PROGRAM

[July 10th, Wednesday]

Opening Session (13:00-13:10)

Plenary Session (13:10-14:00)
Chair : A. Wakahara (Toyoohasi University of Technology)

Plenary  13:10 (50min)  
Thermodynamics of alloy semiconductors and their thin-film growths  
K. Onabe  
The University of Tokyo

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Session We1: Oxide-I (14:00-14:57)
Chair : H. Tampo (National Institute of Advanced Industrial Science and Technology)

We1-1 [Invited] 14:00 (30min)  
Advances in oxide semiconductor based thin film transistors  
H. Kumomi  
Tokyo Institute of Technology

We1-2  14:30(3min+poster)  
Thick film growth of zinc oxide on n-GaN by electrodeposition with photoexcitation  
K. Uno, S. Ikegami, M. Sainokami, Y. Tauchi and I. Tanaka  
Wakayama University

We1-3  14:33(3min+poster)  
Low temperature formation of ZnO films using non-equilibrium atmospheric pressure N₂ Plasma with small amount of O₂ below 1%  
Y. Nose*, T. Nakamura*, T. Yoshimura*, A. Ashida*, T. Uehara** and N. Fujimura*  
*Osaka Prefecture University. **Sekisui Integrated Research Inc.

We1-4  14:35(3min+poster)  
Nucleation and grain growth process of ZnO by electrochemical method  
A. Ashida, N. Nouzu, T. Yoshimura and N. Fujimura  
Osaka Prefecture University

We1-5  14:39(3min+poster)  
Characterization of ZrTe and ZrTeO by the DLTS method  
N. Tsuoboya, J. Hinata Y. Nabetani, T. Muranaka and T. Matsumoto  
University of Yamanashi

We1-6  14:42(3min+poster)  
RF-MBE growth of AlO/AlN/GaN heterostructures  
Y. Sugitani***, T. Yanaguchi*, T. Honda* and M. Higashihakii**  
*Kogakuin University. **National Institute of Information and Communications Technology

We1-7  14:45(3min+poster)  
Growth and properties of high quality AlO, by atmospheric pressure mist CVD  
T. Uchida*, T. Kawaharumura** and S. Fujita*  
*Kyoto University, **Kochi University of Technology

We1-8  14:50(3min+poster)  
Fabrication of transparent conductive oxide thin films by ultrasonic spray assisted mist deposition method  
T. Ikemoto, S. Sakamoto and Y. Inoue  
The University of Shiga Prefecture

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We1-9  14:51(3min+poster)  Effect of oxygen sources on the electrochemical growth process of Cu₂O epitaxial films
S. Sato, A. Ashida, T. Yoshimura and N. Fujimura  Osaka Prefecture University

We1-10  14:54(3min+poster)  Chemical fabrication of transparent Cu metal thin film for infrared reflective thin film
H. Nagai, T. Okada, T. Honda and M. Sato  Kogakum University

Break (14:57-15:15)

Session We2: Optical Properties & Devices (15:15-17:00)  
 Chairs: M. Fujita (Osaka University) & J. Suda (Kyoto University)

We2-1 [Invited]  15:15 (30min)  Photonic crystal nanocavity laser for optical interconnect
S. Matsumoto  NTT

We2-2  15:45(3min+poster)  Introduction of tensile-strained dilute nitride quantum wells to dielectric-rods type photonic crystal device
F. Ishikawa***, H. Goto** and M. Morifumi**  *Ehime University, **Osaka University

We2-3  15:48(3min+poster)  Clear observation of cavity mode of GaAs/air multilayer structure
H. Komatsu, Y. Nakagawa, K. Morita, T. Kitada and T. Isu  The University of Tokushima

We2-4  15:51(3min+poster)  Two-color emission from wafer-bonded GaAs/AlAs coupled multilayer cavity by optical pumping
C. Hayama, S. Kato, Y. Nakagawa, K. Morita, T. Kitada and T. Isu  The University of Tokushima

We2-5  15:54(3min+poster)  Effect of etching mask on Al-rich Al₀.₃Ga₀.₇As dry etching for photonic crystal fabrication
Y. Togano, Y. Kitabayashi, F. Ishikawa and M. Kondo  Osaka University

We2-6  15:57(3min+poster)  Air-hole retained growth for embedding photonic-crystal structures by MBE
M. Nishimoto, K. Ishizaki, K. Mackawa, K. Kitamura and S. Noda  Kyoto University

We2-7  16:00(3min+poster)  Wavelength extension of GaAs/In layer with low temperature coefficient of lasing wavelength
T. Fujiyuki and M. Yosimoto  Kyoto Institute of Technology
We2-8  16:03(3min+poster)  
Terahertz emission from a (113)B GaAs/AlAs coupled multilayer cavity with self-assembled InAs quantum dots
M. Ogamine*, S. Kato*, Y. Nakagawa**, K. Morita*, T. Kitada* and T. Isu*
*The University of Tokushima, **Nichia Corporation

We2-9  16:06(3min+poster)  
Capturing a terahertz wave by photonic-crystal slab
R. Kakimi, M. Fujita, M. Nagai, M. Ashida and T. Nagatsuma
Osaka University

We2-10  16:09(3min+poster)  
Grating coupler for terahertz-wave integrated circuits using a photonic-crystal slab
A. Suminokura, T. Ishigaki, M. Fujita and T. Nagatsuma
Osaka University

We2-11  16:12(3min+poster)  
The evaluation of radiation detection for GaN and BGaN
K. Atsumi, A. Miyake, H. Minuma, Y. Imura, T. Aoki and T. Nakano
Shizuoka University

We2-12  16:15(3min+poster)  
High-field properties of Ge p-i-n photodiodes on Si
S. Nagatomo and Y. Ishikawa
The University of Tokyo

We2-13  16:18(3min+poster)  
Biosensing application of silicon photonic crystal waveguides having air-band optical cavity
*The University of Tokyo, **NTT

We2-14  16:21(3min+poster)  
Excitonic fine structure of AlN studied by polarization-resolved photoluminescence spectroscopy
R. Ishii, M. Funato and Y. Kawakami
Kyoto University

We2-15  16:24(3min+poster)  
Electrochemical formation and optical characterization of GaN porous structures
Y. Kumazaki, A. Watnabe, R. Jinbo, Z. Yatabe and T. Suto
Hokkaido University

We2-16  16:27(3min+poster)  
Exciton localization characteristics in Al-rich AlGaN/AlN quantum wells
T. Oto, R. G. Banal, M. Funato and Y. Kawakami
Kyoto University

We2-17  16:30(3min+poster)  
Impact of ultra-thin InN layers in GaN matrix for light-emitting diodes with super weak waveguides
D. Tajimi*, Y. Sugiuira*, T. Hatakeyama*, T. Onuma**, T. Yamaguchi*and T. Honda*
*Kogakuin University, **Tokyo National College of Technology

We2-18  16:33(3min+poster)  
Fabrication of nitride air/AlGaN distributed Bragg reflector vertical microcavities using thermal decomposition of GaN
R. Tao, M. Akitu, S. Kako and Y. Arakawa
The University of Tokyo

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We2-19  16:38(3min+poster)  
Massive improvement in ultra-violet emission of thermal annealed AlGaN
*Kobe University, **YUMEX INC, ***Hyogo Prefectural Inst. of Tech

We2-20  16:59(3min+poster)  
Low-temperature-dependent red light-emitting diode with Eu and Mg codoped GaN active layer
*Toyoohashi University of Technology, **Hamamatsu Photonics K. K

We2-21  16:42(3min+poster)  
Preparation of Europium-doped GaN films grown by radical-nitrogen-assisted compound-source MBE
S. Yudate, Y. Koyama and S. Shirakata
Ehime University

We2-22  16:45(3min+poster)  
Enhancement of red luminescence intensity in Eu-doped GaN/AlGaN multiple quantum well structures grown by organometallic vapor phase epitaxy
T. Arai, R. Wakamatsu, D. Lee, A. Koizumi and Y. Fujiwara
Osaka University

We2-23  16:48(3min+poster)  
Optical characteristics of Eu and Mg codoped AlGaN
M. Kanemoto*, H. Sekiguchi*, Y. Takagi**, H. Okada* and A. Wakahara*
*Toyoohashi University of Technology, **Hamamatsu Photonics K. K.

We2-24  16:51(3min+poster)  
Luminescence properties of Eu-doped GaN under resonant excitation and quantitative evaluation of luminescent sites
R. Wakamatsu, D. Lee, A. Koizumi and Y. Fujiwara
Osaka University

We2-25  16:54(3min+poster)  
Design of Si guide layer buried Er3+SiO2 waveguides by FDTD method
K. Sakaguchi, Y. Terada, T. Nakajima, T. Kimura and H. Ishii
The University of Electro-Communications

We2-26  16:57(3min+poster)  
Building a measurement system for optical propagation properties in waveguides
R. Sasamoto, Y. Terada and H. Ishii
The University of Electro-Communications

Poster Session I (We1-2) (17:00-19:00)

Dinner (19:00-20:00)
Rump Session (20:00-21:30)

“Carrier Design of Science and Technology Students and Researchers”

Organizer: Y. Mori (Osaka University)

Panelists: T. Ogawa (Osaka University)
G. Okada (Spectronix Corporation)
T. Tokura (Osaka University)
M. Isemura (Itochu Plastics Inc.)
K. Kaneko (Kyoto University)
T. Kageyama (QD Laser, Inc.)

Chairs: Y. Mori (Osaka University)
K. Negishi (Osaka University and Koyasan University)
Th1-1 [Invited] 8:30 (30min)
Graphene plasmons and their applications to terahertz lasers
T. Otsuj
Tohoku University

Th1-2 09:00(3min+poster)
Analysis of surface potential of GaN layers by Kelvin force microscopy
N. Okada, T. Yamamoto, K. Yamane and K. Tadatomo
Yamaguchi University

Th1-3 09:03(3min+poster)
Influence of native surface oxide on GaN surface band bending
R. Amiy® Y. Sugimura, D. Tajimi, T. Yamaguchi and T. Honda
Kogakuin University

Th1-4 09:06(3min+poster)
Effects of surface modification on emission property of GaN Schottky diodes
S. Fujiko*, R. Amiyi*, T. Omura**, T. Yamaguchi* and T. Honda*
*Kogakuin University, **Tokyo National College of Technology

Th1-5 09:09(3min+poster)
AC operation of low-Mg-doped p-GaN Schottky diodes
T. Aoki*, N. Kaneda**, T. Mishima** and K. Shiguma*
*University of Fukui, **Hitachi Cable Ltd.

Th1-6 09:12(3min+poster)
Characterization of AlGaN/GaN HEMT by UV assisted CV method
Y. Hashimoto, S. Kiyohara, J. Kikawa, T. Araki, Y. Nanishi, H. Tomita, M. Sugimoto and M. Kanechika
Ritsumeikan University

Th1-7 09:15(3min+poster)
Characterization of transfer property of AlGaN/GaN HEMT
S. Kiyohara*, Y. Hashimoto*, J. Kikawa*, T. Araki*, Y. Nanishi*,**, H. Tomita***, M. Sugimoto*** and M. Kanechika****
*Ritsumeikan Univ., **Seoul National University, ***Toyota Motor Corp., ****Toyota Central R&D Laboratories, Inc.

Th1-8 09:18(3min+poster)
High-temperature operation of diamond field-effect transistors with Al2O3 passivation layer
K. Hirama*, H. Sato*, Y. Harada*, H. Yamamoto* and M. Kasu*,**
*NTT, **Saga University

Th1-9 09:21(3min+poster)
21-kV SiC DJTs With Space-Modulated Junction Termination Extension
T. Okuda, H. Miyake, T. Kimoto and J. Suda
Kyoto University

Th1-10 09:24(3min+poster)
Evaluation of degradation due to electron irradiation of SiµC/S/D n-type Si MOSFET
*Kumamoto National College of Technology, **Kyushu University, ***Chuo Denki Kogyo Co. LTD, ****IMEC
Th2-1  09:27 (3min+poster)  ...  103
Crystalline and electrical characteristics of C-doped GaAs layers
J. Nishinaga and Y. Horikoshi
Waseda University

Th2-2  09:30 (3min+poster)  ...  105
Study of the optical properties of C-doped GaAs layers
*Miyanaka University, **Waseda University

Th2-3  09:33 (3min+poster)  ...  107
Experimental study of a symmetric STM image on asymmetric GaAs(001)-c(4×4)a
S. Kaku, K. Yagyu and J. Yoshino
Tokyo Institute of Technology

Th2-4  09:36 (3min+poster)  ...  109
Growth of free-standing quasi-InGaAs substrate and low thermal resistance InGaAs metamorphic buffer using in-situ curvature measurement
R. Nakao, M. Arat, R. Iga and M. Kohto
NTT

Th2-5  09:39 (3min+poster)  ...  111
Growth of GaAsN quantum wells by using surface nitridation enhanced N incorporation
N. Urakami*, H. Ito*, H. Sekiguchi*, H. Okada** and A. Wakahara*
*Toyohashi University of Technology, **Electronics Inspired Interdisciplinary Research Institute

Th2-6  09:42 (3min+poster)  ...  113
Comparative study of selective growth of GaAs on Ti, SiO2, and graphene masks by molecular beam epitaxy
Meijo University

Th2-7  09:45 (3min+poster)  ...  115
Study of abnormal growth in (100) GaAs microchannel epitaxy - Effect of mask pattern -
Meijo University

Th2-8  09:48 (3min+poster)  ...  117
Formation of highly quality nanocrystal diamond with Si-V luminescent center
Y. Souna, K. Matsuhashi, T. Shigeo, S. Takigawa and H. Ishikiri
The University of Electro-Communication

Th2-9  09:51 (3min+poster)  ...  119
Silicon intercalation at the SiC-graphene interface
S. Kimoto, T. Kajiwara, A. Visikovskiy and S. Tanaka
Kyushu University

Th2-10  09:54 (3min+poster)  ...  121
New polytypes (4H, 6H) of III-nitrides grown by hetero-step-flow mode on vicinal SiC surfaces
*Kyushu University, **Kyoto University, ***University of Fukui
Th2-11  09:57(3min+poster)  
Initial stages of graphene growth via MBE by LEED analysis  
S. Hayashi, A. Visikovskiy, T. Kajiwara and S. Tanka  
Kyushu University

Th2-12  10:00(3min+poster)  
Electron irradiation effect of Au induced lateral crystallization for amorphous Ge on SiO$_2$  
Kumamoto National College of Technology

Th2-13  10:03(3min+poster)  
Formation of photo-induced charge transfer composites using graphene oxide and application to heterojunction devices  
G. Kalita*, M. Umemitsu** and M. Tanemura*  
*Nagoya Institute of Technology, **Chubu University

Th2-14  10:06(3min+poster)  
Growth of pentacene crystallinity control layers for benzodithiophene-dimer field-effect transistors  
T. Sakai, Y. Matsumoto, H. Osuga, K. Uno and I. Tanaka  
Wakayama University

Th2-15  10:09(3min+poster)  
Surface transformation and transmitted light characterization of 6H-SiC by femtosecond laser irradiation  
R. Miyagawa and O. Eryu  
Nagoya Institute of Technology

Break (10:12-10:20)

Poster Session II (Th1-2) (10:20-12:00)

Lunch (12:00-13:00)

Session  Th3: Silicon Carbides and Nitrides Growth (13:00-14:33)  
Chair: J. Suda (Kyoto University) & T. Tsuchiya (Hitachi, Ltd.)

Th3-1 [Invited]  13:00(30min)  
PVT-grown SiC single crystals and their applications to power electronics  
T. Fujimoto  
Nippon Steel & Sumitomo Metal Corporation

Th3-2  13:30(3min+poster)  
Structural characterization of 4H-AlN/4H-GaN short-period superlattice coherently grown on 4H-SiC (11-20) by plasma-assisted molecular-beam epitaxy  
M. Kaneko, S. Ueta, H. Okumura, T. Kimoto and J. Suda  
Kyoto University

Th3-3  13:33(3min+poster)  
Structural characterization of stacking mismatch boundaries in 2H-AlN grown on 6H-SiC (0001) by plasma-assisted molecular beam epitaxy  
T. Higashi, M. Kaneko, T. Kimoto and J. Suda  
Kyoto University
Th3-4  13:36(3min+poster)
Effects of threading dislocation on MOVPE growth of Si-doped AlN
G. Nishio, H. Miyake and K. Hiramatsu
Mie University

Th3-5  13:38(3min+poster)
Luminescence image of cleaved crystal in hexagonal boron nitride grown by temperature gradient method
K. Watanabe and T. Taniguchi
National Institute for Materials Science

Th3-6  13:42(3min+poster)
Remarkable surface morphology improvement of semipolar (1 1 0 2) AlN homoepitaxial films by nucleation control growth
S. Ichikawa*, M. Funato*, S. Nagaya** and Y. Kawakami*
*Kyoto University, **JFE Mineral Co. Ltd.

Th3-7  13:45(3min+poster)
Growth characteristics of semipolar [1 1 2 2] GaN homoepitaxial layers
J. Nishinaka, M. Funato and Y. Kawakami
Kyoto University

Th3-8  13:48(3min+poster)
Double polarities selective area growth of GaN in MOVPE by using carbon mask
Y. Fujita, Y. Takano, Y. Inoue and T. Nakano
Shizuoka University

Th3-9  13:51(3min+poster)
Crystallographic polarity dependence of surface morphology evolution during MOVPE growth of GaN/Sapphire
*Tohoku University, **Japan Science and Technology Agency

Th3-10  13:54(3min+poster)
Effect of indium surfactant on MOVPE growth of N-polar GaN
*Tohoku University, **Japan Science and Technology Agency

Th3-11  13:57(3min+poster)
Interdiffusion of Mg-Fe dopants in GaN
T. Tsuchida, T. Kitani, A. Tenana and K. Muchitaki
Hitachi, Ltd.

Th3-12  14:00(3min+poster)
Epitaxial growth on high-quality GaN crystals by the Na-flux method
Osaka University

Th3-13  14:03(3min+poster)
The effects of solution stirring by the thermal convection on GaN crystal growth by the Na-flux method
Osaka University

Th3-14  14:06(3min+poster)
Growth of thick GaN on Si substrate with 3C-SiC intermediate layer
*Me University, **AF Water K&L Co., Ltd.
RF-MBE growth of GaN films on α-Ga2O3/sapphire template
T. Hatakeyama, T. Yamaguchi, D. Tajimi, Y. Sugiuira and T. Honda
Kogakuin University

The GaN growth on pseudo aluminium templates by molecular beam epitaxy
S. Otsawa, T. Hatakeyama, D. Tajimi, T. Yamaguchi and T. Honda
Kogakuin University

Growth and characterization of GaN on graphene/Si (100) substrates by RF-MBE
*Ritsumeikan University, **Seoul National University, ***Massachusetts Institute of Technology, ****Dongguk University, *****Graphene S. A.

Low temperature selective growth of c-plane GaN using Ti mask by RF-MBE
N. Yamamoto, H. Kato, Y. Hirota, H. Iha, T. Maruyama and S. Naritsuka
Meijo University

Observation of phase separation on m-plane InGaN film by micro-beam X-ray diffraction
*Tohoku University, **IST, ***JASRI

InGaN/GaN multi-quantum well growth by raised pressure MOVPE
T. Doi, Y. Honda, M. Yamaguchi and H. Amano
Nagoya University

Film thickness dependence of composition and relaxation of In-rich InGaN epilayers grown by RF-MBE
M. Sakamoto*, K. Weng**, T. Araki*** and Y. Nanishi and E. Yoon
*Ritsumeikan University, **Seoul University

Thickness dependence of structural and electrical properties of thin InN grown by RF-MBE
J. Sakaguchi*, T. Amaki*, T. Fujishima**, E. Matsu***. T. Palacios** and Y. Nanishi****
*Ritsumeikan University, **Massachusetts Institute of Technology, ***Seoul National University

Break (14:33-14:48)

Session Th4: Spintronics and Ferromagnetics (14:48-15:18)
Chair: M. Oogane (Tohoku University)

Epitaxial growth of (CoMn)2N thin films by molecular beam epitaxy
Y. Yasutomi, T. Sanai, K. Ito, K. Toko and T. Suemasu
University of Tsukuba
Session Th5: Solar Cells (15:18-15:42)
Chair: M. Sugiyama (The University of Tokyo)

Th5-1 15:18(3min+poster)  ...  199
Structural design of photonic crystals for enhancing optical absorption of solar cells
Y. Kawamoto, Y. Tanaka and S. Noda
Kyoto University

Th5-2 15:21(3min+poster)  ...  201
Investigation of mini-band formation in strain-balanced InGaAs/GaAsP superlattice solar cells by using a photoreflectance method
*University of Miyazaki; **The University of Tokyo
Th5-3  15:24(3min+poster)  …  203
Efficiency enhancement of GaAs solar cells with 100-period InGaAs / GaAsP quantum wells with a bandgap of 1.23 eV
H. Fuji, K. Topersenpong, K. Watanabe, M. Sugiyama and Y. Natano
The University of Tokyo

Th5-4  15:27(3min+poster)  …  205
Effects of built-in electric field on carrier escape from the intermediate band in InAs/GaAs quantum dot solar cell
T. Kada, A. Hasegawa and T. Kita
Kobe University

Th5-5  15:30(3min+poster)  …  207
Carrier dynamics in InAs/GaAs quantum dot superlattice solar cells
N. Kasaomatsu, A. Hasegawa and T. Kita
Kobe University

Th5-6  15:33(3min+poster)  …  209
Fabrication of ITO/p-InP hetero-junction nanowire-array solar cells
M. Yoshimura*, E. Naka*, K. Tomioka* and T. Fukui*
*Hokkaido University, **JST

Th5-7  15:36(3min+poster)  …  211
Optimization of the AlN thickness for the polarization engineered nitride photocathode for water splitting
A. Nakamura*, K. Fujii**, M. Sugiyama* and Y. Nakano*
*The University of Tokyo, **Global Solar+ Initiative

Th5-8  15:39(3min+poster)  …  213
Carrier transport in tunneling-enhanced multiple quantum well solar cells
K. Topersenpong, H. Fuji, Y. Wang, K. Watanabe, M. Sugiyama and Y. Nakan
The University of Tokyo

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Session Th6: Oxide-II (15:42-16:06)
Chair: T. Oshima (Tokyo Institute of Technology)

Th6-1  15:42(3min+poster)  …  217
Modification in crystal structures of alpha-Ga2O3 grown on sapphire substrates
Y. Ito, S. D. Lee and S. Fujita
Kyoto University

Th6-2  16:02(3min+poster)  …  217
Doping and alloying effects on electrical properties of alpha-Ga2O3 thin films on sapphire substrates
K. Akaiwa, N. Suzuki, K. Suzuki, K. Kaneko and S. Fujita
Kyoto University

Th6-3  15:48(3min+poster)  …  221
Evaluation of electrical conductivity and crystal structure of alpha-V2O5-Ga2O3 thin films
K. Kaneko, S. Komori, I. Kakeya, S. Fujita and K. Tanaka
Kyoto University

Th6-4  15:51(3min+poster)  …  223
Semi-insulation behavior in conducting beta-Ga2O3 single crystal surfaces by thermal oxidation
*Tokyo Institute of Technology, **Tamura Corp., ***KOHA Co., Ltd., ****Kyoto University, *****Materials Research Center for Element Strategy

Th6-5  15:54(3min+poster)  …  225
Characterization of Ga-In-O films fabricated by molecular precursor method
Kogakukin University
Characteristics of (In0.5Al0.5)2O3 films grown on yttria-stabilized zirconia
A. Kobayashi*, T. Itoh*, J. Ohta*, M. Oshima* and H. Fujikawa**
*The University of Tokyo, **Japan Science and Technology Agency

Paramagnetic defects in a variety of oxide-semiconductor induced by plasma
T. Matsuda, D. Nishimoto, K. Takakashi, T. Ueno and M. Kimura
Ryukoku University

TiO2 particle production with flame synthesis method for nanoparticles by using flashing spray - relationship between ambient pressure and particle characteristics -
M. Oshima*, A. Yonezawa**, M. Matsushita**, J. Senda** and K. Ishida***
*Fukui University of Technology, **Doshisha University, ***HORIBA, Ltd.

Poster Session III (Th3-Th6) (16:06-18:30)

Break (18:30-19:00)

Banquet (19:00-21:00)
Session Fr1: Low-dimentonal System (8:50-10:05)
Chair: H. Sekiguchi (Toyohashi University of Technology)

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Fr1-1 [Invited] 8:56 (30min)
*** Nanowire/Si Heterojunction Tunnel Field-Effect Transistors
K. Tomioka**, T. Fukui**
*Hokkaido University, **JST

Fr1-2 09:20 (3min+poster)
Manufacturability of quantum dot lasers by molecular beam epitaxy
*QD Laser, Inc., **Fujitsu Laboratories Ltd., ***The University of Tokyo

Fr1-3 09:25 (3min+poster)
Optical properties of InAs QDs embedded in strain-relaxed InGaAs barriers on (113)B GaAs substrate
S. Katoh, Y. Yasunaga, Y. Nakagawa, K. Morita, T. Kitada and T. Isu
The University of Tokushima

Fr1-4 09:30 (3min+poster)
Spectral gain feature of InAs/GaAs quantum dot semiconductor optical amplifier
T. Andachi, M. Suwa, T. Matsumura and T. Kita
Kobe University

Fr1-5 09:35 (3min+poster)
Scaling behavior of IrAlAs/AlGaAs quantum dots grown on GaAs by molecular beam epitaxy
X. M. Lu*, M. Koyama, Y. Izumi, S. Adachi and S. Muto
The University of Tokushima

Fr1-6 09:40 (3min+poster)
In-plane magnetic field effect on magnetic focusing in an InGaAs two-dimensional electron gas
T. Okayasu, M. Kohdi and J. Nitta
Tohoku University

Fr1-7 09:45 (3min+poster)
Stimulated emission by photo excitation in (1101) InGaN/GaN multiple quantum well with cavity structure on a patterned Si substrate
M. Kushimoto, T. Tanikawa, Y. Honda, M. Yamaguchi and H. Amino
Nagoya University

Fr1-8 09:50 (3min+poster)
Impact of recombination lifetimes on exciton hopping in semipolar (1122) InGaN quantum wells
T. Ozaki, J. Nishimura, M. Funato and Y. Kawakami
Kyoto University

Fr1-9 09:55 (3min+poster)
Structural and optical properties of ZnSe-based nanostructures grown by Selective MBE
A. Higuchi, H. Asano, S. Ueno, M. Nakamura, T. Muranaka, Y. Nabetani and T. Matsumoto
University of Yamashita

Fr1-10 10:00 (3min+poster)
Growth of Wurtzite InP/Gap Core-shell Nanowires by Selective-area Metal Organic Vapor Phase Epitaxy
F. Ishizuka, K. Ikemuku, K. Tomioka and T. Fukui
Hokkaido University
Fr1-11 09:47(3min+poster) 257
Effectiveness of alternating supply of Ga and As in self-catalyzed GaAs nanowires growth on Si substrate by MBE
R. Kizu, M. Yamaguchi and H. Amano
Nagoya University

Fr1-12 09:50(3min+poster) 259
Study on the lateral growth on GaAs Nanowires
T. Wada, Y. Kohashi, S. Hara and J. Motohisa
Hokkaido University

Fr1-13 09:55(3min+poster) 261
Effect of Be doping on electron-phonon interaction within self-catalyzed MBE-VLS grown GaAs nanowires on (111)Si substrate
A. Suzuki*, A. Fukuyma*, J. H. Park**, M. Yamaguchi** and T. Ikari*
*University of Miyazaki, **Nagoya University

Fr1-14 09:56(3min+poster) 263
Growth of GaN nanowires on a (111)Si substrate by RF-MBE under alternating supply
S. Mizutani, Y. Honda, M. Yamaguchi and H. Amano
Nagoya University

Fr1-15 09:59(3min+poster) 265
Atomic structures of InGaN nanowires investigated by STEM with Cs-corrected system
*NIMS, **RIKEN, ***Nagoya University

Fr1-16 10:02(3min+poster) 267
Room-temperature PL emissions from site-controlled single GaN/AlGaN nanowire quantum dots
K. Cho, M. Arita, S. Kako and Y. Arakawa
The University of Tokyo

Break (10:05-10:15)

Poster Session IV (Fr1) (10:15-11:45)

Lunch (11:45-13:00)
Special Session (13:00-15:50)

"Recent Progress of Power Devices -Approaching to Commercialize-"
Chair: A. Wakahara (Toyohashi University of Technology)

13:00 (5min)
Introduction
A. Wakahara
Toyohashi University of Technology

Tutorial 13:05 (45min)
Present status and future prospects of novel semiconductor power electronics
H. Okumura
National Institute of Advanced Industrial Science and Technology

SP-1 [Invited] 13:50 (30min)
Present and future of silicon crystal for power devices
H. Yamamoto
Chiba Institute of Technology

SP-2 [Invited] 14:20 (30min)
GaN based power devices - current status, challenges, and expectations -
T. Kachi
Toyota Central R&D Labs., Inc.

SP-3 [Invited] 14:50 (30min)
Development of gallium oxide power devices
*Tamura Corporation, **NICT, ***Koha Co., Ltd.

SP-4 [Invited] 15:20 (30min)
SiC power device and application to power conversion system
K. Ohitsuka
Mitsubishi Electric Corporation

Closing Session (15:50-16:00)