

PROGRAM

【November 8th, Wednesday】

Opening Session (13:00-13:10)

Plenary Session (13:10-14:00)

Chair : J. Motohisa (*Hokkaido University*)

Plenary 13:10 (50min) ... 1
HVPE growth of the group III nitrides
A. Koukitsu, Y. Kumagai and H. Murakami
Tokyo University of Agriculture and Technology

Session We1: Photonic Materials (14:00-15:06)

Chair : J. Motohisa (*Hokkaido University*)

We1-1 [Invited] 14:00 (30min+poster) ... 3
Control of light emission properties using photonic crystal and recent progress in the related topics
S. Iwamoto, Y. Ohta, S. Takahashi, T. Tajiri and Y. Arakawa
The University of Tokyo

We1-2 14:30 (3min+poster) ... 5
Coupling efficiency between a circular defect (CirD) resonator and a waveguide in 2D slab photonic crystal
Y. Miyamoto, M. Morifuji, H. Kajii and M. Kondow
Osaka University

We1-3 14:33 (3min+poster) ... 7
Photonic crystal microcavity laser with low-quality factor
Y. Xiong, X. Zhang, E. He, R. Tezuka, T. Hino, S. Kasamatsu, M. Morifuji, H. Kajii and M. Kondow
Osaka University

We1-4 14:36 (3min+poster) ... 11
Surface-processed photonic-crystal lasers for generating optical vortex beam
M. Kitazawa*, K. Kitamura*** and S. Noda**
*Kyoto Institute of Technology, **Kyoto University

We1-5 14:39 (3min+poster) ... 13
Selective inductively coupled plasma etching of GaAs/AlO_x films having photonic crystal structure intended to realize current driven nanolaser
Y. Tani, X. Cong, Y. Xiong, M. Morifuji, H. Kajii, A. Maruta and M. Kondow
Osaka University

We1-6 14:42 (3min+poster) ... 15
Circularly polarized spontaneous emission in semiconductor-based three-dimensional chiral photonic crystals
S. Takahashi***, Y. Ota*, T. Tajiri*, J. Tatebayashi*, S. Iwamoto* and Y. Arakawa*
*The University of Tokyo, **Kyoto Institute of Technology

We1-7 14:45 (3min+poster) ... 17
GaAsP quantum well single-mode semiconductor laser with periodically slotted structure
S. Kusumoto, M. Uemukai and R. Katayama
Osaka University

We1-8 14:48 (3min+poster) ... 19
Characterizing tail states of GaAsBi photodiodes by their spectral response
K. Kakuyama, K. Suzuki, S. Hasegawa, H. Nishinaka and M. Yoshimoto
Kyoto Institute of Technology

We1-9 14:51 (3min+poster) ... 21
Efficient carrier collection of up-converted electrons in two-step photon up-conversion solar cells
S. Asahi, K. Nishimura, K. Kusaki, T. Kaizu and T. Kita
Kobe University

We1-10	14:54 (3min+poster)	...	23
Demonstration of InGaAs nanowire array photodiode on Si substrate K. Chiba, A. Yoshida, K. Tomioka and J. Motohisa Hokkaido University			
We1-11	14:57 (3min+poster)	...	25
Lasing in a single GaAs nanowire with InGaAs/GaAs quantum dots embedded in flexible substrates J. Tatebayashi, Y. Ota, S. Ishida, M. Nishioka, S. Iwamoto and Y. Arakawa The University of Tokyo			
We1-12	15:00 (3min+poster)	...	27
Ultraviolet Stark effect optical modulators using non-polar ZnO/ZnMgO multiple quantum wells T. Abe, S. Iwagashita, D. Kimura, H. Kasada, K. Ando and K. Ichino Tottori University			
We1-13	15:03 (3min+poster)	...	29
Development of ZnSe-based organic-inorganic hybrid ultraviolet avalanche photodiodes K. Tanaka, S. Uchida, T. Kawahara, Y. Ichikawa, K. Nakagawa, T. Abe, H. Kasada, K. Ando, K. Ichino and K. Akaiwa Tottori University			

Break (15:06-15:16)

Session We2: Nitrides (15:16-16:16)

Chair : M. Funato (Kyoto University)

We2-1 [Invited]	15:16 (30min+poster)	...	31
Novel approaches of conductivity controls in nitride semiconductors – tunnel junctions and polarization doping - T. Takeuchi*, M. Iwaya*, S. Kamiyama*, and I. Akasaki*** *Meijo University, **Nagoya University			
We2-2	15:46 (3min+poster)	...	35
Thick GaN and AlGaIn growth by solid-source tri-halide vapor phase epitaxy H. Murakami, M. Takahashi and A. Koukitu Tokyo University of Agriculture and Technology			
We2-3	15:49 (3min+poster)	...	37
Fabrication of large-size, macro-defect-free GaN substrates with small off-angle variations by void-assisted separation method T. Fujimoto, T. Suzuki, T. Kitamura, T. Konno, H. Fujikura, T. Yoshida and S. Fujio SCIOCS Co. Ltd.			
We2-4	15:52 (3min+poster)	...	39
Improvement of GaN crystallinity in OVPE growth using carbothermal reduction of Ga ₂ O ₃ Y. Yamaguchi*, S. Tsuno*, K. Ishibashi*, Y. Gunji*, H. Kobayashi*, N. Murashima*, T. Oshiba*, Y. Sakamoto*, A. Kitamoto*, M. Imanishi*, M. Imade*, M. Yoshimura*, M. Isemura** and Y. Mori* *Osaka University, **Itochu Plastics Inc.			
We2-5	15:55 (3min+poster)	...	41
Effect of H ₂ carrier gas on the growth of thick GaN layers by Oxide Vapor Phase Epitaxy Y. Gunji*, Y. Yamaguchi*, K. Ishibashi*, S. Tsuno*, A. Kitamoto*, M. Imanishi*, M. Imade*, M. Yoshimura*, M. Isemura** and Y. Mori* *Osaka University, **Itochu Plastics Inc.			
We2-6	15:58 (3min+poster)	...	43
Effects of NH ₃ /H ₂ ratio on the polycrystal formation during GaN growth using OVPE method S. Tsuno*, Y. Gunji*, Y. Yamaguchi*, K. Ishibashi*, A. Kitamoto*, M. Imanishi*, M. Imade*, M. Yoshimura*, M. Isemura**, T. Sumi***, J. Takino****, Y. Okayama****, M. Nobuoka**** and Y. Mori* *Osaka University, **Itochu Plastics Inc., ***Panasonic Corporation			
We2-7	16:01 (3min+poster)	...	45
Growth of GaN crystals by OVPE method with a three-layer flow gas injection reactor K. Ishibashi, H. Kobayashi, T. Oshiba, S. Tsuno, Y. Gunji, Y. Yamaguchi, A. Kitamoto, M. Imanishi, M. Imade, M. Yoshimura, M. Isemura and Y. Mori Osaka University			

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Enlargement of transparent region of GaN crystals by thin-flux-growth in Na-flux point seed technique M. Hayashi, M. Imanishi, K. Murakami, M. Maruyama, M. Imade, M. Yoshimura and Y. Mori Osaka University			
We2-9	16:07 (3min+poster)	...	49
Effects on Yields and Surface Morphology of GaN Crystal using Cyanide Addition in Na-flux Method N. Takeda, M. Imanishi, T. Yamada, M. Hayashi, K. Murakami, K. Kakinouchi, M. Imade and Y. Mori Osaka University			
We2-10	16:10 (3min+poster)	...	51
Influence of Sapphire thickness on GaN wafer bowing grown by the Na-flux method with sapphire dissolution process T. Yamada, K. Murakami, K. Nakamura, T. Kitamura, K. Kakinouchi, K. Okumura, M. Imanishi, M. Imade, M. Yoshimura and Y. Mori Osaka University			
We2-11	16:13 (3min+poster)	...	53
The Evaluation of carrier concentration on Na-flux-grown GaN crystals by capacitance-voltage (C-V) measurements K. Endo, R. Kuramoto, T. Yamada, M. Imanishi, H. Kubo, M. Imade and Y. Mori Osaka University			

Session We3: Oxide Materials (16:16-16:52)

Chair : T. Kawaharamura (*Kochi University of Technology*)

We3-1	16:16 (3min+poster)	...	55
Control of Ga ₂ O ₃ crystal structures by alpha-(Al _x Ga _{1-x}) ₂ O ₃ buffer layers R. Jinno, T. Uchida, K. Kaneko and S. Fujita Kyoto University			
We3-2	16:19 (3min+poster)	...	57
MSM-type solar-blind photodetector with α-Ga ₂ O ₃ film grown by mist CVD K. Rikitake, T. Kobayashi, T. Yamaguchi, T. Onuma and T. Honda Kogakuin University			
We3-3	16:22 (3min+poster)	...	59
Growth of α-Ga ₂ O ₃ by mist CVD using carbon-free sources S. Nakamura, K. Uno and I. Tanaka Wakayama University			
We3-4	16:25 (3min+poster)	...	61
The epitaxial growth of ε-Ga ₂ O ₃ thin films by mist chemical vapor deposition using the GaCl ₃ precursor solutions S. Morimoto, D. Tahara, N. Miyauchi, H. Nishinaka and M. Yoshimoto Kyoto Institute of Technology			
We3-5	16:28 (3min+poster)	...	63
Epitaxial growth of ε-Al _{2x} Ga _{2-2x} O ₃ alloy films on c-plane AlN templates by mist chemical vapor deposition D. Tahara, H. Nishinaka, S. Morimoto, N. Miyauchi and M. Yoshimoto Kyoto Institute of Technology			
We3-6	16:31 (3min+poster)	...	65
Alloying of ε-In _{2x} Ga _{2-2x} O ₃ epitaxial thin films grown on AlN templates by mist-CVD N. Miyauchi, D. Tahara, S. Morimoto, H. Nishinaka and M. Yoshimoto Kyoto Institute of Technology			
We3-7	16:34 (3min+poster)	...	67
Effect of low temperature buffer layer in mist CVD growth of In ₂ O ₃ on α-Al ₂ O ₃ substrate T. Kobayashi, T. Yamaguchi, T. Onuma and T. Honda Kogakuin University			
We3-8	16:37 (3min+poster)	...	69
Study on the effect of solvents on fabricating ZnO thin films by solution-based mist chemical vapor deposition M. Nishi, L. Liu, P. Rutthongjan, S. Sato, M. Sakamoto, Y. Kobayashi, M. Ueda, E. K. C. Pradeep, G. T. Dang and T. Kawaharamura Kochi University of Technology			

We3-9	16:40 (3min+poster)	...	71
Tailoring rate limiting process and growth interface of hydrothermal zinc oxide nanowire growth K. Nagashima*, D. Sakai*, H. Yamashita*, G. Zhang*, X. Zhao*, T. Takahashi*, H. Yoshida*, M. Kanai*, S. Takeda** and T. Yanagida* *Kyushu University, **Osaka University			
We3-10	16:43 (3min+poster)	...	73
The effect of mist on the fabrication of metal oxide thin films M. Sakamoto*, L. Liu, S. Sato, P. Rutthongjan, M. Nishi, Y. Kobayashi, M. Ueda, E. K. C. Pradeep, G. T. Dang and T. Kawaharamura Kochi University of technology			
We3-11	16:46 (3min+poster)	...	75
High mobility p-type Cu ₂ O thin films grown by mist chemical vapor deposition method T. Ikenoue, T. Kawai, R. Wakashima, M. Miyake and T. Hirato Kyoto University			
We3-12	16:49 (3min+poster)	...	77
Epitaxial growth of SnO ₂ layers on c-plane sapphire by mist CVD T. Okumura, H. Nishinaka and M. Yoshimoto Kyoto Institute of Technology			

Break (16:52-17:02)

Poster Session I (We1, We2, We3) (17:02-19:00)

Dinner (19:00-20:00)

Rump Session (20:00-21:30)

“Does your research link with business?”

<i>Organizer:</i>	R. Katayama	(Osaka University)
	H. Miyake	(Mie University)
<i>Panelists:</i>	M. Ippommatsu	(UV Craftory Co. Ltd.)
	Y. Otoki	(SCIOCS Co. Ltd.)
	K. Domen	(Yushi Souzou Co. Ltd.)
	A. Nishikawa	(ALLOS Semiconductors GmbH)
	Y. Mori	(SOSHO Co. Ltd. and Osaka University)

【November 9th, Thursday】

Session Th1: Electronic and Spintronic Devices (8:30-9:33)

Chair : S. Sasaki (NTT Basic Research Laboratory)

Th1-1 [Invited] 8:30 (30min+poster)	...	79
Recent progress of germanium spintronics		
K. Hamaya		
Osaka University		
Th1-2 9:00 (3min+poster)	...	83
In-plane easy axis angle dependence of spin-orbit torque induced magnetization switching		
Y. Takahashi, A. Ohkawara, T. Anekawa, C. Zhang, S. Fukami and H. Ohno		
Tohoku University		
Th1-3 9:03 (3min+poster)	...	85
An effect of junction diameter on write-error rate of CoFeB/MgO-based magnetic tunnel junction with perpendicular easy axis		
T. Saino, H. Sato, S. Fukami and H. Ohno		
Tohoku University		
Th1-4 9:06 (3min+poster)	...	87
Homodyne-detected ferromagnetic resonance in nanoscale magnetic tunnel junction with magnetic field modulation		
Z. Wang, M. Shinozaki, A. Okada, S. Kanai, H. Sato, F. Matsukura and H. Ohno		
Tohoku University		
Th1-5 9:09 (3min+poster)	...	89
Fabrication of $\text{Co}_2\text{Fe}_{0.4}\text{Mn}_{0.6}\text{Si}$ Heusler alloy thin films on SrTiO_3 substrate for spin-injection into semiconductor		
H. Inaba, T. Koike, M. Oogane, and Y. Ando		
Tohoku University		
Th1-6 9:12 (3min+poster)	...	91
Suppression of spin Peltier effect under high magnetic fields		
R. Itoh*, R. Iguchi**, S. Daimon*, K. Oyanagi*, K. Uchida**, and E. Saitoh*		
*Tohoku University, **NIMS		
Th1-7 9:15 (3min+poster)	...	93
Ultra-low forward-voltage Ga_2O_3 trench MOS-type SBDs		
K. Sasaki*, **, Quang T. Thieu*, D. Wakimoto*, **, Y. Koishikawa*, **, A. Kuramata*, **, and S. Yamakoshi*, **,		
*Novel Crystal Technology, **Tamura Corporation		
Th1-8 9:18 (3min+poster)	...	95
Development of channeled ion implantation into GaN and fabrication of GaN based MOSFET towards GaN-IC		
H. Sekiguchi, H. Okada, K. Miwa, T. Yokoyama, K. Yamane and A. Wakahara		
Toyohashi University of Technology		
Th1-9 9:21 (3min+poster)	...	97
High temperature characteristics in AlGaIn/GaN asymmetric open-gate HFETs with recessed-gate enhanced-barrier structure		
T. Makie and N. Maeda		
Tokyo University of Technology		
Th1-10 9:24 (3min+poster)	...	99
m-plane GaN Schottky barrier diode fabricated with MOVPE layer on several off- angled m-plane GaN substrate		
A. Tanaka, Y. Ando, O. Barry, K. Nagamatsu, M. Deki, M. Kushimoto, S. Nitta, Y. Honda and H. Amano		
Nagoya University		
Th1-11 9:27 (3min+poster)	...	101
Correlation between dislocation and leakage current of p-n diodes on free-standing GaN substrate		
S. Usami, Y. Ando, A. Tanaka, K. Nagamatsu, M. Kushimoto, M. Deki, S. Nitta, Y. Hond and H. Amano		
Nagoya University		
Th1-12 9:30 (3min+poster)	...	103
Channel-length scaling of III-V nanowire vertical field-effect transistors		
K. Tomioka, A. Yoshida, Y. Minami and F. Ishizaka		
Hokkaido University		

Session Th2: Optical Devices (9:33-10:15)

Chair : M. Uemukai (Osaka University)

- Th2-1 9:33 (3min+poster) ... 105
Fabrication of nanocolumn LED with Eu-doped GaN active region grown by RF-MBE
R. Matsuzaki*, H. Sekiguchi*, A. Sukegawa*, K. Yamane*, H. Okada*, K. Kishino** and A. Wakahara*
*Toyohashi University of Technology, ** Sophia University
- Th2-2 9:36 (3min+poster) ... 107
Study on fabrication and characterizations of multi-quantum-shell GaInN/GaN nanowire LEDs
K. Nokimura*, M. H. Kim*, A. Suzuki*, Y. Kurisaki*, H. Shibuya*, M. Takebayashi*, K. Sasai*,
S. Kamiyama*, T. Takeuchi*, M. Iwaya* and I. Akasaki*, **
*Meijo University, **Nagoya University
- Th2-3 9:39 (3min+poster) ... 109
Fabrication of a GaInN/GaInP/GaInAs/Ge four-junction solar cell using the wafer bonding technology
K. Takahashi*, R. Shinoda*, S. Mitsufuji*, N. Muramatsu*, M. Iwaya*, T. Takeuchi*, S. Kamiyama*,
T. Hattori*, I. Akasaki**,** and A. Hiroshi**
*Meijo University, **Nagoya University
- Th2-4 9:42 (3min+poster) ... 111
Fabrication of a semipolar (10-1-1) GaInN-based solar cell
N. Muramatsu*, T. Takanishi*, S. Mitufuji*, K. Takahashi*, M. Iwaya*, T. Takeuchi*, S. Kamiyama*
and Isamu Akasaki*:**
*Meijo University, **Nagoya University
- Th2-5 9:45 (3min+poster) ... 113
Arrangement technique of GaN-nanowires based on top-down approach
M. Takebayashi*, M. H. Kim*, A. Suzuki*, Y. Kurisaki*, H. Shibuya*, K. Nokimura*, K. Sasai*, S. Kamiyama*,
T. Takeuchi*, M. Iwaya* and I. Akasaki*:**
*Meijo University, **Nagoya University
- Th2-6 9:48 (3min+poster) ... 115
Enhancement of Eu emission intensity in Eu doped GaN by silver nanoparticles on thin p-GaN layer
T. Yamada, T. Inaba, J. Tatebayashi and Y. Fujiwara
Osaka University
- Th2-7 9:51 (3min+poster) ... 117
Development of Surface-Activated Wafer Bonding Method of AlN, GaN and LiNbO₃
T. Onodera*, M. Uemukai*, K. Takahashi**, M. Iwaya**, I. Akasaki**, Y. Hayashi***, H. Miyake*** and R. Katayama*
*Osaka University, **Meijo University, ***Mie University
- Th2-8 9:54 (3min+poster) ... 119
Polarity inversion of AlN fabricated by wafer bonding and its atomic arrangement models
Y. Hayashi*, H. Miyake*, K. Hiramatsu*, T. Akiyama*, T. Ito* and R. Katayama**
*Mie University **Osaka University
- Th2-9 9:57 (3min+poster) ... 121
Design of polarity-inverted multilayer AlN waveguide for deep UV second harmonic generation
S. Yamaguchi*, M. Uemukai*, K. Takahashi**, M. Iwaya**, I. Akasaki**, Y. Hayashi**, H. Miyake**, T. Yamada*,
Y. Fujiwara* and R. Katayama*
*Osaka University, **Meijo University
- Th2-10 10:00 (3min+poster) ... 123
Design of GaN monolithic doubly-resonant microcavity SHG device
T. Nambu, M. Uemukai, R. Fuji, T. Yamada, Y. Fujiwara and R. Katayama
Osaka University
- Th2-11 10:03 (3min+poster) ... 125
GaN rib waveguide directional coupler for optical quantum information processing systems
J. Miwa, M. Kihira, M. Uemukai, R. Fuji, Y. Fujiwara and R.katayama
Osaka University
- Th2-12 10:06 (3min+poster) ... 127
Extremely rapid growth of GaAs by MOVPE for low-cost PV applications
A. Ubukata*, H. Sodabanlu**, K. Watanabe**, S. Koseki*, Y. Yano*, T. Tabuchi*, T. Sugaya***,
K. Matsumoto*, Y. Nakano**, and M. Sugiyama**
*Taiyo Nippon Sanso Corp., **The University of Tokyo, ***National Institute of Advanced Industrial Science and Technology

Th2-13	10:09 (3min+poster)	...	129
MOVPE growth of low-antiphase-boundary-density GaAs layer on on-axis Si (100) substrate			
R. Nakao and S. Matsuo			
NTT Device Technology Laboratories			
Th2-14	10:12 (3min+poster)	...	131
Alloy compositional dependence of Zn diffusion characteristics in InGaAsP and InGaAlAs grown by MOVPE			
T. Kitatani, K. Okamoto, K. Uchida and S. Tanaka			
Oclaro Japan, Inc.			

Break (10:15-10:25)

Poster Session II (Th1, Th2) (10:25-12:00)

Lunch (12:00-13:00)

Session Th3: Low Dimensional Structures (13:00-14:12)

Chair : K. Kawaguchi (FUJITSU Laboratories)

- Th3-1 [Invited] 13:00 (30min+poster) ... 133
Understanding of layered heterointerfaces in 2D semiconductors
K. Nagashio
The University of Tokyo
- Th3-2 13:30 (3min+poster) ... 135
Pulsed current-mode plating of smooth thin copper layer on graphene for fabrication of copper-graphene composite
K. Fujiwara, D. Yamamoto, J. Yamada, Y. Ueda, T. Maruyama and S. Naritsuka
Meijo University
- Th3-3 13:33 (3min+poster) ... 137
Investigation of carrier thermal excitation process in GaAs-inserted InGaAs/GaAsP superlattice solar cell
T. Nakamura*, H. Takeda*, J. Lu*, H. Suzuki*, T. Ikari*, K. Topraserpong**, M. Sugiyama** and A. Fukuyama*
*University of Miyazaki, **The University of Tokyo
- Th3-4 13:36 (3min+poster) ... 139
Effect of compressive strain on the photoluminescence spectrum of multi-sacked InAs quantum dots structure
F. Ishitsuka*, D. Ohori**, A. Iwamoto*, T. Ikari*, K. Akahane*** and A. Fukuyama*
*University of Miyazaki, **Tohoku University, ***NICT
- Th3-5 13:39 (3min+poster) ... 141
Internal quantum efficiency of InGaN/GaN multiple quantum wells grown on ScAlMgO₄ substrate
C. Hagiwara*, S. Kuboya*, T. Tanikawa*, T. Fukuda** and T. Matsuoka*
*Tohoku University, **Fukuda Crystal Laboratory
- Th3-6 13:42 (3min+poster) ... 143
Comparison of In incorporation in axial InGaN quantum wells on GaN and InGaN nanorods grown by molecular beam epitaxy
T. Hattori, M. Kushimoto, S. Nitta, Y. Honda and H. Amano
Nagoya University
- Th3-7 13:45 (3min+poster) ... 145
Growth of self-organized Eu-doped InGaN nanocolumns by RF-plasma-assisted molecular beam epitaxy
A. Sukegawa, H. Sekiguchi, R. Matsuzaki, K. Yamane, H. Okada, K. Kishino and A. Wakahara
Toyohashi University of Technology
- Th3-8 13:48 (3min+poster) ... 147
Fabrication of regularly arranged Eu doped GaN nanocolumns using Ti mask selective area growth
K. Ozaki*, H. Sekiguchi*, Y. Tamai*, K. Yamane*, H. Okada*, K. Kishino** and A. Wakahara*
*Toyohashi University of Technology, **Sophia University
- Th3-9 13:51 (3min+poster) ... 149
Longer nonradiative lifetimes of excitons localized in AlGaN quantum wires grown on macrosteps
M. Hayakawa, Y. Hayashi, S. Ichikawa, K. Kumamoto, M. Shibaoka, M. Funato and Y. Kawakami
Kyoto University
- Th3-10 13:54 (3min+poster) ... 151
Critical role of liquid-solid interface on composition and electrical conduction properties of vapor-liquid-solid grown oxide nanowires
K. Nagashima*, H. Anzai*, Z. Zhu*, Hi. Yoshida**, M. Suzuki*, M. Kanai*, T. Takahashi, S. Takeda** and T. Yanagida*
* IMCE Kyushu University, **ISIR Osaka University
- Th3-11 13:57 (3min+poster) ... 153
Growth and characterization of nanowire quantum dots emitting at telecom wavelength
M. Sasaki, K. Chiba, A. Yoshida, K. Tomioka and J. Motohisa
Hokkaido University
- Th3-12 14:00 (3min+poster) ... 155
GaAs/GaAsBi nanowire growth on Si(111)
K. Yano*, K. Takada*, K. Nishioka*, P. Patil*, F. Ishikawa*, S. Shimomura*, K. Nagashima** and T. Yanagida**
*Ehime University, **Kyushu University

Th3-13	14:03 (3min+poster)	...	157
Synthesis of GaAs-related multishell nanowires with native oxide AlGaO _x outermost shell N. Tsuda and F. Ishikawa Ehime University			
Th3-14	14:06 (3min+poster)	...	159
Selective-area growth of InGaAs nanowires with various In compositions on Ge(111) by MOVPE A. Yoshida, Y. Minami, K. Chiba, K. Tomioka and J. Motohisa Hokkaido University			
Th3-15	14:09 (3min+poster)	...	161
Selective-area MOVPE of GaAs nanowires on Ge(111) substrates toward photovoltaic applications Y. Minami, A. Yoshida, K. Tomioka and J. Motohisa Hokkaido University			

Session Th4: Novel Electronic Materials (14:12-15:21)

Chair : S. Naritsuka (Meijo University)

Th4-1 [Invited]	14:12 (30min+poster)	...	163
R&D of REBa ₂ Cu ₃ O _y high-T _c superconducting tapes – present status and future prospect – T. Izumi National Institute of Advanced Industrial Science and Technologies			
Th4-2	14:42 (3min+poster)	...	165
The effect of lattice mismatch on strains and magnetic properties of τ-phase MnAl films F. Takata, T. Gushi, A. Anzai, K. Toko and T. Suemasu University of Tsukuba			
Th4-3	14:45 (3min+poster)	...	167
Epitaxial growth and magnetic properties of Mn _x Fe _{4-x} N films A. Anzai, T. Gushi, F. Takata, K. Toko and T. Suemasu University of Tsukuba			
Th4-4	14:48 (3min+poster)	...	169
Pyramidal diamond formation by high pressure and high temperature technique R. Fukuta, N. Yamamoto, F. Ishikawa, M. Matsushita, H. Ohfuji, T. Shinmei and T. Irifune Ehime University			
Th4-5	14:51 (3min+poster)	...	171
Properties of molybdenum disulfide (MoS ₂) thin film fabricated by mist CVD S. Sato*, M. Sakamoto, D. T. Giang, E. K. C. Pradeep, L. Li, P. Rutthongjan, Y. Kobayashi, M. Ueda and T. Kawaharamura Kochi University of Technology			
Th4-6	14:54 (3min+poster)	...	173
Usage of nano diamond as carbon source in graphene precipitation method D. Yamamoto, J. Yamada, Y. Ueda, K. Fujiwara, T. Maruyama and S. Naritsuka Meijo University			
Th4-7	14:57 (3min+poster)	...	175
Optimization of template growth duration in p-BaSi ₂ /n-Si solar cells S. Yachi, R. Takabe, K. Toko and T. Suemasu University of Tsukuba			
Th4-8	15:00 (3min+poster)	...	177
Nonvolatile resistive memory 99.3 vol.% composed of nanocellulose K. Nagashima*, H. Koga**,**, U. Celano****, T. Kitaoka*, M. Nogi** and T. Yanagida* * Kyushu University, **Osaka University, ***Core lab, ****imec			
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【November 10th, Friday】

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