am Saptarbi Mandal C0.4.07 (LATE NEWS) Gain Gaite Current Biocking Layer Demonstration 9:45 am Saptarbi Mandal C0.4.07 (LATE NEWS) Gain Gaite Current Biocking Version 10:00 am Break Elecking Version Contract State Current Biocking Layer Demonstration 11:00 am James Pometroy C0.4.10 High Temperature Operation of Damond Coated AlGaI/Gain High Electron Mobility Transistor 11:15 am Gabriel Vanko C0.4.11 Low Thermal Am Machanner of Gai HeMTs Electron Mobility Transistor 11:15 am Gabriel Vanko C0.4.12 Thermal Management in Gai HeMTs Electron Mobility Transistor 11:15 am Gabriel Vanko C0.4.11 Theremal Management in Gai HeMTs <td>8:00 am Elis</td> <td>son Matioli</td> <td>*C0.4.01</td> <td>Nanostructured GaN Devices—From Ballistic Transport to Superior Device Performance</td>	8:00 am Elis	son Matioli	*C0.4.01	Nanostructured GaN Devices—From Ballistic Transport to Superior Device Performance		
8:45 am Siriam Krishnamoorthy C0.4.03 Modeling and Demonstration of High Current MoS_GaN Interhand Tunnel Junctions 9:00 am Haven Hou C0.4.04 A Sub-Tht Strandband Detector Based on GaN HEMTs with Nano Antonas 9:15 am Shawn Gibb C0.4.05 Single Crystal IIN Harkina's for Buck Acustic Wave Resonator Applications 9:45 am Saptarshi Mandal C0.4.05 C.147 ENEWS [Srst Demonstration of H-Pdar GaN HEMTs with Multiple Field Plates Exhibiting Breakdown Voltage Over 500V 9:45 am Saptarshi Mandal C0.4.07 C.147 ENEWS [CaN Gat CaN CVF With Mg Ion-Implanted Current Blocking Layer Demonstrating a Blocking Voltage over 500V 10:00 am Break Evak Detect Table Can Control Can Contro Can Control Can	8:30 am Zhio	chao Yang	C0.4.02	III-Nitride Tunneling Hot Electron Transistors with Current Gain above 10		
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8:45 am Akira Yoshikawa B3.3.03/ F0.5.03 Physical Property of the High Photosensitive Field Effect Transistor Type UV Photosensors with AlGaN/AlGaN Hetero Structure 9:00 am Saki Ushida B3.3.03/ F0.5.04 Temperature Dependence in AlGaN-Based Heterostructure Field-Effect Transistor Type UV Photo F0.5.05 9:15 am Gregory Salamo B3.3.05/ F0.5.05 AlGaN/GaN Micro-Hall Devices for Current Sensing 9:43 am Bahadir Kucukgok B3.3.06/ F0.5.06 Investigation of Thermoelectric Properties in III-Nitride Based Semiconductors 9:45 am Break Polinset 10:45 am Zetian Mi *F0.6.01 High Efficiency Solar Fuels Generation on III-Nitride Nanostructures 11:15 am Paula Neuderth F0.6.02 Photocatalytic Properties of InGaN/GaN Nanowires Functionalized with Ultrathin Oxide Films 11:45 am Mohamed Ebaid F0.6.04 Realization of Robust Photoelectrochemical Water Splitting System with Enhanced Conversion Using 1.65 eV InGaN Nanowires on Bulk-Metal Substrates 12:00 pm Hua Zon	8:30 am Lut	tz Geelhaar	B3.3.02/ F0.5.02	High Photocurrent of (In,Ga)N Nanowire Photoanodes Mediated by a Radial Stark Effect		
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3:15 pm Biplab Sarkar B2.4.06 Cluster Contact Behavior in p-GaN Grown on Sapphire and AIN Substrate	3:00 pm Tos	shiki Yasuda	B2.4.05	Hole Accumulations to Polarization Charges in Relaxed AlGaN Heterostructures with High AIN Mole Fractions		
	3:15 pm Bip	olab Sarkar	B2.4.06	Cluster Contact Behavior in p-GaN Grown on Sapphire and AIN Substrate		
3:30 pm Noriaki Nagata B2.4.07 Low Resistivity Ohmic Contact V-Based Electrode Contributed by Using Thin SiN _x Intermediate for High AIN Molar Fraction n-Type AlGaN	3:30 pm Nor	riaki Nagata	B2.4.07	Low Resistivity Ohmic Contact V-Based Electrode Contributed by Using Thin SiN, Intermediate Layer for High AIN Molar Fraction n-Type AlGaN		

2.10: Epitax	ial Growth X: Growth of UV	Devices & Thic	k AIN & GaN Films Azalea/Begoni	
4:15 pm	Yu-Han Liang	A2.10.01	Progress in AlGaN-Based Ultraviolet Light-Emitting Diodes Made from Films Synthesized by the Liquid-Metal-Enabled Growth Mode of Molecular Beam Epitaxy	
4:30 pm	Feng Wu	A2.10.02	Significant Internal Quantum Efficiency Enhancement of GaN/AlGaN Multiple Quantum Wells Emitting at ~350 nm	
4:45 pm	Jicai Zhang	A2.10.03	2 inch AIN/Sapphire Template Grown by HVPE	
5:00 pm	Chia-Hung Lin	A2.10.04	Effect of AIN Buffer Layer Thickness on Crystallinity and Surface Morphology of 10-µm-Thick a-Plane AIN Films Grown on r-Plane Sapphire Substrates	
5:15 pm	Masayoshi Adachi	A2.10.05	Fabrication of a-Plane AIN on r-Plane Sapphire Substrate by Sapphire Nitridation and Ga-AI Liquid Phase Epitaxy	
5:30 pm	Tohoru Matsubara	A2.10.06	Visualization of Dislocation Behavior in HVPE-Grown GaN Using Facet Controlling Technique	
0.5: Nanosi	ructures V: Nanostructures	for Electronic A	pplications Camellia/Dogwoo	
2:00 pm	Ki-Sik Im	E0.5.01	First Demonstration of Top-Down GaN Nanowire Gate-All-Around FET	
2:15 pm	Sameer Joglekar	E0.5.02	Transport Properties of Nano-Ribbon AlGaN/GaN Devices-Impact of Sidewall Roughness	
2:30 pm	Dong-Hyeok Son	E0.5.03	Suspended Nanowire GaN Junctionless FET Fabricated by Top-Down Approach	
2:45 pm	Giovanni Santoruvo	E0.5.04	Room Temperature Ballistic Devices for High Frequency Harmonic Generation	
3:00 pm	Jana Hartmann	E0.5.05	High Aspect Ratio 3D GaN Fins with Nonpolar a-Plane Sidewalls Grown by Metalorganic Vapor Phase Epitaxy	
3:15 pm	Ludwig Greif	E0.5.06	Energy Transfer Processes in GaN Quantum Wires	
3:30 pm	Thierry Guillet	E0.5.07	Transport of Indirect Excitons in GaN Quantum Wells	
3:45 pm	Break	12.23		
0.6: Nanosi	tructures VI: III-N Quantum I	Dots	Camellia/Dogwoo	
4:15 pm	Tong Wang	E0.6.01	Linearly Polarized Single Photon Emission at 220 K from a Non-Polar (11-20) InGaN/GaN Quantum Dot	
4:30 pm	Ping Wang	E0.6.02	Single Photon Emission from Site-Controlled In(Ga)N/GaN Monolayers Quantum Dot	
4:45 pm	Houssaine Machhadani	E0.6.03	InGaN Pyramidal Quantum Dots as Source of Single Photons Device	
5:00 pm	Tim Puchtler	E0.6.04	Polarized Single-Photon Emission from m-Plane InGaN Quantum Dots	
5:15 pm	Sarah Blumenthal	E0.6.05	Stacked Self-Assembled Cubic GaN Quantum Dots Grown by Molecular Beam Epitaxy	
5:30 pm	Songrui Zhao	E0.6.06	Molecular Beam Epitaxial Growth and Characterization of AlGaN Single Monolayer Dot-in-Nanowire Heterostructures	
5:45 pm	Benjamin Leung	E0.6.07	InGaN Quantum Dots by Quantum Size Controlled Photoelectrochemical Etching	
1.7: Visible	Devices VII: Light Emitters	& their Degrad	ation International Cent	
2:00 pm	Anna Kafar	B1.7.01	Nitride Superluminescent Diodes with Broadband Emission Spectra Realized by Step-Like Indium Content Profile	
2:15 pm	Seung-Hyuk Lim	B1.7.02	Fabrication and Characterization of GaN Based White Light-Emitting Diode without Phosphor	
2:30 pm	Krzysztof Gibasiewicz	B1.7.03	Practical Method of Fabrication of High Quality Micrometer Size InGaN Light Emitting Diode	
2:45 pm	Michael Kunzer	B1.7.04	Defect Repair of GaN-Based LEDs by Ultraviolet Laser Processing	
3:00 pm	Ewa Grzanka	B1.7.05	Changes of Indium Distribution within the InGaN MQWs in LED and LD Structures just before Their Decomposition	
3:15 pm	Carlo De Santi	B1.7.06	Time-Dependent Breakdown in GaN-Based LEDs—Description and Physical Origin	
3:30 pm	Agata Bojarska	B1.7.07	(LATE NEWS) Factors Influencing InGaN Laser Diodes Degradation	
3:45 pm	Break			
1.10: Mater	ials Characterization X: Cha	iracterization o	f Low Dimensional Nitrides & Defects International Cent	
4:15 pm	Alexey Kavokin	*D1.10.01	Light-Matter Coupling Phenomena in Low-Dimensional Nitride-Semiconductors	
4:45 pm	Akira Sakai	*D1.10.02	Three-Dimensional Reciprocal Space Mapping Analysis for Localized Structures and Defects in Nitride Semiconductor Materials	
5:15 pm	Ines Trenkmann	D1.10.03	Birefringence in GaN Epitaxial Layers and GaN Microrods	
5:30 pm	Akira Uedono	D1.10.04	Vacancy-Type Defects in Metal Deposited GaN Probed Using a Monoenergetic Positron Beam	
5:45 pm	Michael Reshchikov	D1.10.05	Fine Structure of the Yellow Luminescence Band in GaN	
6:00 pm	Felix Kaess	D1.10.06	Experimental Analysis of Defect Quasi Fermi Level Control in MOCVD-Grown GaN and AlGaN	

9: Materia	Is Characterization IX: Char	acterization of (Optical Processes in (In.Ga)N	
2:00 nm	Andreas Hangleiter	*D1 9 01	Efficient Formation of Free Excitons in Nitride Quantum Wells at Room Temperature-	
2.00 pm		01.0.01	Impact on Recombination Processes and LED Droop	
2:30 pm	Felix Feix	D1.9.02	Power Law Decay of the Photoluminescence Intensity of (In,Ga)N/GaN{0001} Quantum Wells- Impact of Nonradiative Recombination and Diffusion	
2:45 pm	Gwenole Jacopin	D1.9.03	Enhancement of Auger Recombination Induced by Localization in InGaN/GaN Quantum Wells	
3:00 pm	m Mariia Anikeeva D1.9.04 Recombination Processes and Influence of Carrier Localization on their Optical Pro in (In,Ga)N/GaN Short Period Superlattices		Recombination Processes and Influence of Carrier Localization on their Optical Properties in (In,Ga)N/GaN Short Period Superlattices	
3:15 pm	Tadeusz Suski	D1.9.05	Searching for Indirect Excitons in Coupled Double InGaN/GaN Quantum Wells	
3:30 pm	Yoshihiro Ishitani	D1.9.06	Exciton Dynamics and Stability of GaN in Non-Thermal Equilibrium State by the Analysis Taking into Account the Higher-Order Exciton States	
3:45 pm	Break			
1.11: Mater	als Characterization XI: We	ar of Nitride Ma	terials & Properties of GaN Based Structures & Late News International North	
4:15 pm	Guosong Zeng	D1.11.01	Investigation of Ultralow Wear of III-Nitride Materials	
4:30 pm	Norihiko Kamata	D1.11.02	ICP-Etching Induced Defects in GaN and its Recovery Revealed by Two-Wavelength Excited Photoluminescence	
4:45 pm	Andrea Winnerl	D1.11.03	Electrochemical Characterization of Surface States at the GaN/Electrolyte Interface	
5:00 pm	Modestos Athanasiou	D1.11.04	Enhanced Forster Energy Transfer in Hybrid Organic/III-Nitride Grating Structures	
5:15 pm	Tomohiro Inaba	D1.11.05	Quantitative Analysis on Energy Transfer Process for Eu Luminescent Centers in Eu-Doped GaN	
5:30 pm	Siddha Pimputkar	D1.11.06	(LATE NEWS) Sub-Bandgap Optical Absorption of Bulk GaN Crystals	
5:45 pm	Naoki Sawada	D1.11.07	(LATE NEWS) Si-Donor Ionization Energy and Compensating Effect in MOVPE-Grown Homoepitaxial n-Type GaN with Various Doping Concentrations	
2.9: Epitaxia	I Growth IX: Epitaxial Grow	th of N-Polar Ni	trides & GaN-on-Si International Sout	
2:00 pm	Stefan Mohn	A2.9.01	Role of Low Temperature Buffers for Polarity Control of III-Nitrides on Sapphire	
2:15 pm	Cory Lund	A2.9.02	Growth of High Quality N-Polar In, Ga, , N Films with x > 0.4 for Tunnel Junction Devices	
2:30 pm	Tomoyuki Tanikawa	A2.9.03	Control of Impurity Concentration of Undoped N-Polar (000-1) GaN Grown by Metalorganic Vapor Phase Epitaxy	
2:45 pm	Ryohei Nonoda	A2.9.04	Improvement of Homogeneity in N-Polar (000-1) InGaN Grown by Metalorganic Vapor Phase Epitaxy	
3:00 pm	Gautier Laval	A2.9.05	Selective Area Growth of High Crystalline Quality N-Polar GaN Pseudo-Substrates on Si (100)	
3:15 pm	Mikhail Rudinsky	A2.9.06	Control of Stress, Bow, and Dislocation Density in (0001) AIN/GaN Superlattices Grown on Silicon	
3:30 pm	Hojun Lee	A2.9.07	Study of AIN Nucleation by Directional Sputtering for Growth of Orientation-Controlled GaN on Si(001) Substrates	
3:45 pm	Break	La Grade	States and the second	
0.8: Novel N	aterials & Devices VIII/A2.	11: Epitaxial Gro	owth XI: Growth of Novel Materials & Devices International South	
4:15 pm	David Meyer	*F0.8.01/ A2.11.01	Epitaxial Conductors—Transition Metal Nitride Integration with III-N Materials	
4:45 pm	Lu Han	F0.8.02/ A2.11.02	Electron-Photon and Electron-LO Phonon Intersubband Scattering Rates in Lattice-Matched GaN-ZnGeN ₂ Coupled Quantum Wells	
5:00 pm	Andriy Zakutayev	F0.8.03/ A2.11.03	Group-IV Nitride Compounds and Alloys for Solar Energy Conversion Applications	
5:15 pm	Matthew Hardy	F0.8.04/ A2.11.04	Epitaxial ScAIN Grown by Plasma-Assisted Molecular Beam Epitaxy on GaN and SiC Substrates	
5:30 pm	Mohammad Nazari	F0.8.05/ A2.11.05	Morphology Study of Diamond Grown on GaN Using Near-Ultraviolet Micro-Raman Technique	
5:45 pm	Neeraj Nepal	F0.8.06/ A2.11.06	Structural and Raman Properties of Molecular Beam Epitaxy Grown $\beta\text{-Nb}_2N$ Films and AlN/ $\beta\text{-Nb}_2N$ Heterojunctions on 6H-SiC Substrates	
2.3: Power l	levices III: Devices for Pow	er Electronics II	Narcissus/Orange Blosson	
2:00 pm	Sen Huang	*C2.3.01	Enhancement-Mode GaN-Based MIS-HEMTs for Dynamic Voltage Power Supply Applications	
2:30 pm	Gaudenzio Meneghesso	C2.3.02	Normally-off HEMTs with p-GaN Gate—Stability and Lifetime Extrapolation	
2:45 pm	Ho-Young Cha	C2.3.03	Normally-off AlGaN/GaN-on-Si Metal-Oxide-Semiconductor-Heterojunction Field-Effect Transistor with an Integrated Single Stage GaN Inverter as a Gate Driver	
3:00 pm	Naoki Kato	C2.3.04	An AlGaN/GaN Field Effect Diode with a High Turn-On Voltage Controllability	
3:15 pm	Yuhao Zhang	C2.3.05	High-Performance Quasi- and Fully-Vertical GaN-on-Si pn Diodes	
3:30 pm	Xu Zhang	C2.3.06	Switching Performance of Quasi-Vertical GaN-Based p-i-n Diodes on Si	
CTURING CONTRACTOR				

CO.5: Electron	nic Devices V: Doping, Im	plantation & Isol	ation & Late News	Narcissus/Orange Blossom
4:15 pm	Boris Feigelson	*C0.5.01	Advances and Challenges in p-Type Doping of GaN by Imp	plantation and Novel Annealing Technique
4:45 pm	Tetsuo Narita	C0.5.02	.02 P-Type Conduction by Mg-Ion Implantation for N-Face GaN	
5:00 pm	Shinya Takashima	C0.5.03	Mg Doping Dependence of GaN MOSFETs Fabricated on Homoepitaxial p-GaN Layers	
5:15 pm	Kexiong Zhang	C0.5.04	InGaN/GaN Heterostructure P-Channel Metal-Oxide-Semiconductor Field Effect Transistor by Using Polarization-Induced Two-Dimensional Hole Gas	
5:30 pm	Aki Sasakura	C0.5.05	Characterization of GaN-Based Trench-Gate MOSFET with	Implanted Source Region
5:45 pm	Martin Eickelkamp	C0.5.06	Growth and Characterization of Buffer Structures for AlGa Field Effect Transistors	N/GaN-Based Heterostructure
6:00 pm	Kazuki Nomoto	C0.5.07	(LATE NEWS) Vertical GaN Junction Field Effect Transisto	rs with Regrown GaN Channels
FO.7: Novel N	laterials & Devices VII: N	ovel Sensing De	vices & Magnetism	Poinsettia/Quince
2:00 pm	Martin Eickhoff	*F0.7.01	Optochemical Sensing Devices Based on Group III-Nitride	e Nanowires
2:30 pm	Dominik Heinz	F0.7.02	Sensing the Iron-Load of Ferritin Biomolecules Using Gal	nN Quantum Wells as Optochemical Transducers
2:45 pm	Sara Lippert	F0.7.03	F0.7.03 InGaN/GaN Nanowire Heterostructures as Multifunctional Optical Biosensors— Selective Detection of Biochemical Species and Local Sensing of pH Changes in Cells	
3:00 pm	Maciej Sawicki	F0.7.04	7.04 Stretching Magnetism with an Electric Field in a Nitride Semiconductor	
3:15 pm	Shengxiang Jiang	F0.7.05	D5 Enhanced Ferromagnetism in Nanoscale GaN:Mn Wires Grown on GaN Ridges	
3:30 pm	Katarzyna Gas	F0.7.06 Impact of Mg Doped Cladding Layers on Ferromagnetism of (Ga,Mn)N Thin Films		
3:45 pm	Break Break	1 2 1 2 1		
B3.4: Photode	etectors, Photovoltaics, In	tersubband Dev	ices IV: Characterization of Intersubband Structures & Late	News Poinsettia/Quince
4:15 pm	Houqiang Fu	B3.4.01	Crystal Orientation Dependent Intersubband Transition in for Optoelectronic Applications	Semipolar AlGaN/GaN Quantum Well
4:30 pm	Caroline Lim	B3.4.02	Doping of Nonpolar M-Plane GaN/AlGaN Multi-Quantum- in the THz Range—Effect of Si and Ge Doping	Wells with Intersubband Transitions
4:45 pm	Oana Malis	B3.4.03	Dramatic Enhancement of Near-Infrared Intersubband Abs	sorption in c-Plane AlInN/GaN Superlattices
5:00 pm	Xuanqi Huang	B3.4.04	04 (LATE NEWS) Fabrication and Characterization of Non-Polar and Semipolar InGaN/GaN Multi-Quantum Well (MQW) Solar Cells	
5:15 pm	P. Holtz	B3.4.05	.05 (LATE NEWS) Single Polarized-Photons Emitted from Elongated III-Nitride Pyramidal Quantum Dots	
5:30 pm	Zarco Gacevic	B3.4.06 (LATE NEWS) Nonpolar, Semipolar and Polar III-Nitride Dot-in-a-Wire Sources of Linearly Polarized Single Photons		
Rump Sessio	ins			
6:15 pm	International North	Rump Sess	ion I: Is There a Suitable Future for Ordered Nanostructures :	as Real Devices?
6:15 pm	International Center	Rump Sess	ion II: Do We Really Need Better LEDs?	energian de contra 1998, Cl
6:15 pm	International South Rump Session III: The Future of Wide-Bandgap Electronics			

PROGRAM AT-A-GLANCE FRIDAY

* Invited Talk

PL.2: Plenary	Session II			Grand Ballroom
9:00 am	Jy Bhardwaj	*PL.2.01	Progress in LED Technology for Solid-State Lighting	
9:45 am	Takashi Egawa	*PL.2.02	Heteroepitaxial Growth of GaN-on-Si and Power Device Applications	
10:30 am	Break			1.5
11:00 am	Closing Remarks			

LATE NEWS

MONDAY

PS1: Poster	Session I	
ABSTRACT	PRESENTER	TITLE IN ALL THE REAL PROPERTY AND A DESCRIPTION OF THE
PS1.88	Matthew Rosenberger	Atomic Force Microscope Measurements of Thermomechanical and Inverse-Piezoelectric Strain in AlGaN/GaN High Electron Mobility Transistors

TUESDAY

Oral Program							
C1.1: RF/mm Wave Devices I: Electronic Devices for RF Applications							
10:00 am	Wenwen Li	C1.1.06	Design and Fabrication of Self-Aligned GaN Static Induction Transistors				
D1.4: Materials Characterization IV: Atomic Structure & Dislocation Effects							
3:30 pm	Anna Kafar	D1.4.06	Spontaneous and Stimulated Emission in InGaN Edge Emitters and their Competition with Auger Processes				
B2.3: UV De	vices III: UV Lasers & Las	ing					
6:00 pm	Burhan SaifAddin	B2.3.07	Epi-Transfer Technology for High EQE UV LEDs Grown on SiC				

WEDNESDAY

Oral Progra	m					
A1.3: Bulk 0	Growth III: Bulk Gro	wth & Late News				
9:45 am	J. Hertrampf	A1.3.07	Ammonothermal Synthesis and Crystal Growth of Indium Nitride			
D1.6: Materials Characterization VI: Characterization of Electronic Devices						
9:45 am	Yumi Kisanuki	D1.6.07	Superior Thermal Resistance of N-Polar GaN Surface over Ga-Polar GaN Surface in NH_3 added N_2 Ambient at High Temperatures above 1200 °C			
PS2: Poster Session II						
ABSTRACT	PRESENTER	TITLE				
PS2.162	Atsushi Tanaka	Facet Distribution of Leakage Current and Carrier Concentration in m-Plane GaN Schottky Barrier Diode Fabricated with MOVPE				

THURSDAY

Oral Progra							
CO.4: Electronic Devices IV: Quantum Devices & Sensors							
9:30 am	Onur Koksaldi	C0.4.06	First Demonstration of N-Polar GaN HEMTs with Multiple Field Plates Exhibiting Breakdown Voltage Over 500 V				
9:45 am	Saptarshi Mandal	C0.4.07	pGaN Gate CAVET with Mg Ion-Implanted Current Blocking Layer Demonstrating a Blocking Voltage over 500V				
B1.5: Visibl	le Devices V: Visible Light	Emitters: Contacts	, Tunnel Junctions, & Monolithic Integration				
9:45 am	Marco Jimenez- Rodriguez	B1.5.07	First Ultrafast Mode-Locked Fiber Laser Using InN Saturable Absorber at Telecom Wavelength				
B1.7: Visibl	le Devices VII: Light Emitte	rs & their Degrad	ation				
3:30 pm	Agata Bojarska	B1.7.07	Factors Influencing InGaN Laser Diodes Degradation				
B3.4: Photo	odetectors, Photovoltaics, I	ntersubband Devi	ces IV: Characterization of Intersubband Structures				
5:00 pm	Xuanqi Huang	83.4.04	Fabrication and Characterization of Non-Polar and Semipolar InGaN/GaN Multi-Quantum Well (MQW) Solar Cells				
5:15 pm	P. Holtz	B3.4.05	Single Polarized-Photons Emitted from Elongated III-Nitride Pyramidal Quantum Dots				
5:30 pm	Zarco Gacevic	B3.4.06	Nonpolar, Semipolar and Polar III-Nitride Dot-in-a-Wire Sources of Linearly Polarized Single Photons				
D1.11: Mat	erials Characterization XI:	Wear of Nitride M	aterials & Properties of GaN Based Structures				
5:30 pm	Siddha Pimputkar	D1.11.06	Sub-Bandgap Optical Absorption of Bulk GaN Crystals				
5:45 pm	Naoki Sawada	D1.11.07	Si-Donor Ionization Energy and Compensating Effect in MOVPE-Grown Homoepitaxial n-Type GaN with Various Doping Concentrations				
CO.5: Electr	ronic Devices V: Doping, In	plantation & Isol	ation				
6:00 pm	Kazuki Nomoto	C0.5.07	Vertical GaN Junction Field Effect Transistors with Regrown GaN Channels				