

PROGRAM

【October 10th, Wednesday】

Opening Session (13:00-13:10)

Plenary Session (13:10-14:00)

Chair: J. Suda (Nagoya University)

Plenary 13:10 (50min+poster) ... 1
Progress in quantum dot photonics ~From Science to Practical Implementation~
Y. Arakawa
The University of Tokyo

Session We1: Photonic crystal & Light emitting devices (14:00-15:09)

Chair: Y. Kumazaki (Fujitsu Laboratories Ltd.)

We1-1 [Invited] 14:00 (30min+poster) ... 5
Three-dimensional photoluminescence imaging of GaN crystals by utilizing multiphoton-excitation process
T. Tanikawa and T. Matsuoka
Tohoku University

We1-2 14:30 (3min+poster) ... 9
Fabrication process of InGaN single-mode laser with periodically slotted structure
D. Tazuke*, S. Kusumoto*, K. Ikeda*, J. Tajima**, T. Hikosaka**, S. Nunoue**, M. Uemukai*, and R. Katayama*
*Osaka University, **Toshiba Corporation

We1-3 14:33 (3min+poster) ... 11
Fabrication process of InGaN high-order deeply etched DBR laser
S. Kusumoto*, D. Tazuke*, K. Ikeda*, J. Tajima**, T. Hikosaka**, S. Nunoue**, M. Uemukai*, and R. Katayama*
*Osaka University, **Toshiba Corporation

We1-4 14:36 (3min+poster) ... 13
Implementation of GaN monolithically integrated optical circuits for universal quantum computing in a loop-based architecture
T. Komatsu, R. Noro, M. Uemukai, and R. Katayama
Osaka University

We1-5 14:39 (3min+poster) ... 15
AlGaIn-based deep ultraviolet light emitting diodes with GaN tunnel junctions
Y. Goto, H. Kojima, K. Iida, Y. Saito, M. H. Kim, N. Koide, T. Takeuchi, M. Iwaya, S. Kamiyama, and I. Akasaki
Meijo University

We1-6 14:42 (3min+poster) ... 17
Temperature dependence of emission efficiency in InP nanowire LEDs
J. Motohisa, H. Kameda, M. Sasaki, and K. Tomioka
Hokkaido University

We1-7 14:45 (3min+poster) ... 19
Electroluminescence characteristics of InP/InAsP nanowire LEDs
T. Akamatsu, H. Kameda, M. Sasaki, K. Tomioka, and J. Motohisa
Hokkaido University

We1-8 14:48 (3min+poster) ... 21
Surface-plasmon-enhanced GaN:Eu-based light-emitting diodes utilizing silver nanoparticles
J. Tatebayashi, T. Yamada, T. Inaba, Y. Matsude, S. Ichikawa, and Y. Fujiwara
Osaka University

We1-9 14:51 (3min+poster) ... 23
Enhancement of Er emission in a Er,O-codoped GaAs-based two dimensional photonic crystal nanocavity
T. Kishina, M. Ogawa, N. Fujioka, R. Higashi, J. Tatebayashi, and Yasufumi Fujiwara
Osaka University

We1-10	14:54 (3min+poster)	...	25
Fabrication of two-dimensional GaN:Eu plasmonic crystals toward highly efficient red light emitters Y. Matsude, T. Yamada, S. Ichikawa, J. Tatebayashi, and Y. Fujiwara Osaka University			
We1-11	14:57 (3min+poster)	...	27
Circularly polarized light emission from a chiral photonic crystal fabricated by a micro-manipulation method using an optical microscope Y. Kinuta*, T. Ishida**, S. Takahashi*, K. Yamashita*, J. Tatebayashi**, S. Iwamoto**, and Y. Arakawa** *Kyoto Institute of Technology, **The University of Tokyo			
We1-12	15:00 (3min+poster)	...	29
Three-dimensional modeling of photonic-crystal lattice-structure by using neural network T. Tanoue*, K. Kitamura**, K. Suenaga**, K. Ishizaki**, and S. Noda** *Kyoto Institute of Technology, **Kyoto University			
We1-13	15:03 (3min+poster)	...	31
Three-dimensional photonic crystal containing quantum dots fabricated by a micro-manipulation method using an optical microscope Y. Arimitsu*, T. Ishida**, S. Takahashi*, K. Yamashita*, K. Watanabe**, S. Iwamoto**, and Y. Arakawa** *Kyoto Institute of Technology, **The University of Tokyo			
We1-14	15:06 (3min+poster)	...	33
Design of photonic crystal lasers generating optical vortex beams R. Suzuki*, K. Kitamura*, and S. Noda** *Kyoto Institute of Technology, **Kyoto University			

Break (15:09-15:19)

Session We2: Spintronics & Oxides (15:19-16:43)

Chair: M. Kitamura (Kobe University)

We2-1 [Invited]	15:19 (30min+poster)	...	35
Spin current propagation in orthodox and exotic semiconductors M. Shiraishi Kyoto University			
We2-2	15:49 (3min+poster)	...	37
Stack structure dependence of magnetic properties of granular films for spintronics device applications T. Koga, K. Watanabe, W. A. Borders, S. Fukami, and H. Ohno Tohoku University			
We2-3	15:52 (3min+poster)	...	39
Magnetic coupling of perpendicular easy axis FeB layers thorough MgO T. Funatsu, J. Igarashi, K. Watanabe, S. Fukami, H. Sato, and H. Ohno Tohoku University			
We2-4	15:55 (3min+poster)	...	41
Enhancement of spin-orbit torque efficiency in W/CoFeB/MgO by engineering W resistivity K. Furuya, Y. Takeuchi, C. Zhang, A. Okada, B. Jinnai, S. Fukami, and H. Ohno Tohoku University			
We2-5	15:58 (3min+poster)	...	43
Evaluation of write-error rate of spin-orbit torque induced magnetization switching K. Miyasaka, T. Saino, C. Zhang, S. Fukami, and H. Ohno Tohoku University			
We2-6	16:01 (3min+poster)	...	45
Homodyne-detected ferromagnetic resonance in nanoscale MgO/FeB/MgO magnetic tunnel junction Z. Wang, M. Shinozaki, A. Okada, M. Bersweiler, S. Kanai, H. Sato, S. Fukami, and H. Ohno Tohoku University			
We2-7	16:04 (3min+poster)	...	47
Magnetic transport of YbFe ₂ O ₄ thin films with non-stoichiometric composition J. Tanaka, K. Miura, D. Kiriya, T. Yoshimura, A. Ashida, and N. Fujimura Osaka Prefecture University			

We2-8	16:07 (3min+poster)	...	49
Bias dependence of spin signals in Si spin MOSFET S. Lee*, F. Rortais*, Y. Ando*, S. Miwa**, Y. Suzuki**, H. Koike***, and M. Shiraiishi* *Kyoto University, **Osaka University, ***TDK Corporation			
We2-9	16:10 (3min+poster)	...	51
Estimation of interface state density of Si(100)/MgO interface for spin injection into Silicon T. Koike, M. Oogane, M. Tsunoda, and Y. Ando Tohoku University			
We2-10	16:13 (3min+poster)	...	53
Synthesis of ultra uniform sized ZnO nanowires by post-growth homogenization of growth interface X. Zhao*, K. Nagashima*, G. Zhang*, Z. Zhu*, T. Takahashi*, T. Hosomi*, H. Yoshida**, M. Kanai*, S. Takeda**, and T. Yanagida* *Kyushu University, **Osaka University			
We2-11	16:16 (3min+poster)	...	55
Crucial role of tungstate ions on elemental doping of hydrothermal ZnO nanowires H. Yamashita, K. Nagashima, T. Takahashi, T. Hosomi, G. Zhang, M. Kanai, and T. Yanagida Kyushu University			
We2-12	16:19 (3min+poster)	...	57
Photoluminescence properties of Tm,Yb-codoped ZnO nanowires grown by sputtering-assisted metalorganic chemical vapor deposition T. Nakajima, G. Yoshii, M. Mishina, J. Tatebayashi, and Y. Fujiwara Osaka University			
We2-13	16:22 (3min+poster)	...	59
Chemical interaction of volatile aldehyde molecules on ZnO nanowire surface C. Wang*, K. Nagashima*, T. Hosomi*, G. Zhang*, T. Takahashi*, H. Yoshida*, M. Kanai*, S. Takeda**, and T. Yanagida* *Kyushu University, **Osaka University			
We2-14	16:25 (3min+poster)	...	61
Long-term stability of hydrothermal ZnO nanowire/Pt junctions K. Nakamura, T. Takahashi, M. Kanai, G. Zhang, T. Hosomi, K. Nagashima, and T. Yanagida Kyushu University			
We2-15	16:28 (3min+poster)	...	63
Thermal discrimination of volatile organic molecules by molecularly fingerprinted metal oxide nanowires J. Liu*, K. Nagashima*, W. Li*, T. Hosomi*, Y. He**, M. Matsui*, G. Zhang*, T. Takahashi*, H. Yoshida***, M. Kanai*, S. Takeda***, and T. Yanagida* *Kyushu University, **Chongqing University, ***Osaka University			
We2-16	16:31 (3min+poster)	...	65
Fabrication of rocksalt-MgZnO/MgO layered structure and the characteristic of DUV light emission K. Ishii*, M. Ono**, T. Onuma**, K. Kaneko*, and S. Fujita* *Kyoto University, **Kogakuin University			
We2-17	16:34 (3min+poster)	...	67
P-type non-polar a-ZnO:N on r-plane sapphire substrate grown by plasma-assisted MBE H. Nakayama, N. Maekawa, N. Yamane, T. Abe, H. Kasada, K. Ando, K. Ichino, and K. Akaiawa Tottori University			
We2-18	16:37 (3min+poster)	...	69
Photo-induced phenomena of strongly correlated ferroelectric YMnO ₃ thin film K. Miura, D. Kiriya, T. Yoshimura, A. Ashida, and N. Fujimura Osaka Prefecture University			
We2-19	16:40 (3min+poster)	...	71
Growth and conductivity control of epitaxial Li-doped NiO thin film by mist chemical vapor deposition method T. Ikenoue, M. Miyake, and T. Hirato Kyoto University			

Break (16:43-16:53)

Poster Session I (We1, We2) (16:53-19:00)

Dinner (19:00-20:00)

Rump Session (20:00-21:30)

***“Watch and learn from
the powerful Japanese compound-semiconductor device business”***

Organizer: Y. Otoki (SCIOCS Co. Ltd.)
J. Suda (Nagoya University)

Panelists: F. Koyama (Tokyo Institute of Technology)
S. Nagahama (NICHIA Corporation)
K. Kamino (Asahi Kasei Microdevices Corporation)
F. Yamaki (Sumitomo Electric Device Innovations, Inc.)

【October 11th, Thursday】

Session Th1: III-Vs & Photo detectors (8:30-10:06)

Chair: Y. Kangawa (Kyushu University)

Th1-1 [Invited]	8:30 (30min+poster)	...	73
Computics approach to power semiconductors: Reactions in GaN epitaxial growth and carrier traps near SiC/SiO ₂ interfaces			
A. Oshiyama Nagoya University			
Th1-2	9:00 (3min+poster)	...	77
Growth of GaInNAs nanowires by molecular beam epitaxy			
M. Yukimune*, R. Fujiwara*, M. Jansson**, W. M. Chen**, I. A. Buyanova**, and F. Ishikawa*			
*Ehime University, **Linkoping University			
Th1-3	9:03 (3min+poster)	...	79
Growth of GaNAs nanowires with nitrogen over 2%			
R. Fujiwara*, M. Yukimune*, M. Jansson**, W. M. Chen**, I. A. Buyanova**, and F. Ishikawa*			
*Ehime University, **Linkoping University			
Th1-4	9:06 (3min+poster)	...	81
Solid-phase epitaxial growth of In _x Ga _{1-x} As			
Y. Horita*, K. Hirayama*, Y. Tominaga*, H. Morioka**, N. Ikenaga***, and O. Ueda***			
*Hiroshima University, **Bruker Japan K.K., ***Kanazawa Institute of Technology			
Th1-5	9:09 (3min+poster)	...	83
Temperature dependence of carrier relaxation process in InGaAs/GaAsP superlattice solar cell with GaAs interlayer			
R. Iwanaga, T. Nakamura, J. Lu, T. Ikari, M. Sugiyama, and A. Fukuyama Miyazaki University			
Th1-6	9:12 (3min+poster)	...	85
Extremely rapid growth of GaAs and P-based compound materials by MOVPE for low-cost PV applications			
A. Ubukata*, H. Sodabanlu**, T. Aihara***, R. Ohshima***, K. Watanabe**, S. Koseki*, T. Sugaya***, K. Matsumoto*, Y. Nakano****, and M. Sugiyama**			
*Taiyo Nippon Sanso Corporation, **Research Center for Advanced Science and Technology, ***National Institute of Advanced Industrial Science and Technology, ****The University of Tokyo			
Th1-7	9:15 (3min+poster)	...	87
Effect of TBAs preflow temperature on generation of antiphase domains in MOVPE-grown GaAs layer on Si(100) substrate			
R. Nakao***, T. Sato*, H. Sugiyama*, and S. Matsuo***			
*NTT Device Technology Labs., **NTT Nanophotonics Center			
Th1-8	9:18 (3min+poster)	...	89
Effect of dot size on the temperature-dependent photoluminescence signal in droplet-epitaxy-fabricated GaAs quantum dots			
Y. Ezoe, F. Ishitsuka, T. Goda, T. Ikari, T. Mano, and A. Fukuyama Miyazaki University			
Th1-9	9:21 (3min+poster)	...	91
XRD measurement of GaAs/GaNAs/GaAs core-multishell nanowires			
T. Mita, R. Fujiwara, M. Yukimune, and F. Ishikawa Ehime University			
Th1-10	9:24 (3min+poster)	...	93
Integration of vertical GaAs/InGaP core-multishell nanowires on Si			
K. Tomioka and J. Motohisa Hokkaido University			
Th1-11	9:27 (3min+poster)	...	95
Carrier-collection efficiency in two-step photon up-conversion solar cells			
K. Nishimura, S. Asahi, T. Kaizu, and T. Kita Kobe University			
Th1-12	9:30 (3min+poster)	...	97
Intraband absorption characteristics in two-step photon up-conversion solar cell			
K. Kusaki, T. Murata, S. Asahi, and T. Kita Kobe University			

Th1-13	9:33 (3min+poster)	...	99
Effect of excitation power density on photon up-conversion in two-step photon up-conversion solar cells			
S. Asahi and T. Kita			
Kobe University			
Th1-14	9:36 (3min+poster)	...	101
Voltage boost effect in two-step photon up-conversion solar cell with partial absorptivity			
Y. Harada, S. Asahi, and T. Kita			
Kobe University			
Th1-15	9:39 (3min+poster)	...	103
Absolute photoluminescence spectroscopy on InAs quantum dot intermediate band solar cells			
R. Tamaki*, Y. Shoji**, L. Lombez***, J.-F. Guillemoles****, and Y. Okada*			
*The University of Tokyo, **National Institute of Advanced Industrial Science and Technology, ***Institut Photovoltaïque Ile de France			
Th1-16	9:42 (3min+poster)	...	105
First experimental demonstration of BaSi ₂ p-n homojunction solar cells			
K. Kodama, T. Deng, K. Toko, and T. Suemasu			
University of Tsukuba			
Th1-17	9:45 (3min+poster)	...	107
Growth of dense CsPbBr ₃ thin films by mist deposition method for all-inorganic perovskite solar cells			
Y. Haruta, T. Ikenoue, M. Miyake, and T. Hirato			
Kyoto University			
Th1-18	9:48 (3min+poster)	...	109
Photoconductive properties of α -Ga ₂ O ₃ MSM device			
K. Uno, C. Umemura, S. Nakamura, and I. Tanaka			
Wakayama University			
Th1-19	9:51 (3min+poster)	...	111
Fabrication of double schottky type photodetector using corundum-structured gallium oxide			
K. Rikitake, T. Yamaguchi, T. Onuma, and T. Honda			
Kogakuin University			
Th1-20	9:54 (3min+poster)	...	113
Development of high gain ZnSe-based organic-inorganic hybrid ultraviolet avalanche photodiodes			
K. Nakagawa, T. Kawahara, K. Tanaka, Y. Ichikawa, K. Yoshida, Y. Fujii, T. Abe, H. Kasada, K. Ando, K. Ichino, and K. Akaiwa			
Tottori University			
Th1-21	9:57 (3min+poster)	...	115
SiGe stressors for band engineering of Ge photonic devices on Si			
K. Kawashita and Y. Ishikawa			
Toyoashi University of Technology			
Th1-22	10:00 (3min+poster)	...	117
Optical and electrical characteristics of low-temperature-grown In _x Ga _{1-x} As towards evaluation of its localized levels			
R. Hayashi, S. Tsurisaki, and Y. Tominaga			
Hiroshima University			
Th1-23	10:03 (3min+poster)	...	119
Temperature dependence of avalanche multiplication in GaN PN diodes measured by sub-bandgap light irradiation			
T. Maeda*, T. Narita**, H. Ueda**, M. Kanechika**, T. Uesugi**, T. Kachi***, T. Kimoto*, M. Horita*, and J. Suda****			
*Kyoto University, **TOYOTA Central R&D Labs., ***Nagoya University			

Break (10:06-10:16)

Poster Session II (Th1) (10:16-12:00)

Lunch (12:00-13:00)

Session Th2: Gallium oxide & Nitrides (13:00-14:45)

Chair: A. Ubukata (Taiyo Nippon Sanso Corp.)

Th2-1 [Invited]	13:00 (30min+poster)	...	121
Fabrication of β -Ga ₂ O ₃ epitaxial wafers by halide vapor phase epitaxy			
Y. Kumagai and H. Murakami			
Tokyo University of Agriculture and Technology			
Th2-2	13:30 (3min+poster)	...	123
Ultra-low forward-voltage Ga ₂ O ₃ trench MOS-type SBDs			
K. Sasaki ^{***} , Q. T. Thieu [*] , D. Wakimoto ^{***} , A. Takatsuka [*] , A. Kuramata [*] , and S. Yamakoshi ^{**}			
[*] Novel Crystal Technology, ^{**} Tamura Corporation			
Th2-3	13:33 (3min+poster)	...	125
TEM observation of α -Ga ₂ O ₃ films grown on m-plane sapphire substrates			
K. Akaiwa [*] , K. Ota [*] , T. Sekiyama [*] , T. Abe [*] , T. Shinohe ^{**} , and K. Ichino [*]			
[*] Tottori University, ^{**} FLOSFIA			
Th2-4	13:36 (3min+poster)	...	127
Heteroepitaxial growth of single-phase ϵ -Ga ₂ O ₃ thin films on c-plane sapphire by insertion of NiO buffer layers			
Y. Arata, H. Nishinaka, D. Tahara, S. Morimoto, and M. Yoshimoto			
Kyoto Institute of Technology			
Th2-5	13:39 (3min+poster)	...	129
Growth and characterization of ϵ -Ga ₂ O ₃ films grown on (100) TiO ₂ substrates by mist chemical vapor deposition			
D. Tahara, H. Nishinaka, Y. Arata, and M. Yoshimoto			
Kyoto Institute of Technology			
Th2-6	13:42 (3min+poster)	...	131
Band alignment of β -(Al _x Ga _{1-x}) ₂ O ₃ and β -(In _x Ga _{1-x}) ₂ O ₃			
Y. Ota			
Tokyo Metropolitan Industrial Technology Research Institute			
Th2-7	13:45 (3min+poster)	...	133
Evaluation of electrical characteristics of Si-doped Ga ₂ O ₃ thin film			
N. Aida, K. Ibino, K. Maki, and K. Takakura			
National Institute of Technology Kumamoto College			
Th2-8	13:48 (3min+poster)	...	135
Characterization of ohmic contact on α -Ga ₂ O ₃ thin film			
S. Aoyama [*] , T. Matsuda ^{**} , T. Shinohe ^{**} , J. Kikawa [*] , Y. Nanishi [*] , and T. Araki [*]			
[*] Ritsumeikan University, ^{**} FLOSFIA			
Th2-9	13:51 (3min+poster)	...	137
Dual impacts of Sb doping on crystal growth interface and electrical homogeneity of SnO ₂ nanowires grown by vapor-liquid-solid process			
Z. Zhu, K. Nagashima, T. Takahashi, M. Suzuki, H. Anzai, T. Hosomi, G. Zhang, M. Kanai, and T. Yanagida			
Kyushu University			
Th2-10	13:54 (3min+poster)	...	139
Immiscibility behind the MOVPE growth of InGaN			
K. Onabe			
The University of Tokyo			
Th2-11	13:57 (3min+poster)	...	141
A kinetic-thermodynamic modeling of carbon incorporation during step flow growth of GaN by metalorganic vapor phase epitaxy			
Y. Inatomi [*] , Y. Kangawa ^{**} , A. Pimpinelli ^{***} , and T. L. Einstein ^{****}			
[*] Kyushu University, ^{**} Nagoya University, ^{***} Rice University, ^{****} University of Maryland			
Th2-12	14:00 (3min+poster)	...	143
A new theoretical model for adatom density and lifetime on polar GaN surfaces during MBE and MOVPE			
Y. Inatomi [*] , Y. Kangawa ^{**} , A. Pimpinelli ^{***} , and T. L. Einstein ^{****}			
[*] Kyushu University, ^{**} Nagoya University, ^{***} Rice University, ^{****} University of Maryland			
Th2-13	14:03 (3min+poster)	...	145
GaN-MOVPE on SiC film formed by surface carbonization of Si substrates			
Y. Zhu, T. Momose, Y. Shimogaki, and M. Deura			
The University of Tokyo			

Th2-14	14:06 (3min+poster)	...	147
Acceleration of lateral growth rate in the GaN crystal grown on a point seed with Na-flux method by using thin flux level T. Nakajima, T. Yamada, K. Endo, K. Murakami, M. Imanishi, M. Yoshimura, and Y. Mori Osaka University			
Th2-15	14:09 (3min+poster)	...	149
Reduction of the bunched steps in GaN crystals using flux-film-coating technique in Na-flux method K. Endo, T. Yamada, K. Murakami, M. Imanishi, M. Yoshimura, and Y. Mori Osaka University			
Th2-16	14:12 (3min+poster)	...	151
Macro-step removal during vicinal (0001) GaN epitaxy using Eu-doping technique S. Ichikawa, T. Morikawa, J. Tatebayashi, and Y. Fujiwara Osaka University			
Th2-17	14:15 (3min+poster)	...	153
Surface and bulk electronic structures of unintentionally-doped InGaN epilayers by hard X-ray photoelectron spectroscopy M. Imura*, S. Tsuda*, T. Nagata*, H. Yoshikawa*, Y. Yamashita*, K. Kobayashi*, Y. Koide*, T. Yamaguchi**, T. Araki***, and Y. Nanishi*** *National Institute for Materials Science, **Kogakuin University, ***Ritsumeikan University			
Th2-18	14:18 (3min+poster)	...	155
Temperature dependence of structural and optical properties of GaN films grown by pulsed DC sputtering deposition S. Imai*, T. Onodera*, M. Imanishi*, Y. Mori*, H. Miura**, Y. Takahashi**, Y. Honda***, H. Cheong***, H. Amano***, M. Uemukai*, and R. Katayama* *Osaka University, **Tokyo Electron Limited, ***Nagoya University			
Th2-19	14:21 (3min+poster)	...	157
Electron beam excitation laser using AlGaIn for active layer Y. Sakuragi, Y. Kawase, J. Ikeda, S. Yasue, S. Iwayama, M. Iwaya, S. Kamiyama, T. Takeuchi, and I. Akasaki Meijo University			
Th2-20	14:24 (3min+poster)	...	159
Effect of growth order on CVD growth of h-BN/graphene heterostructure R. Makino*, K. Takata*, and H. Hibino** *Kwansei Gakuin University, **NTT Basic Research Labs			
Th2-21	14:27 (3min+poster)	...	161
Fabrication of regularly arranged Eu-doped GaN nanocolumns on AlN/Si substrate grown by RF-MBE S. Fujiwara, H. Sekiguchi, Y. Tamai, K. Yamane, H. Okada, K. Kishino, and A. Wakahara Toyohashi University of Technology			
Th2-22	14:30 (3min+poster)	...	163
Fabrication of AlInN/GaN DBR with high reflectance and conductivity toward efficient red light-emitting diodes K. Shiomi, T. Inaba, S. Ichikawa, J. Tatebayashi, and Y. Fujiwara Osaka University			
Th2-23	14:33 (3min+poster)	...	165
In-situ surface modification of InN films by nitrogen radical irradiation and thermal annealing H. Omatu, F. B. Abas, R. Fujita, S. Mouri, T. Araki, and Y. Nanishi Ritsumeikan University			
Th2-24	14:36 (3min+poster)	...	167
Visualization of resonant second order Raman modes for n-GaN wafer by spatial mapping method K. Watanabe National Institute for Materials Science			
Th2-25	14:39 (3min+poster)	...	169
Fabrication and optical properties of GaN:Eu-based microdisks with thick AlInN sacrificial layer Y. Sasaki, T. Inaba, S. Ichikawa, J. Tatebayashi, and Y. Fujiwara Osaka University			
Th2-26	14:42 (3min+poster)	...	171
Energy dependence of deep level formation by electron-beam irradiation in homoepitaxial n-type GaN M. Horita* and J. Suda** *Kyoto University, **Nagoya University			

Break (14:45-14:55)

Session Th3: Optical devices (14:55-15:55)

Chair: S. Naritsuka (Meijo University)

Th3-1 [Invited] 14:55 (30min+poster)	...	173
X-ray fluorescence holography and its application to electronic materials K. Hayashi Nagoya Institute of Technology		
Th3-2 15:25 (3min+poster)	...	177
Ge avalanche photodiodes on Si using SiGe/Si carrier-multiplication layer K. Noguchi*, Y. Miyasaka**, and Y. Ishikawa* *Toyoashi University of Technology, **The University of Tokyo		
Th3-3 15:28 (3min+poster)	...	179
Fiber array coupled semiconductor quantum dots for single photon emitter Y. Suzuki, S. Odashima, S. Kamono, K. Oomiya, and H. Sasakura Hokkaido University		
Th3-4 15:31 (3min+poster)	...	181
Photo-pumped lasing characteristics of perovskite nanoplatelet S. Enomoto and K. Yamashita Kyoto Institute of Technology		
Th3-5 15:34 (3min+poster)	...	183
Laser cooling in Yb-doped yttrium aluminum compounds Y. Nakayama*, T. Ando**, K. Terada*, Y. Harada*, and T. Kita* *Kobe University, **Panasonic Corporation		
Th3-6 15:37 (3min+poster)	...	185
GaN strip waveguide directional coupler for optical quantum information processing systems M. Kihira, J. Miwa, K. Shiomi, Y. Fujiwara, M. Uemukai, and R. Katayama Osaka University		
Th3-7 15:40 (3min+poster)	...	187
Input grating coupler for AlN channel waveguide wavelength conversion device Y. Morioka*, S. Yamaguchi*, Y. Hayashi**, H. Miyake**, K. Shiomi*, Y. Fujiwara*, M. Uemukai*, and R. Katayama* *Osaka University, **Mie University		
Th3-8 15:43 (3min+poster)	...	189
Design of transverse quasi-phase-matched AlN tapered waveguide SHG device for broadening wavelength acceptance bandwidth A. Yamauchi*, S. Yamaguchi*, Y. Hayashi**, H. Miyake**, K. Shiomi*, Y. Fujiwara*, M. Uemukai*, and R. Katayama* *Osaka University, **Mie University		
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Poster Session III (Th2, Th3) (16:05-18:30)

Banquet (19:00-21:00)

【October 12th, Friday】

Session Fr1: Electron devices & process (8:30-10:15)

Chair: A. Wakejima (Nagoya Institute of Technology)

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Y. Minoura^{***}, N. Okamoto^{***}, M. Sato^{**}, A. Yamada^{***}, K. Makiyama^{***}, J. Kotani^{***}, T. Ohki^{***}, K. Joshin^{**}, and N. Nakamura^{***}
^{*}Fujitsu Limited, ^{**}Fujitsu Laboratories Ltd.
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T. Onodera^{*}, R. Tanabe^{*}, T. Hikosaka^{**}, S. Nunoue^{**}, M. Kushimoto^{***}, H. J. Cheong^{***}, Y. Honda^{***}, H. Amano^{***}, M. Uemukai^{*}, and R. Katayama^{*}
^{*}Osaka University, ^{**}Toshiba Corporation, ^{***}Nagoya University
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R. Miyagawa^{*}, K. Shojiki^{**}, Y. Hayashi^{**}, H. Miyake^{**}, and O. Eryu^{*}
^{*}Nagoya Institute of Technology, ^{**}Mie University
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S. Yasue^{*}, K. Sato^{***}, Y. Kawase^{*}, J. Ikeda^{*}, Y. Sakuragi^{*}, S. Iwayama^{*}, M. Iwaya^{*}, S. Kamiyama^{*}, T. Takeuchi^{*}, and I. Akasaki^{***}
^{*}Meijo University, ^{**}Asahi-Kasei Corporation, ^{***}Nagoya University
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University of Tsukuba, Tosoh Corporation
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K. Fukuda^{***}, T. Onuma^{**}, T. Yamaguchi^{**}, T. Honda^{**}, and M. Sumiya^{*}
^{*}National Institute for Materials Science, ^{**}Kogakuin University
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K. Miwa, T. Yokoyama, H. Sekiguchi, K. Yamane, A. Wakahara, and H. Okada
Toyohashi University of Technology
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S. Toyoda^{*}, T. Taniguchi^{**}, K. Watanabe^{**}, and K. Nagashio^{*}
^{*}The University of Tokyo, ^{**}National Institute of Materials Science
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H. Yamaguchi^{*}, S. Konno^{*}, Y. Chonan^{*}, T. Komiyama^{*}, K. Kotani^{*}, R. Obara^{*}, and Y. Momoi^{**}
^{*}Akita Prefectural University, ^{**}Toyo Ltd.

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Break (10:15-10:25)

Poster Session IV (Fr1) (10:25-12:00)

Lunch (12:00-13:00)

Special session (13:00-15:20)

“Forefront of two-dimensional layered materials research”

Chair: K. Watanabe (National Institute for Materials Science)

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Y. Kawano		
Tokyo Institute of Technology		

Closing Session (15:20-15:40)