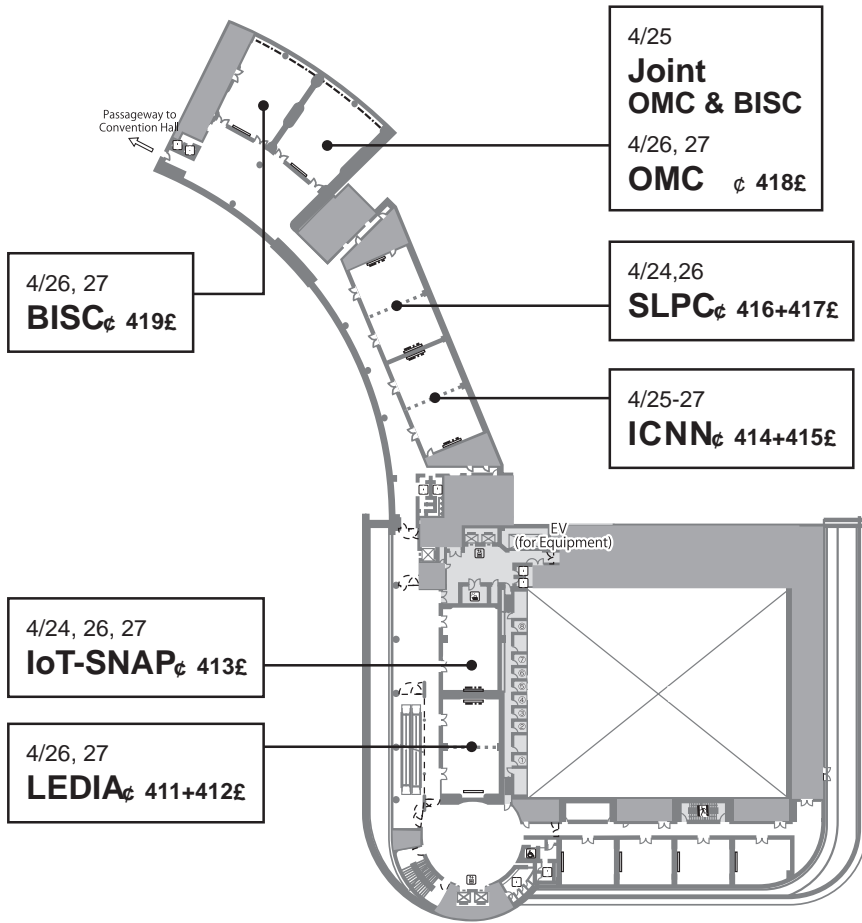


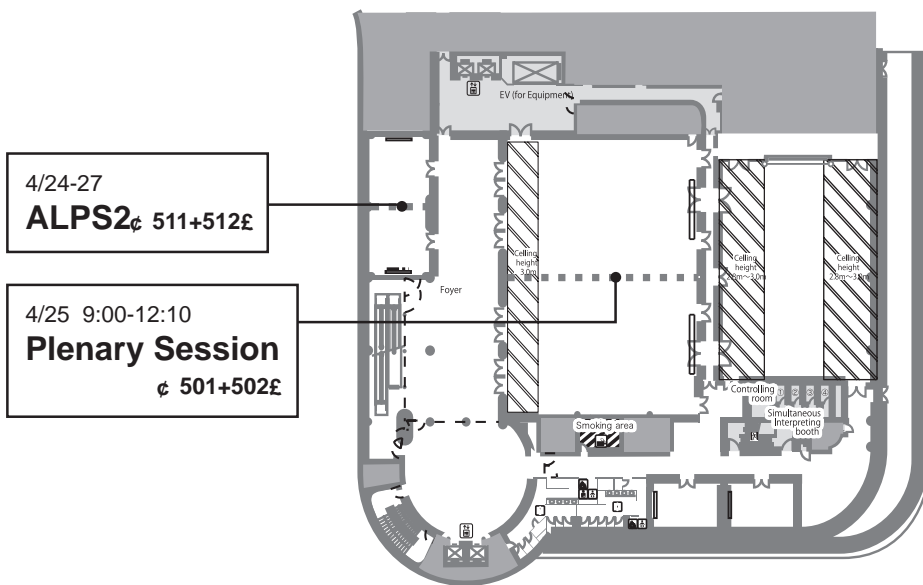
Conference Center

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Conference Center

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PROGRAM AT A GLANCE

April 25 (Wed)		April 26 (Thu)		April 27 (Fri)	
		9:00	SESSION I ADVANCED DEVICES I	9:15	SESSION V CHARACTER- IZATIONS
		10:15	BREAK	10:30	BREAK
		10:45	SESSION II SHORT PRESENTATION	11:00	SESSION VI GROWTHS
		11:42	LUNCH	12:00	LUNCH
		13:00	SESSION II POSTER	13:00	SESSION VII ADVANCED PROCESSES
13:30	Opening				
13:45	IOT-LDC-LEDIA JOINT SESSION				
14:45	BREAK	14:30	SESSION III NOVEL APPLICATION & MATERIALS	14:45	BREAK
15:15	IOT-LDC-LEDIA JOINT SESSION	15:45	BREAK	15:15	SESSION VIII EXTENDED WAVELENGTH DEVICES
		16:15	SESSION IV ADVANCED DEVICES II	16:45	SESSION IX TUTORIAL
17:15				17:30	Closing
		17:45		17:45	

ADVANCE PROGRAM

Wednesday, April 25, 2018

JOINT SESSION <Room 301>

Chairs:

Atsushi Kanno

National Institute of Information and Communications Technology, Japan

Sunao Kurimura

National Institute of Material Science, Japan

Ryuji Katayama

Osaka University, Japan

13:30-13:45 Opening Remarks

13:45-14:15 IOT-LDC-LEDIA-1 *Invited*

IoT Revolution and Business Opportunities in Emerging Market in ASEAN Region

Huei Ee Yap

LP-Research Inc., Japan

14:15-14:45 IOT-LDC-LEDIA-2 *Invited*

Fiber-optic-based Life Cycle Monitoring of Aerospace Composite Structures: Toward Digitalization of Next Generation Aircraft

Shu Minakuchi, Nobuo Takeda

University of Tokyo, Japan

14:45-15:15 Break

15:15-15:45 IOT-LDC-LEDIA-3 *Invited*

Laser Diode Based Underwater Optical Wireless Communication

Takao Sawa¹, Koji Tojo², Naoki Nishimura², Shin Ito³

¹JAMSTEC, Japan, ²Shimadzu Corp., Japan, ³SAS Co., Ltd., Japan

15:45-16:15 IOT-LDC-LEDIA-4 *Invited*

Recent Progress of Retinal Imaging Laser Technology

Mitsuru Sugawara

QD Laser, Japan

16:15-16:45 IOT-LDC-LEDIA-5 *Invited*

III-nitride Semiconductor Light Emitting Transistors

Kazuhide Kumakura¹, Junichi Nishinaka¹, Hideki Yamamoto¹

¹NTT Basic Research Laboratories, NTT Corporation, Japan

16:45-17:15 IOT-LDC-LEDIA-6 *Invited*

High Photosensitivity HFET-type Nitride Based Photosensors

Motoaki Iwaya¹ Tetsuya Takeuchi¹, Satoshi Kamiyama¹, Isamu Akasaki^{1,2}

¹Meijo University, Japan

²Akasaki Research Center, Nagoya University

Thursday, April 26, 2018

SESSION I: ADVANCED DEVICES I <Room 411+412>

Chairs:

Jeehee Cho

Chonbuk National University, Korea

Hoi Wai Choi

The University of Hong Kong, Hong Kong

9:00-9:30 LEDIA1-1 *Invited*

Development of Advanced Hybrid GaN-based Tunnel Junction LEDs

James S. Speck¹

¹University of California, Santa Barbara, USA

9:30-9:45 LEDIA1-2

Characterization of AlGaIn-Based Tunnel Junction Ultraviolet Light Emitting Diodes

Yusuke Goto¹, Hisanori Kojima¹, Kazuyoshi Iida¹, Myunghee Kim¹, Norikatsu Koide¹, Tetsuya Takeuchi¹, Motoaki Iwaya¹, Satoshi Kamiyama¹, Isamu Akasaki¹

¹Meijo University, Japan

9:45-10:00 LEDIA1-3

Electroluminescence enhancement for near-ultraviolet light emitting diodes with graphene/AZO-based current spreading layers

Li Lin¹, Yiyu Ou¹, Xiaolong Zhu², Berit Herstroem³, Flemming Jensen³, Haiyan Ou¹

¹Department of Photonics Engineering, Technical University of Denmark, Denmark

²Department of Micro- and Nanotechnology, Technical University of Denmark

³DTU Danchip, Technical University of Denmark

10:00-10:15 LEDIA1-4

GaN metal–semiconductor–metal ultraviolet photodetector with a reduced-graphene oxide Schottky contact

Bhishma Pandit¹, Jaehee Cho¹

¹Chonbuk National University, Korea

10:15-10:45 Break

SESSION II: SHORT PRESENTATION & POSTER SESSION

<Room 411+412>

Chair: Hisashi Murakami

Tokyo University of Agriculture and Technology, Japan

10:45-10:48 LEDIAp2-1

AlGaIn-based deep UV flip-chip light emitting diode with AlN/Al reflector

Tae Hoon Park¹, Tae Ho Lee¹, Tae Geun Kim¹

¹Korea University, Korea

10:48-10:51 LEDIAp2-2

The Effect of the Metallic Nano-Grating for 365nm Polarized UV-LED

Eun-Kyung Chu¹, Nam-Woo Kang¹, Beom-Rae Noh¹, Hee-Jung Choi¹, Yung-Ju Kwon², Kyoung-Kook Kim¹

¹Dept. of Advanced Convergence Technology, Korea Polytechnic University, Korea

²Dept. of Nano Optical Engineering, Korea Polytechnic University, Korea

10:51-10:54 LEDIAp2-3

Wide Band Gap Transparent Conductive Oxides of Oxide/Metal/Oxide Triple-Layer Structure based on Fluorine Tin Oxide

Si-Won Kim¹, Gyu-Jae Yohn¹, Soae Jeong¹, Beom-Rae Noh¹, So-Yeon Park², Suyeon Son², Kyoung-Kook Kim^{1,2}

¹Convergence Technology, Korea Polytechnic University, Korea

²Dept. of Nano Optical Engineering, Korea Polytechnic University, Korea

10:54-10:57 LEDIAp2-4

Efficient blue micro-light-emitting diodes using SiO_x-based glass electrode

Kyung Rock Son¹, Byeong Ryong Lee¹, Tae Ho Lee¹, Sang Hoon Oh¹

¹School of Electrical Engineering, Korea University, Korea

10:57-11:00 LEDIAp2-5

Self-Standing ZnO Nanotube/SiO₂ Core-Shell Arrays for High Photon Extraction Efficiency in III-Nitride Emitter

Hee-Jung choi¹, Semi Oh², Soo-Hyun Kang¹, Kab Ha¹, Eun-Kyung Chu¹, Won-Seok Lee³, Soon-Hwan Kwon³, Kyoung-Kook Kim¹

¹Dept. of Advanced Convergence Technology, Korea Polytechnic University, Korea

²Dept. of Materials Science & Technology (GIST), Korea

³Dept. of Nano Optical Engineering, Korea

11:00-11:03 LEDIAp2-6

Improved light extraction efficiency of GaN-based near ultraviolet light-emitting diodes using TiO₂/HfO₂ DBR electrode with Conductive Filaments

Sanghoon Oh¹, Kyung Rock Son¹, Tae Geun Kim¹

¹School of Electrical Engineering, Korea University, Korea

11:03-11:06 LEDIAp2-7

Thermal annealing effect of Ti buffer layer for the growth of GaN film

Tzu-Ting Lin¹, Shih-Hao Chan¹, Shao-Ze Tseng¹, Sheng-Hui Chen¹

¹National Central University, Taiwan

11:06-11:09 LEDIAp2-8

Characterizations and Growth of ZnO: B Films Grown by Low-Pressure Chemical Vapor Deposition on Glass Substrates

Wei-Ming Lee¹, Ying-Hsiang Wang¹, Chin-Yi Tsai¹, Shih-Wei Feng¹, Chien-Hsun Chen², Hsiang-Chen Wang³, Li-Wei Tu⁴

¹Department of Applied Physics, National University of Kaohsiung, Kaohsiung, Taiwan

²Green Energy and Environment Research Labs, Industrial Technology Research Institute, Hsinchu, Taiwan

³Graduate Institute of Opto-Mechatronics, National Chung Cheng University, Taiwan

⁴Department of Physics and Center for Nanoscience and Nanotechnology, National Sun Yat-Sen University, Kaohsiung, Taiwan

11:09-11:12 LEDIAp2-9

A study on p-type Conductivity of Phosphorus-doped ZnO Thin Film using RF Sputtering and Annealing

So-yeon Park¹, Si-Won Kim², Gyu-Jae Yohn², Hee-Jung Choi², Yebin Im¹, Kyoung-Kook Kim^{1,2}

¹Dept. of Nano Optical Engineering, Korea Polytechnic University, Korea

²Dept. of Advanced Convergence Technology, and Research Institute of Advanced Convergence Technology, Korea Polytechnic University, Korea

11:12-11:15 LEDIAp2-10

Photoluminescence investigation of near white light-emitting zinc stannate-based phosphors

Mu-Tsun Tsai¹, Chih-Chuan Chan¹, Chien-Hung Lin¹

¹Department of Materials Science Engineering, National Formosa University, Taiwan

11:15-11:18 LEDIAp2-11

Highly efficient photonic conversion mediums based on polymer complexes for applications in light emitting devices

Petronela Horlescu¹, Corneliu S. Stan¹, Simona E. Bacaïta¹

¹Gheorghe Asachi Technical University, Romania

11:18-11:21 LEDIAp2-12

Numerical and Experimental Investigations for Deposited Nanosilver Tracks on Polyimide Films with Heterostructures

Chia-Yen Chan¹, Kuan-Cheng Shih², Yu-Hsin Lin¹

¹Instrument Technology Research Center, National Applied Research Laboratories, Taiwan

²Kingley Rubber Industrial Co., Ltd., Taiwan

11:21-11:24 LEDIAp2-13

Effect of the Oxygen Concentration on Electrical Properties of GaN Crystals

Grown with the Na-flux Point Seed Method

K. Endo¹, T. Yamada¹, H. Kubo¹, K. Murakami¹, M. Imanishi¹, M. Yoshimura¹, and Y. Mori¹

¹Osaka University, Japan

11:24-11:27 LEDIAp2-14

The effect of nitrogen pressure on Threading Dislocation Density during the Na-flux GaN Growth using Point Seed Technique

Yuki Sawada¹, Takumi Yamada¹, Kosuke Murakami¹, Keisuke Kakinouchi¹, Kosuke Nakamura¹, Kanako Okumura¹, Tomoko Kitamura¹, Yasuhiro Unoki¹, Masayuki Imanishi¹, Masashi Yoshimura¹, and Yusuke Mori¹

¹Osaka University, Japan

11:27-11:30 LEDIAp2-15

Reduction of Li impurity in the freestanding GaN substrate fabricated using the sapphire dissolution technique in the Na-flux growth

Takumi Yamada¹, Masayuki Imanishi¹, Kosuke Murakami¹, Kosuke Nakamura¹, Mamoru Imade¹, Masashi Yoshimura¹, and Yusuke Mori¹

¹Osaka University, Japan

11:30-11:33 LEDIAp2-16

Sol-Gel-Derived Hole-Transporting NiO_x Films for Perovskite CsPbBr₃ Green Light-Emitting Diodes

Chun-Yuan Huang¹, Shyh-Jer Huang², Yi-Hsiu Hsieh¹

¹National Taitung University, Taiwan

²National Cheng Kung University, Taiwan

11:33-11:36 LEDIAp2-17

Optically Readable GaN-based Micro-LEDs Using NiO-based ReRAM as an N-Type Contact layer for Micro-LED Display

Byeong Ryong Lee¹, Ju Hyun Park¹, Hyun Tae Kim¹, Kyung Rock Son¹, Tae Geun Kim¹

¹Korea University, Korea

11:36-11:39 LEDIAp2-18

Optical and Device Characteristics of InGaN/GaN Light Emitting Diodes with Multilayer Graphene as Transparent and Current Spreading Electrodes

Ying-Hsiang Wang¹, Wei-Ming Lee¹, Shih-Wei Feng¹, Hsiang-Chen Wang²

¹Department of Applied Physics, National University of Kaohsiung, Taiwan

²Graduate Institute of Opto-Mechatronics, National Chung Cheng University, Taiwan

11:39-11:42 LEDIAp2-19

High Efficiency UV-Emitters with Micro-Hole Pattern and ITO Nanoparticles

Beom-Rae Noh¹, Joon-Sung Kwon¹, Nam-Woo Kang¹, Eun-Kyung Chu¹, Si-Won Kim¹, Kwang-Gyun Im², Kyoung-Kook Kim¹

¹Department of Advanced Convergence Technology, Korea

²Department of Nano Optical Engineering, Korea

11:42-13:00 Lunch Break

13:00-14:30 Poster Session <Exhibition Hall A>

SESSION III: NOVEL APPLICATION & MATERIALS <Room 411+412>

Chairs:

Ryuji Katayama

Osaka University, Japan

Je Won Kim

Namseoul University, Korea

14:30-15:00 LEDIA3-1 *Invited*

LED Technology for Dental Applications

Paul Michael Petersen¹

¹Technical University of Denmark, Denmark

15:00-15:15 LEDIA3-2

Organosilicon-Functionalized Carbon Dots Based White LED

Yunfeng Wang^{1,2}, Zhengmao Yin³, Chuanjian Zhou², Zheng Xie¹, Shuyun Zhou¹

¹Technical Institute of Physics and Chemistry, Chinese Academy of Science, China

²The HongKong Polytechnic University, China

³College of Materials Science and Engineering, Qingdao University of Science and Technology, China

15:15-15:30 LEDIA3-3

Solution Processed All Inorganic Quantum Dots Light Emitting Diodes with UV Ozone Treatment

Hsin-Chieh Yu^{1,2}, Yiyang Shen², Hoang-Tuan Vu², Chih-Chiang Yang², Chun-Yuan Huang³

¹Institute of Lighting and Energy Photonics, College of Photonics, National Chiao Tung University, Taiwan

²Advanced Optoelectronic Technology Center, National Cheng Kung University, Taiwan

³Department of Applied Science, National Taitung University, Taiwan

15:30-15:45 LEDIA3-4

Photonic conversion mediums based on polymer embedded Carbon Dots for applications in light emitting/solar energy harvesting devices

Corneliu S. Stan¹, Petronela Horlescu¹, Catalina A. Peptu¹

¹Gheorghe Asachi Technical University, Romania

15:45-16:15 Break

SESSION IV: ADVANCED DEVICES II <Room 411+412>

Chairs:

James S. Speck

UCSB, USA

Gen-ichi Hatakoshi

Waseda University, Japan

16:15-16:45 LEDIA4-1 *Invited*

GaN Monolithic Integration for Lighting and Display

Hoi Wai Choi¹

¹The University of Hong Kong, Hong Kong

16:45-17:00 LEDIA4-2

Fabrication of 10x10 array structure of micro-LED display using Si micro-cup substrate

Ryosuke Nawa¹, Takeyoshi Onuma¹, Tomohiro Yamaguchi¹, Tohru Honda¹

¹Kogakuin University, Japan

17:00-17:15 LEDIA4-3

GaAsP Tunable Single-Mode Semiconductor Laser using Periodically Slotted Structure with Simplified Fabrication Process

So Kusumoto¹, Masahiro Uemukai¹, Ryuji Katayama¹

¹Osaka University, Japan

17:15-17:45 LEDIA4-4 *Invited*

Nano-Mold & Nano Structured LEDs

Je Won Kim¹

¹Namseoul University, Korea

Friday, April 27, 2018

SESSION V: CHARACTERIZATIONS <Room 411+412>

Chairs:

Tetsuo Narita

Toyota Central R&D Labs. Inc., Japan

Jong Kyu Kim

Pohang University of Sci. and Technol., Korea

9:15-9:45 LEDIA5-1 *Invited*

Nondestructive Analysis of Threading Dislocations in GaN by Multiphoton-Excitation Photoluminescence

Tomoyuki Tanikawa¹

¹Institute for Materials Research, Tohoku University, Japan

9:45-10:00 LEDIA5-2

Degradation of electro-optical parameters and electromigration of hydrogen in (In)AlGaN-based UVB LEDs

Johannes Glaab¹, Jan Ruschel¹, Tim Kolbe¹, Arne Knauer¹, Jens Rass¹, Neysha Lobo Ploch¹, Markus Weyers¹, Michael Kneissl^{1,2}, Sven Einfeldt¹

¹Ferdinand-Braun-Institut, Germany

²Technische Universität Berlin, Berlin, Germany

10:00-10:15 LEDIA5-3

Microstructure of GaN fin LEDs: Characterization of Structural and Optical Properties by STEM-CL

Gordon Schmidt¹, F. Bertram¹, P. Veit¹, T. Hampel¹, J. Hartmann², F. Steib², H. Zhou², J. Ledig², S. Fündling², H.-H. Wehmann², A. Waag², J. Cristen¹

¹Otto-von-Guericke-University Magdeburg, Germany

²Technische Universität Braunschweig, Germany

10:15-10:30 LEDIA5-4

Spectroscopic ellipsometry study on p-type NiO films

Mizuki Ono¹, Kohei Sasaki^{2,3}, Tomohiro Yamaguchi¹, Masataka Higashiwaki³, Akito Kuramata², Shigenobu Yamakoshi², Tohru Honda¹, Takeyoshi Onuma^{1,3}

¹Kogakuin University, Japan

²Tamura Corporation, Japan

³National Institute of Information and Communications Technology, Japan

10:30-11:00 Break

SESSION VI: GROWTHS <Room 411+412>

Chair:

Tomoyuki Tanikawa

Institute for Materials Research, Tohoku University, Japan

11:00-11:30 LEDIA6-1 *Invited*

Formation mechanism of singular structure in AlInN layer grown on *m*-GaN substrate by MOVPE

Yuya Inatomi¹, Akira Kusaba¹, Yoshihiro Kangawa^{1,2,3}, Kazunobu Kojima⁴, Shigefusa Chichibu⁴

¹Department of Aeronautics and Astronautics, Kyushu University, Japan

²RIAM, Kyushu University, Japan

³IMaSS, Nagoya University, Japan

⁴IMRAM, Tohoku University, Japan

11:30-11:45 LEDIA6-2

Thermodynamic and experimental analyses of β -Ga₂O₃ growth by ozone molecular beam epitaxy

Natsuki Ueda¹, Yohei Sawada¹, Keita Konishi¹, Yoshiaki Nakata², Masataka Higashiwaki², Yoshinao Kumagai¹

¹Tokyo University of Agriculture and Technology, Japan

²National Institute of Information and Communications Technology, Japan

11:45-12:00 LEDIA6-3

Heteroepitaxial growth of ϵ -Ga₂O₃ thin films on c-plane sapphire and GaN templates by HVPE

Mayuko Sato¹

¹Tokyo University of Agriculture and Technology, Japan

12:00-13:00 Lunch

SESSION VII: ADVANCED PROCESSES <Room 411+412>

Chairs:

Malgorzata Iwinska

UNIPRESS, Poland

Tomohiro Yamaguchi

Kogakuin University, Japan

13:00-13:30 LEDIA7-1 *Invited*

High Purity in HVPE Method as an Advantage Used for Controllable Doping of GaN - Influence of Different Dopants on Electrical, Optical, and Structural Properties of GaN Crystals

Malgorzata Iwinska¹

¹Institute of High Pressure Physics Polish Academy of Sciences (Unipress), Poland

13:30-13:45 LEDIA7-2

AlN templates for low threading dislocation density GaN-on-Si: A solution to boost the adoption of GaN-on-Si for LEDs and μ LEDs

Fabrice Semond¹, S. Rennesson¹, G. Gommé¹, E. Frayssinet¹, P. Vennéguès¹, J. Massies¹

¹Université Côte d'Azur, CRHEA-CNRS, France

13:45-14:00 LEDIA7-3

Fabrication of Polarity-Inverted GaN Heterostructure by Surface-Activated Wafer Bonding and Silicon Removal

Takuya Onodera¹, Masahiro Uemukai¹, Kazuya Takahashi², Motoaki Iwaya², Isamu Akasaki², Yusuke Hayashi³, Hideto Miyake³, Maki Kushimoto⁴, Heajeong Cheong⁵, Yoshio Honda⁵, Hiroshi Amano^{4,5}, Ryuji Katayama¹

¹Graduate School of Engineering, Osaka University, Japan

²Faculty of Science and Technology, Meijo Univ., Japan

³Graduate School of Regional Innovation Studies, Mie Univ., Japan

⁴Department of Electronics, Nagoya Univ., Japan

⁵Institute of Materials and Systems for Sustainability, Nagoya Univ., Japan

14:00-14:15 LEDIA7-4

Structural recovery of Mg-ion-implanted N-polar bulk GaN substrates by high-temperature heat treatment

Sakiko Yamanobe¹, Kento Yoshida¹, Keita Konishi¹, Shinya Takashima², Masaharu Edo², Yoshinao Kumagai¹

¹Tokyo University of Agriculture and Technology, Japan

²Fuji Electric Co., Ltd., Japan

14:15-14:45 LEDIA7-5 *Invited*

P-type Conduction of Mg-ion Implanted N-polar GaN and the Optical Investigation

Tetsuo Narita¹

¹Toyota Central R&D Labs. Inc., Japan

14:45-15:15 Break

SESSION VIII: EXTENDED WAVELENGTH DEVICES <Room 411+412>

Chairs:

Bao-Ping Zhang

Xiamen University, China

Young-Joo Kim

Yonsei University, Korea

15:15-15:45 LEDIA8-1 *Invited*

Arrays of Truncated Cone AlGaIn Deep-Ultraviolet Light-Emitting Diodes for Efficient Outcoupling of in-Plane Emission

Jong Kyu Kim¹

¹Pohang University of Science and Technology, Korea

15:45-16:00 LEDIA8-2

Design of Transverse Quasi-Phase-Matched AlN Waveguide for Deep UV Second Harmonic Generation

Shuhei Yamaguchi¹, Masahiro Uemukai¹, Kazuya Takahashi², Motoaki Iwaya², Isamu Akasaki², Yusuke Hayashi³, Hideto Miyake³, Tomoya Yamada¹, Yasufumi Fujiwara¹, Ryuji Katayama¹

¹Osaka University, Japan

²Faculty of Science and Technology, Meijo University, Japan

³Graduate School of Regional Innovation Studies, Mie University, Japan

16:00-16:15 LEDIA8-3

Demonstration of red vertical-microcavity LEDs with Eu-doped GaN as an active layer

Keishi Shiomi¹, Tomohiro Inaba¹, Jun Tatebayashi¹, Yasufumi Fujiwara¹

¹Osaka University, Japan

16:15-16:45 LEDIA8-4 *Invited*

Fabrication of VCSELs Emitting in the 'Green Gap'

Bao-Ping Zhang¹

¹Department of Electronic Engineering, Xiamen University, China

SESSION IX: TUTORIAL SESSION <Room 411+412>

Chair:

Yoshinao Kumagai

Tokyo University of Agriculture and Technology, Japan

16:45-17:30 LEDIA9-1 *Invited*

Modeling and Process Design of III-nitride MOVPE

Yoshihiro Kangawa¹

¹RIAM, Kyushu University, Japan

17:30-17:45 Closing Remarks

13:00-14:30 LEDIAp-1

AlGaIn-based deep UV flip-chip light emitting diode with AlN/Al reflector

Tae Hoon Park¹, Tae Ho Lee¹, Tae Geun Kim¹

¹Korea University, Korea

13:00-14:30 LEDIAp-2

The Effect of the Metallic Nano-Grating for 365nm Polarized UV-LED

Eun-Kyung Chu¹, Nam-Woo Kang¹, Beom-Rae Noh¹, Hee-Jung Choi¹, Yung-Ju Kwon², Kyoung-Kook Kim¹

¹Dept. of Advanced Convergence Technology, Korea Polytechnic University, Korea

²Dept. of Nano Optical Engineering, Korea Polytechnic University, Korea

13:00-14:30 LEDIAp-3

Wide Band Gap Transparent Conductive Oxides of Oxide/Metal/Oxide Triple-Layer Structure based on Fluorine Tin Oxide

Si-Won Kim¹, Gyu-Jae Yohn¹, Soae Jeong¹, Beom-Rae Noh¹, So-Yeon Park², Suyeon Son², Kyoung-Kook Kim^{1,2}

¹Convergence Technology, Korea Polytechnic University, Korea

²Dept. of Nano Optical Engineering, Korea Polytechnic University, Korea

13:00-14:30 LEDIAp-4

Efficient blue micro-light-emitting diodes using SiO_x-based glass electrode

Kyung Rock Son¹, Byeong Ryong Lee¹, Tae Ho Lee¹, Sang Hoon Oh¹

¹School of Electrical Engineering, Korea University, Korea

13:00-14:30 LEDIAp-5

Self-Standing ZnO Nanotube/SiO₂ Core-Shell Arrays for High Photon Extraction Efficiency in III-Nitride Emitter

Hee-Jung choi¹, Semi Oh², Soo-Hyun Kang¹, Kab Ha¹, Eun-Kyung Chu¹, Won-Seok Lee³, Soon-Hwan Kwon³, Kyoung-Kook Kim¹

¹Dept. of Advanced Convergence Technology, Korea Polytechnic University, Korea

²Dept. of Materials Science & Technology (GIST), Korea

³Dept. of Nano Optical Engineering, Korea

13:00-14:30 LEDIAp-6

Improved light extraction efficiency of GaN-based near ultraviolet light-emitting diodes using TiO₂/HfO₂ DBR electrode with Conductive Filaments

Sanghoon Oh¹, Kyung Rock Son¹, Tae Geun Kim¹

¹School of Electrical Engineering, Korea University, Korea

13:00-14:30 LEDIAp-7

Thermal annealing effect of Ti buffer layer for the growth of GaN film

Tzu-Ting Lin¹, Shih-Hao Chan¹, Shao-Ze Tseng¹, Sheng-Hui Chen¹

¹National Central University, Taiwan

13:00-14:30 LEDIAp-8

Characterizations and Growth of ZnO: B Films Grown by Low-Pressure Chemical Vapor Deposition on Glass Substrates

Wei-Ming Lee¹, Ying-Hsiang Wang¹, Chin-Yi Tsai¹, Shih-Wei Feng¹, Chien-Hsun Chen², Hsiang-Chen Wang³, Li-Wei Tu⁴

¹Department of Applied Physics, National University of Kaohsiung, Kaohsiung, Taiwan

²Green Energy and Environment Research Labs, Industrial Technology Research Institute, Hsinchu, Taiwan

³Graduate Institute of Opto-Mechatronics, National Chung Cheng University, Taiwan

⁴Department of Physics and Center for Nanoscience and Nanotechnology, National Sun Yat-Sen University, Kaohsiung, Taiwan

13:00-14:30 LEDIAp-9

A study on p-type Conductivity of Phosphorus-doped ZnO Thin Film using RF Sputtering and Annealing

So-yeon Park¹, Si-Won Kim², Gyu-Jae Yohn², Hee-Jung Choi², Yebin Im¹, Kyoung-Kook Kim^{1,2}

¹Dept. of Nano Optical Engineering, Korea Polytechnic University, Korea

²Dept. of Advanced Convergence Technology, and Research Institute of Advanced Convergence Technology, Korea Polytechnic University, Korea

13:00-14:30 LEDIAp-10

Photoluminescence investigation of near white light-emitting zinc stannate-based phosphors

Mu-Tsun Tsai¹, Chih-Chuan Chan¹, Chien-Hung Lin¹

¹Department of Materials Science Engineering, National Formosa University, Taiwan

13:00-14:30 LEDIAp-11

Highly efficient photonic conversion mediums based on polymer complexes for applications in light emitting devices

Petronela Horlescu¹, Corneliu S. Stan¹, Simona E. Bacaïta¹

¹Gheorghe Asachi Technical University, Romania

13:00-14:30 LEDIAp-12

Numerical and Experimental Investigations for Deposited Nanosilver Tracks on Polyimide Films with Heterostructures

Chia-Yen Chan¹, Kuan-Cheng Shih², Yu-Hsin Lin¹

¹Instrument Technology Research Center, National Applied Research Laboratories, Taiwan

²Kingley Rubber Industrial Co., Ltd., Taiwan

13:00-14:30 LEDIAp-13

Effect of the Oxygen Concentration on Electrical Properties of GaN Crystals Grown with the Na-flux Point Seed Method

K. Endo¹, T. Yamada¹, H. Kubo¹, K. Murakami¹, M. Imanishi¹, M. Yoshimura¹, and Y.

Mori¹

¹Osaka University

13:00-14:30 LEDIAp-14

The effect of nitrogen pressure on Threading Dislocation Density during the Na-flux GaN Growth using Point Seed Technique

Yuki Sawada¹, Takumi Yamada¹, Kosuke Murakami¹, Keisuke Kakinouchi¹, Kosuke Nakamura¹, Kanako Okumura¹, Tomoko Kitamura¹, Yasuhiro Unoki¹, Masayuki Imanishi¹, Masashi Yoshimura¹, and Yusuke Mori¹

¹Grad. Sch. of Eng., Osaka Univ.

13:00-14:30 LEDIAp-15

Reduction of Li impurity in the freestanding GaN substrate fabricated using the sapphire dissolution technique in the Na-flux growth

Takumi Yamada¹, Masayuki Imanishi¹, Kosuke Murakami¹, Kosuke Nakamura¹, Mamoru Imade¹, Masashi Yoshimura¹, and Yusuke Mori¹

¹Grad. Sch. of Eng., Osaka Univ.

13:00-14:30 LEDIAp-16

Sol-Gel-Derived Hole-Transporting NiO_x Films for Perovskite CsPbBr₃ Green Light-Emitting Diodes

Chun-Yuan Huang¹, Shyh-Jer Huang², Yi-Hsiu Hsieh¹

¹National Taitung University, Taiwan

²National Cheng Kung University, Taiwan

13:00-14:30 LEDIAp-17

Optically Readable GaN-based Micro-LEDs Using NiO-based ReRAM as an N-Type Contact layer for Micro-LED Display

Byeong Ryong Lee¹, Ju Hyun Park¹, Hyun Tae Kim¹, Kyung Rock Son¹, Tae Geun Kim¹

¹Korea University, Korea

13:00-14:30 LEDIAp-18

Optical and Device Characteristics of InGaN/GaN Light Emitting Diodes with Multilayer Graphene as Transparent and Current Spreading Electrodes

Ying-Hsiang Wang¹, Wei-Ming Lee¹, Shih-Wei Feng¹, Hsiang-Chen Wang²

¹Department of Applied Physics, National University of Kaohsiung, Taiwan

²Graduate Institute of Opto-Mechatronics, National Chung Cheng University, Taiwan

13:00-14:30 LEDIAp-19

High Efficiency UV-Emitters with Micro-Hole Pattern and ITO Nanoparticles

Beom-Rae Noh¹, Joon-Sung Kwon¹, Nam-Woo Kang¹, Eun-Kyung Chu¹, Si-Won Kim¹, Kwang-Gyun Im², Kyoung-Kook Kim¹

¹Department of Advanced Convergence Technology, Korea

²Department of Nano Optical Engineering, Korea

PRESENTATION GUIDELINES

TIME ALOTTED FOR PRESENTATION:

INVITED TALK:	25-minute talk + 5-minute discussion
CONTRIBUTED ORAL TALK:	10-minute talk + 5-minute discussion
POSTER PRESENTATION:	90-minute poster presentation + 3-minute short presentation

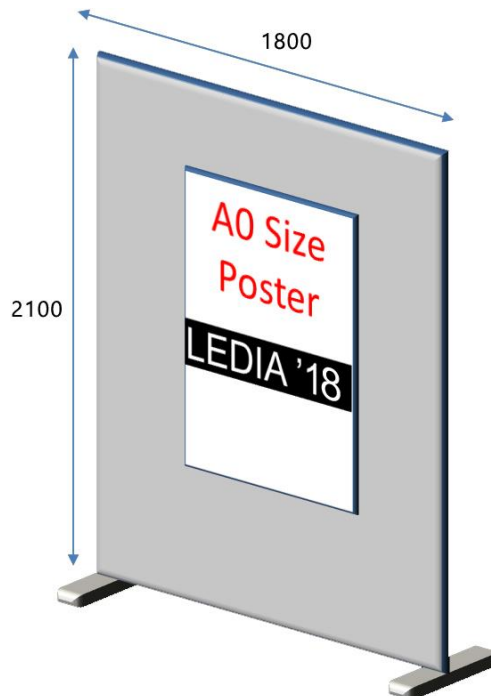
POSTER PRESENTATIONS:

The size of the poster board is 180 cm in a width and 210 cm in a height. We recommend the authors to use A0 size (84.1 cm in a width, 118.9 cm in a height) paper/cloth to prepare their posters.

On the poster board, only the paper number will be labeled, so that the paper title, author names, and affiliations should be prepared by the authors. Necessary tools for pinning the posters will be provided.

Before the poster session, 3 minutes short oral presentation will be planned. A PC video projector will be available. Please prepare your presentation in Adobe PDF file format. **Submit the electrical PDF file through the online system by April 20, 2018.**

*Notice: The authors of the short presentation must be finished their talk within 3 minutes and the presentation must be given by using PC provided at the conference room.



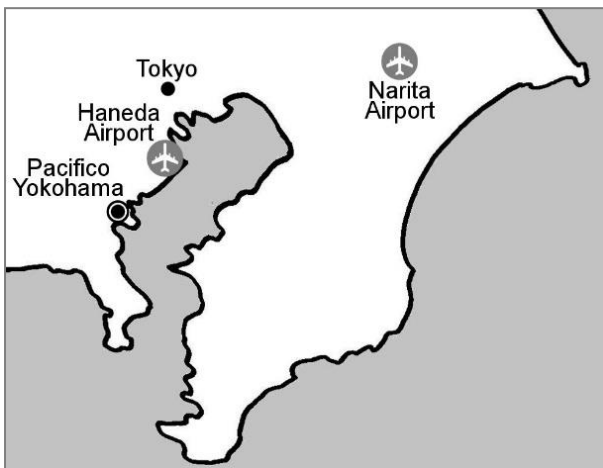
LOCATION OF CONFERENCE SITE

FROM OVERSEA

The LEDIA '18 takes place at Pacifico Yokohama, Yokohama city, Kanagawa prefecture, JAPAN. Yokohama city, the center of Kanagawa prefecture is located in the south of Tokyo. Pacifico Yokohama is conveniently located about 30 minutes from Tokyo International Airport (Haneda) and about 100 minutes from Narita International Airport. Direct Airport Limousine to Pacifico Yokohama is available.

For more information, please visit the following URL:

<http://www.pacifico.co.jp/english/destination/access/tabid/502/Default.aspx>



Access from the nearest stations

- 1. Minato Mirai Line:** 3-minute walk from “Minato Mirai Station”
- 2. JR or Subway Line:** 12-minute walk, 7 minutes by bus or 5 minutes by taxi from “Sakuragicho Station”
- 3. Sea Bass (boat):** 10 minutes from “Yokohama Station”

Pacifico Yokohama

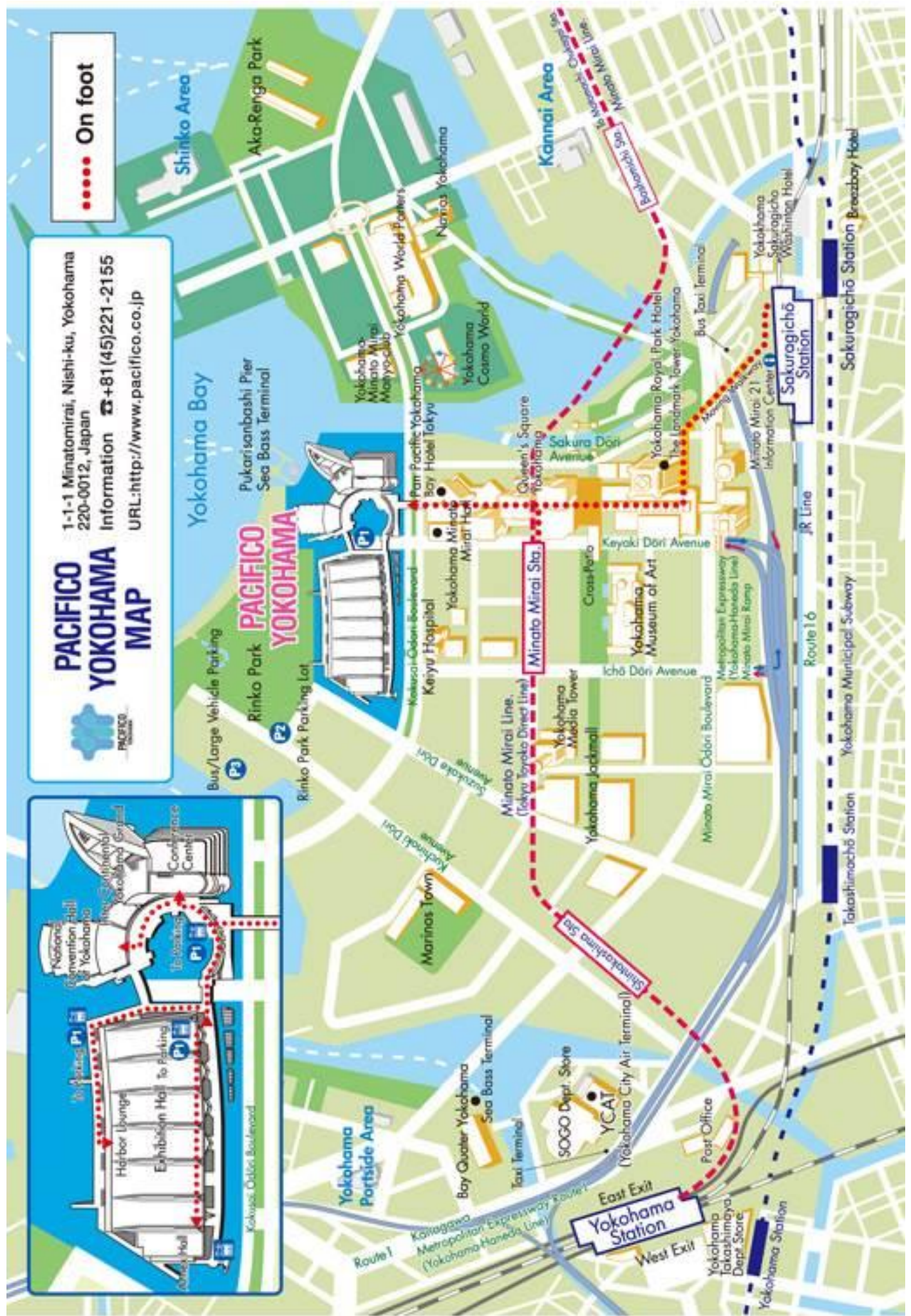
1-1-1 Minato Mirai, Nishi-ku, Yokohama 220-0012, Japan

<http://www.pacifico.co.jp/english/>

PACIFICO YOKOHAMA MAP

1-1-1 Minatomirai, Nishi-ku, Yokohama
220-0012, Japan
Information ☎ +81(45)221-2155
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..... On foot



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