

ICOOPMA2012

Fifth International Conference on
Optical, Optoelectronic and Photonic
Materials and Applications

June 3-7, 2012

Nara Prefectural New Public Hall

Nara, Japan

Session Schedule

Monday, June 4, 2012

Room 1	Room 2	Room 3
Op Opening 9:00 - 9:15		
1PL1 Plenary I 9:15 - 10:15		
Break 10:15 - 10:30		
1A1 Scintillators I 10:30 - 12:15	1B1 Photovoltaic Materials and Devices I 10:30 - 12:15	1C1 Nano-optoelectronics and Photonics I 10:30 - 12:30
Lunch 12:30 - 13:30		
1PL2 Plenary II 13:30 - 14:30		
1A2 Luminescence I 14:30 - 15:30	1B2 Materials for Optoelectronics and Photonics I 14:30 - 15:30	1C2 Excitonic Processes 14:30 - 15:30
Break 15:30 - 15:45		
1A3 Luminescence II 15:45 - 17:00	1B3 Photovoltaic Materials and Devices II 15:45 - 17:00	1C3 Plasmons and Surface Plasmons 15:45 - 17:00
Gagaku Performance (Room 1) 17:00 - 17:30		
1P (Reception Hall) Poster I 17:30 - 19:30		

Tuesday, June 5, 2012

Room 1	Room 2	Room 3
2PL1 Plenary III 9:00 - 10:00		
Break 10:00 - 10:15		
2A1 Light Emitting Devices 10:15 - 12:15	2B1 Phosphors and Luminescence 10:15 - 12:15	2C1 Materials for Optoelectronics and Photonics II 10:15 - 12:15
Lunch 12:15 - 13:30		
Excursion (optional) 12:30 - 18:30		
Banquet 18:30 - 20:30		

Wednesday, June 6, 2012

Room 1	Room 2	Room 3
3PL1 Plenary IV 9:00 - 10:00		
Break 10:00 - 10:15		
3A1 Nano-optoelectronics and Photonics II 10:15 - 11:45	3B1 Luminescence III 10:15 - 12:00	3C1 Photoinduced Effects I 10:15 - 12:00
Lunch 12:00 - 13:30		
3A2 Scintillators II 13:30 - 14:30	3B2 Materials for Optoelectronics and Photonics III 13:30 - 14:30	3C2 Photoinduced Effects II 13:30 - 14:30
Break 14:30 - 14:45		
3A3 Scintillators III 14:45 - 16:45	3B3 Materials for Optoelectronics and Photonics IV 14:45 - 16:30	3C3 Photovoltaic Materials and Devices III 14:45 - 16:30
3P (Reception Hall) Poster II 16:45 - 19:00		

Thursday, June 7, 2012

Room 1	Room 2	Room 3
4A1 Luminescence IV 9:00 - 10:45	4B1 Optoelectronic and Photonic Devices 9:00 - 10:45	4C1 Terahertz Materials, Devices and Techniques I 9:00 - 10:45
Break 10:45 - 11:00		
4A2 Materials for Optoelectronics and Photonics V 11:00 - 12:00	4B2 Photovoltaic Materials and Devices IV 11:00 - 12:15	4C2 Terahertz Materials, Devices and Techniques II 11:00 - 12:15
Lunch 12:15 - 13:30		
4A3 Materials for Optoelectronics and Photonics VI 13:30 - 14:30	4B3 Photovoltaic Materials and Devices V 13:30 - 14:45	4C3 Nano-optoelectronics and Photonics III 13:30 - 14:30
Break 14:45 - 15:00		
4A4 Luminescence V 15:00 - 16:15	4B4 Materials for Optoelectronics and Photonics VII 15:00 - 16:00	4C4 Nano-optoelectronics and Photonics IV 15:00 - 15:45
C1 Closing 16:15 - 16:45		

Program

[Monday, June 4, 2012]

Session 1PL1 Plenary I (9:15 - 10:15)

Location: Room 1

Chair: Andrew Edgar (Victoria Univ., New Zealand)

1PL1-1 (Plenary 60 min.)

- Optically Stimulated Luminescence: Principles and Recent Developments for Use in Radiation Dosimetry 2
*Stephen W.S. McKeever (Oklahoma State Univ., U.S.A.)

Session 1A1 Scintillators I (10:30 - 12:15)

Location: Room 1

1A1-1 (Invited 30 min.)

- The Importance of Excitation Diffusion in Scintillators 3
*Richard T. Williams (Wake Forest Univ., U.S.A.)

1A1-2 (Invited 30 min.)

- Recent Progress in the Physical Understanding of the X-Ray Storage Phosphor CsBr:Eu²⁺ 4
Peter Agoston, Graham Appleby, Jörg Zimmermann, *Heinz von Seggern (Technical Univ. of Darmstadt, Germany)

1A1-3 (Invited 30 min.)

- Recipe for Attaining Optimal Energy Resolution in Inorganic Scintillators 5
*Jai Singh, Alexander Koblov (Charles Darwin Univ., Australia)

1A1-4 (15 min.)

- Optical Properties of High Light Output Halide Scintillators 6
*David J. Singh, Lynn A. Boatner, G.E. Jellison, Jr. (Oak Ridge National Laboratory, U.S.A.)

Session 1B1 Photovoltaic Materials and Devices I (10:30 - 12:15)

Location: Room 2

1B1-1 (Invited 30 min.)

- Near-IR Dye Sensitization of Polymer/Fullerene Solar Cells 7
*Hideo Ohkita, Satoshi Honda, Seiichirou Yokoya, Hiroaki Bente, Shinzaburo Ito (Kyoto Univ., Japan)

1B1-2 (Invited 30 min.)

- Nanomaterials for Polymer Photovoltaics 8
*Chun-Wei Chen (National Taiwan Univ., Taiwan)

1B1-3 (Invited 30 min.)

- Efficient Organic Solar Cells based on Push-pull Small Molecules 9
*Hao-Wu Lin, Yi-Hong Chen, Zheng-Yu Huang, Si-Wen Chiu, Chih-Wei Lu (National Tsing Hua Univ., Taiwan), Li-Yen Lin, Ken-Tsung Wong (National Taiwan Univ., Taiwan)

1B1-4 (15 min.)

- High-performance Organic Solar Cells with In-plane Oriented Molecules 10
*Toshinori Matsushima, Hitoshi Matsuo, Tetsuo Yamamoto, Akichika Nakao, Hideyuki Murata (JAIST, Japan)

Session 1C1 Nano-optoelectronics and Photonics I (10:30 - 12:30)

Location: Room 3

1C1-1 (Invited 30 min.)

- New Semiconductor Approaches to Energy Efficient Integrated Photonics 11
*Stephen John Sweeney (Univ. of Surrey, U.K.)

1C1-2 (Invited 30 min.)

- Extremely Uniform Excitonic States in Nitrogen δ -Doped GaAs 12
Yukihiro Harada, *Takashi Kita (Kobe Univ., Japan)

1C1-3 (Invited 30 min.)	
Nonlinear Spectroscopy of Single Quantum Dots	13
*Christian Wolpert, Christian Dicken (Max Planck Institute for Solid State Research, Germany), Lijuan Wang, Paola Atkinson, Armando Rastelli, Oliver G. Schmidt (Institute for Integrative Nanosciences, Germany), Harald Giessen (Univ. of Stuttgart, Germany), Markus Lippitz (Max Planck Institute for Solid State Research, Germany)	

1C1-4 (Invited 30 min.)	
The Black and Colored Metals and Applications	14
*Chunlei Guo (Univ. of Rochester, U.S.A.)	

Session 1PL2 Plenary II (13:30 - 14:30)

Location: Room 1

Chair: Safa Kasap (Univ. of Saskatchewan, Canada)

1PL2-1 (Plenary 60 min.)	
Nonlinear Photonic Circuits Transforming the New Information Age: Faster, Smaller and Smarter	15
*Benjamin J. Eggleton (Univ. of Sydney, Australia)	

Session 1A2 Luminescence I (14:30 - 15:30)

Location: Room 1

1A2-1 (Invited 30 min.)	
Fast Light-Emitting Silicon-Germanium Nanostructures	16
*David J. Lockwood, Xiaohua Wu, Jean-Marc Baribeau (National Research Council, Canada), Nikhil Modi, Leonid Tsybeskov (New Jersey Inst. of Tech., U.S.A.)	
1A2-2 (Invited 30 min.)	
Visible Light Emission from Rare-earth Doped Silicon-based Nanostructures	17
*Peter Mascher (McMaster Univ., Canada)	

Session 1B2 Materials for Optoelectronics and Photonics I (14:30 - 15:30)

Location: Room 2

1B2-1 (15 min.)	
Breakdown of the 8-N Rule in Glassy As ₂ Se ₃	18
*Shinya Hosokawa (Hiroshima Inst. of Tech., Japan), Jean-Francois Bézar (CNRS-Grenoble, France), Wolf-Christian Pilgrim (Philipps Univ. of Marburg, Germany), Shinji Kohara (JASRI/SPring-8, Japan)	
1B2-2 (15 min.)	
L-edge XANES Investigations of Zn Doped As ₂ Se ₃ glasses	19
Yun Mui Yiu (Univ. of Western Ontario, Canada), Qunfeng Xiao (Canadian Light Source Inc., Canada), Tsun Kong Sham (Univ. of Western Ontario, Canada), *Gurinder Kaur Ahluwalia (College of the North Atlantic, Canada)	
1B2-3 (15 min.)	
Simulation and Process Flow of Radiation Sensors based on Chalcogenide Glasses for in situ Measurement Capability	20
Mahesh Ailavajhala, Darryl P. Butt, *Maria Mitkova (Boise State Univ., U.S.A.)	
1B2-4 (15 min.)	
Structural Modification of Chalcogenide Glasses by Gamma-irradiation and Ion-implantation	21
*Taras Kavetsky, Volodymyr Tsmots (Drohobych Ivan Franko State Pedagogical Univ., Ukraine), Ondrej Šauša (Institute of Physics of Slovak Academy of Sciences, Slovakia), Andrey L. Stepanov (Russian Academy of Sciences, Russian Federation)	

Session 1C2 Excitonic Processes (14:30 - 15:30)

Location: Room 3

1C2-1 (15 min.)	
Wavelength Modulated Excitonic Spectra in Green Series of Cu ₂ O Thin Films Sandwiched by MgO Plates	22
*Kazunori Iwamitsu, Shingo Aihara, Tomoshige Shimamoto, Atsuhiko Fujii, Ichiro Akai (Kumamoto Univ., Japan)	

1C2-2 (15 min.)	
Exciton Recombination Dynamics in Hole-doped Single-walled Carbon Nanotubes	23
*Taishi Nishihara, Makoto Okano, Yasuhiro Yamada, Yoshihiko Kanemitsu (Kyoto Univ., Japan)	
1C2-3 (15 min.)	
Mechanism of Photoluminescence Enhancement of Single-walled Carbon Nanotubes by Chemical Doping	24
*Makoto Okano, Yoshihiko Kanemitsu (Kyoto Univ., Japan)	
1C2-4 (15 min.)	
Detection-Frequency Resolved Measurement of Coherent Phonons as a Probe of the Dielectric Functions in Semiconductors	25
*Yosuke Kayanuma, Yoshihiko Mizumoto, Kohji Mizoguchi (Osaka Prefecture Univ., Japan)	

Session 1A3 Luminescence II (15:45 - 17:00)

Location: Room 1

1A3-1 (Invited 30 min.)	
Using Si and Si Nanocrystals for the 1.5 μ m Emission from Er ³⁺ Ions	26
S. Saeed, N.N. Ha, D. Timmerman, *T. Gregorkiewicz (Univ. of Amsterdam, Netherlands)	
1A3-2 (Invited 30 min.)	
Nanocluster-sensitised Luminescence from Rare-earth Ions: Perspectives and Prospects	27
*Anthony J. Kenyon, Maciej Wojdak, Miraj Shah, Hasitha Jayatilleka, Arsam Nasrollahy-Shiraz (Univ. College London, U.K.)	
1A3-3 (15 min.)	
Optical Properties of Phosphorescent Nanosilicon Doped with Rare-Earths	28
*Bernard Gelloz (Nagoya Univ., Japan), Nobuyoshi Koshida (Tokyo Univ. of Agri. and Tech., Japan)	

Session 1B3 Photovoltaic Materials and Devices II (15:45 - 17:00)

Location: Room 2

1B3-1 (Invited 30 min.)	
Transparent and Conducting Graphene Thin Films and Nanocomposites for Optoelectronic and Solar Applications	29
*Giovanni Fanchini (Univ. of Western Ontario, Canada)	
1B3-2 (Invited 30 min.)	
Semitransparent Organic Solar Cells	30
*Furong Zhu (Hong Kong Baptist Univ., Hong Kong)	
1B3-3 (15 min.)	
Efficient Inverted Organic Solar Cell with Nanostructured Electron- and Hole-Collecting Electrodes	31
*Bobak Gholamkhash, Nima Mohseni Kiasari, Jun Shen, Peyman Servati (Univ. of British Columbia, Canada)	

Session 1C3 Plasmons and Surface Plasmons (15:45 - 17:00)

Location: Room 3

1C3-1 (Invited 30 min.)	
Novel Plasmonic Materials and Devices	32
Gui Xin Li, Shu Mei Chen, Suet Ying Ching, *Kok Wai Cheah (Hong Kong Baptist Univ., Hong Kong)	
1C3-2 (15 min.)	
Many-body Effects in Optically-trapped Metallic Nanoparticles under Thermal Fluctuations	33
*Takuya Iida (Osaka Prefecture Univ., Japan)	
1C3-3 (15 min.)	
Spatial and Spectral Control of the Emission from Thin Layers of Y ₃ Al ₅ O ₁₂ :Ce ³⁺ Coupled to Arrays of Plasmonic Particles	34
*Shunsuke Murai (Kyoto Univ., Japan), Marc A. Verschuuren (Philips Research Laboratories, Netherlands), Gabriel Lozano, Giuseppe Pirruccio, S. R. K. Rodriguez, Jaime Gómez Rivas (FOM Institute AMOLF, Netherlands)	

1C3-4 (15 min.)	
Theoretical Analysis of Wavelength Conversion Through an Antenna-enhanced Up-conversion Process	35
*Yoshiki Osaka, Nobuhiko Yokoshi, Masatoshi Nakatani, Hajime Ishihara (Osaka Prefecture Univ., Japan)	

Session 1P Poster I (17:30 - 19:30)

Location: Reception Hall

[Tuesday, June 5, 2012]

Session 2PL1 Plenary III (9:00 - 10:00)

Location: Room 1

Chair: Hiroyoshi Naito (Osaka Prefecture Univ., Japan)

2PL1-1 (Plenary 60 min.)	
Organic Light-emitting Diodes Employing Efficient Reverse Intersystem Crossing for Triplet to Singlet State Conversion	36
*Chihaya Adachi (Kyushu Univ., Japan)	

Session 2A1 Light Emitting Devices (10:15 - 12:15)

Location: Room 1

2A1-1 (Invited 30 min.)	
Interface Charges in Organic Light-Emitting Diodes: The Origin and Impacts on Device Properties	37
*Yutaka Noguchi, Yukimasa Miyazaki, Yuya Tanaka, Takamitsu Tamura, Hyung-Jun Kim, Yasuo Nakayama (Chiba Univ., Japan), Wolfgang Brütting (Univ. of Augsburg, Germany), Hisao Ishii (Chiba Univ., Japan)	
2A1-2 (Invited 30 min.)	
Investigation of the Diffusion Length of the Cathodes in OLEDs through the Impedance Characteristics	38
I-Wen Wu, *Chih-I Wu (National Taiwan Univ., Taiwan)	
2A1-3 (15 min.)	
Improving the Efficiency of Red PHOLEDs by Exciton Management	39
*Yi-Lu Chang, Danny P. Puzzo, Zhibin Wang, Michael G. Helander, Jacky Qiu, Zhenghong Lu (Univ. of Toronto, Canada)	
2A1-4 (15 min.)	
Preparation of Percolative Quantum-Dot Superlattice for Printed Light Emitting Device	40
*Toshihiko Toyama, Kazuki Itatani, Hiroaki Okamoto (Osaka Univ., Japan)	
2A1-5 (Invited 30 min.)	
Tunable Lasing from a Nano-sized Polymer-dispersed Cholesteric Liquid Crystal	41
*Hiroyuki Yoshida, Yo Inoue, Hitoshi Kubo, Akihiko Fujii, Masanori Ozaki (Osaka Univ., Japan)	

Session 2B1 Phosphors and Luminescence (10:15 - 12:15)

Location: Room 2

2B1-1 (Invited 30 min.)	
Nanophosphors for Displays and Lighting	42
*Robert Withnall, Jack Silver, George R. Fern, Terry Ireland, Colin Catherall, Paul J. Marsh (Brunel Univ., U.K.)	
2B1-2 (15 min.)	
Optical and Optoelectronic Properties of Ce ³⁺ Doped Mg ₃ Y ₂ (Ge,Si) ₃ O ₁₂ Inverse Garnets	43
*Takayuki Shimizu, Jumpei Ueda, Setsuhisa Tanabe (Kyoto Univ., Japan)	
2B1-3 (15 min.)	
Phosphor Nanoparticles as Wavelength Convertors for Applications in Solar Cells, Polymer Protection and as Potential Infra-red Emitters for Stimulating Plant Growth	44
*Jack Silver, Robert Withnall, George R. Fern, Rui Li, Anthony L. Lipman, Colin Catherall, Ali Salimian, Paul G. Harris, Karnik Tarverdi (Brunel Univ., U.K.), Peter Bishop, Benedicte Thiebaut (Johnson Matthey, U.K.), Paul W. Reip, Selvaraj Subbiah (Intrinsiq Materials Ltd, U.K.)	

2B1-4 (15 min.)	
Energy Transfer from Ce to Nd in YAG Ceramics	45
*Mitsuo Yamaga, Yohei Oda, Hideaki Uno (Gifu Univ., Japan), Kazuo Hasegawa, Hiroshi Ito, Sintaro Mizuno (Toyota Central R&D Laboratories, Japan)	
2B1-5 (15 min.)	
Interactive Energy Transfer Process Between Cu ²⁺ and Yb ³⁺ in Ca _{1-x} CuSi ₄ O ₁₀ : Yb _x	46
*Yixi Zhuang, Setsuhisa Tanabe (Kyoto Univ., Japan)	
2B1-6 (15 min.)	
Intrinsic Defect-related Ultraviolet and Visible Photoluminescence from Silica, Magnesia, and Alumina	47
*Takashi Uchino (Kobe Univ., Japan)	
2B1-7 (15 min.)	
Photoluminescence of Obsidian: Tokachi Stone	48
*Keiji Tanaka, Noriyuki Nemoto (Hokkaido Univ., Japan)	

Session 2C1 Materials for Optoelectronics and Photonics II (10:15 - 12:15)

Location: Room 3

2C1-1 (Invited 30 min.)	
Optimizing Chalcogenide Glasses for Nanophotonics	49
*Barry Luther-Davies, Rongping Wang, Ting Wang, Xin Gai, Zhiyong Yang, Xueqiong Su, Steve Madden, Duk-Yong Choi, Sukanta Debbarma (Australian National Univ., Australia)	
2C1-2 (Invited 30 min.)	
Building Quantum Dots inside Glasses	50
*Chao Liu (Wuhan Univ. of Tech., China), Jong Heo, Kai Xu, Yon Kon Kwon (POSTECH, Republic of Korea)	
2C1-3 (Invited 30 min.)	
Long-Wave Infrared-Transmitting Glasses: Optical and Electrical Properties for Sensing Applications	51
*Pierre Lucas, Zhiyong Yang (Univ. of Arizona, U.S.A.), Shibin Jiang (AdValue Photonics, U.S.A.)	
2C1-4 (Invited 30 min.)	
Photosensitivity and Index Changes in Silica Based Fibers	52
*Michael Fokine (Royal Inst. of Tech., Sweden)	

[Wednesday, June 6, 2012]

Session 3PL1 Plenary IV (9:00 - 10:00)

Location: Room 1

Chair: Setsuhisa Tanabe (Kyoto Univ., Japan)

3PL1-1 (Plenary 60 min.)	
Recent Progress and Future Prospects of Photonic Crystals	53
*Takashi Asano, Susumu Noda (Kyoto Univ., Japan)	

Session 3A1 Nano-optoelectronics and Photonics II (10:15 - 11:45)

Location: Room 1

3A1-1 (Invited 30 min.)	
Advances in Silicon Nanophotonics	54
*Jørn M. Hvam, Minhao Pu (Tech. Univ. of Denmark, Denmark)	
3A1-2 (Invited 30 min.)	
Photonic and Related Functional Applications of Quantum-sized Nanosilicon	55
*Nobuyoshi Koshida, Toshiyuki Ohta, Romain Mentek (Tokyo Univ. of Agri. and Tech., Japan), Bernard Gelloz (Nagoya Univ., Japan)	
3A1-3 (15 min.)	
All-inorganic Near Infrared Luminescent Colloidal Silicon Quantum Dot	56
*Minoru Fujii, Hiroshi Sugimoto, Kenji Imakita, Shinji Hayashi (Kobe Univ., Japan)	

- 3A1-4 (15 min.)
 Non-Resonant Third Order Nonlinear Optical Responses of Impurity-Doped Silicon Nanocrystals 57
 *Kenji Imakita, Masahiko Ito, Ryo Naruiwa, Minoru Fujii, Shinji Hayashi (Kobe Univ., Japan)

Session 3B1 Luminescence III (10:15 - 12:00)

Location: Room 2

- 3B1-1 (Invited 30 min.)
 White Light Emission of Rare Earth-Free Phosphate Glass 58
 *Hirokazu Masai (Kyoto Univ., Japan), Takumi Fujiwara (Tohoku Univ., Japan), Syuji Matsumoto (Asahi Glass Co. Ltd., Japan), Toshinobu Yoko (Kyoto Univ., Japan)
- 3B1-2 (Invited 30 min.)
 Current Status of Environment-friendly Red Light-emitting Diodes with Eu-doped GaN 59
 *Yasufumi Fujiwara (Osaka Univ., Japan)
- 3B1-3 (Invited 30 min.)
 Anion Ordering and Tunable Band Gap in Spinel Nitrides: α -, β -, and γ -phase of Si_3N_4 , $\gamma\text{-Ge}_3\text{N}_4$, $\gamma\text{-GeSi}_2\text{N}_4$, $\gamma\text{-Sn}_3\text{N}_4$ and $\text{Ga}_3\text{O}_3\text{N}$ 60
 *Alexander Moewes, Teak Boyko (Univ. of Saskatchewan, Canada)
- 3B1-4 (15 min.)
 Atomic Structure of InAs/GaAs Submonolayer Depositions for Vertical-cavity Surface-emitting Lasers 61
 *A. Lenz, H. Eisele, J. Becker, K. Zak, L. Ivanova, E. Lenz, J.-H. Schulze, T.D. Germann, A. Strittmatter, U.W. Pohl, D. Bimberg, M. Dähne (Technische Univ. Berlin, Germany)

Session 3C1 Photoinduced Effects I (10:15 - 12:00)

Location: Room 3

- 3C1-1 (Invited 30 min.)
 Progress on Photoinduced Effect on Chalcogenide Glasses 62
 Sandra Helena Messaddeq, Patrick Soucy, Jean-Philippe Bérubé, Martin Bernier, Réal Vallée, *Younès Messaddeq (Laval Univ., Canada)
- 3C1-2 (15 min.)
 Phase Competition and Photomagnetism in Supramolecular Assemblies based on Octacyanomolybdates of the Square Antiprism Configuration 63
 *Shoji Yamamoto, Jun Ohara (Hokkaido Univ., Japan)
- 3C1-3 (15 min.)
 Photo Induced Effects on the Optical Properties of $\text{Ge}_{12.5}\text{Sb}_{25}\text{Se}_{62.5}$ Thin Film 64
 *Ramakanta Naik, Sanjit Parida, C. Kumar, R. Ganesan, K.S. Sangunni (Indian Institute of Science, India)
- 3C1-4 (15 min.)
 Effect of Composition on Photodoping Phenomena in Bulk Ge-Sb-S Glasses 65
 *Kohei Kadono, Rikiya Fujiwara, Katsumi Takahiro, Takashi Wakasugi (Kyoto Inst. of Tech., Japan)
- 3C1-5 (15 min.)
 Temperature Variation of Non-radiative Recombination Rate in a-Si:H Films 66
 *Chisato Ogihara (Yamaguchi Univ., Japan), Kazuo Morigaki (Hiroshima Inst. of Tech., Japan)
- 3C1-6 (15 min.)
 Cooling of the SPM Cantilever by Nonlinear Mechanical Frequency Modulation with Cavity-induced Radiation Force 67
 *Nguyen Duy Vy, Takuya Iida (Osaka Prefecture Univ., Japan)

Session 3A2 Scintillators II (13:30 - 14:30)

Location: Room 1

- 3A2-1 (Invited 30 min.)
 Third Generation Cesium Bromide Storage-phosphors for Radiation Imaging 68
 *Andrew Edgar, Nicola Winch (Victoria Univ., New Zealand)

3A2-2 (15 min.)	
High-Resolution and Large-Dynamic Range Dosimetry Technique Based on Sm-Doped Glasses for Microbeam Radiation Therapy	69
*Go Okada (Univ. of Saskatchewan, Canada), George Belev (Canadian Light Source Inc., Canada), Shahrzad Vahedi, Brian Morrell, Cyril Koughia (Univ. of Saskatchewan, Canada), Tomasz Wysokinski (Canadian Light Source Inc., Canada), Dean Chapman (Univ. of Saskatchewan, Canada), Chris Varoy, Andy Edgar (Victoria Univ. of Wellington, New Zealand), Safa Kasap (Univ. of Saskatchewan, Canada)	

3A2-3 (15 min.)	
Lithium Fluoride Crystal as a Novel High Dynamic Neutron Imaging Detector for μ - World Capture	70
*Anatoly Faenov, Masahito Matsubayashi, Tatiana Pikuz, Yuji Fukuda, Masaki Kando, R. Yasuda, H. Iikura, T. Nojima, T. Sakai (Japan Atomic Energy Agency, Japan), M. Shiozawa (Nippon SOKEN, Inc., Japan), Yoshiaki Kato (The Graduate School for the Creation of New Photonics Industries, Japan)	

Session 3B2 Materials for Optoelectronics and Photonics III (13:30 - 14:30)

Location: Room 2

3B2-1 (Invited 30 min.)	
Optical Properties of Rare-Earth-Doped B ₂ O ₃ Glasses: Effect of High Pressure	71
*Fuji Funabiki, Satoru Matsuishi, Hideo Hosono (Tokyo Inst. of Tech., Japan)	
3B2-2 (15 min.)	
Optical Absorption in Sol-gel Derived Thin Films of Calcia-alumina Binary Compounds	72
*Elanz Feizi (Queen Mary, Univ. of London, U.K.), Asim K Ray (Brunel Univ., U.K.)	
3B2-3 (15 min.)	
Ultra-thin Reconfigurable Perfect Absorber Enabled by Phase Co-existence in a Correlated Oxide	73
*Mikhail A. Kats, Deepika Sharma, Jiao Lin, Patrice Genevet, Romain Blanchard, Zheng Yang (Harvard Univ., U.S.A.), M. Mumtaz Qazilbash, Dmitri Basov (Univ. of California, San Diego, U.S.A.), Shriram Ramanathan, Federico Capasso (Harvard Univ., U.S.A.)	

Session 3C2 Photoinduced Effects II (13:30 - 14:30)

Location: Room 3

3C2-1 (Invited 30 min.)	
Photoinduced Volume Changes in Obliquely and Flatly Deposited Amorphous Chalcogenide Glasses - Universal Description of the Kinetics-	74
*Sandor Kugler (Budapest Univ. of Tech. and Economics, Hungary)	
3C2-2 (Invited 30 min.)	
Arithmetic and Biologically-Inspired Computing Using Phase-Change Materials	75
CD Wright, Y Liu, A Shalini, *K Kohary, MM Aziz, RJ Hicken (Univ. of Exeter, U.K.)	

Session 3A3 Scintillators III (14:45 - 16:45)

Location: Room 1

3A3-1 (Invited 30 min.)	
New Material Concepts in Complex Oxide Phosphors and Scintillators	76
*Martin Nikl (Institute of Physics, ASCR, Czech Republic), Kei Kamada (Furukawa Co. Ltd., Japan), Akira Yoshikawa (Tohoku Univ., Japan), Pavel Bohacek (Institute of Physics, ASCR, Czech Republic)	
3A3-2 (Invited 30 min.)	
Crystal Growth and Scintillation Properties of Colquiriite (⁶ LiCaAlF ₆ , ⁶ LiSrAlF ₆) Single Crystal, as a Candidate for Neutron Scintillator Alternatives to ³ He	77
*Akira Yoshikawa (Tohoku Univ., Japan), N. Kawaguchi, K. Fukuda (Tokuyama Corp., Japan), Y. Yokota, S. Kurosawa, A. Yamaji, S. Wakahara, Y. Fujimoto (Tohoku Univ., Japan), K. Watanabe, A. Yamazaki, A. Uritani, T. Iguchi (Nagoya Univ., Japan), T. Yanagida (Tohoku Univ., Japan), M. Nikl (Institute of Physics AS CR, Czech Republic)	
3A3-3 (15 min.)	
Crystal Growth and Evaluation of Scintillation Properties of Eu-M (M=Na, K, Rb and Cs) Co-doped LiSrAlF ₆ Complex Fluoride Single Crystals for Thermal Neutron Detector	78
*Shingo Wakahara, Takayuki Yanagida, Yuui Yokota, Akihiro Yamaji, Jan Pejchal, Yutaka Fujimoto, Makoto Sugiyama (Tohoku Univ., Japan), Noriaki Kawaguchi (Tokuyama, Corp., Japan), Akira Yoshikawa (Tohoku Univ., Japan)	

3A3-4 (15 min.)	
Characterizing the Luminescence Properties of LiF Crystal Imaging Detectors Using Femtosecond Soft X-Ray Monochromatic Free Electron Laser Radiation	79
*Tatiana A. Pikuz, A. Ya. Faenov, Y. Fukuda, M. Kando, P. Bolton (Japan Atomic Energy Agency, Japan), A. Mitrofanov, A. Vinogradov (Russian Academy of Sciences, Russian Federation), M. Nagasono, H. Ohashi, M. Yabashi, K. Tono (XFEL RIKEN, Japan), Y. Senda, T. Togashi, T. Ishikawa (JASRI/SPring-8, Japan)	
3A3-5 (15 min.)	
Luminescence and Scintillation Properties of Rare-earth-doped BaLu ₂ F ₈ Single Crystals Grown by Micro-pulling-down Method	80
*Jan Pejchal (Tohoku Univ., Japan), Kentaro Fukuda (Tokuyama Corp., Japan), Martin Nikl (Institute of Physics AS CR, Czech Republic), Noriaki Kawaguchi (Tokuyama Corp., Japan), Takayuki Yanagida, Yuui Yokota, Akira Yoshikawa (Tohoku Univ., Japan)	
3A3-6 (15 min.)	
The Effect of Ionizing Radiation on the Luminescence Properties of Fluoride Nanoparticles	81
*Christin Gaedtke, Grant V. M. Williams (Victoria Univ., New Zealand), Sebastiampillai G. Raymond, Dave J. Clarke (Industrial Research Ltd., New Zealand), Stefaan Janssens (Victoria Univ., New Zealand)	

Session 3B3 Materials for Optoelectronics and Photonics IV (14:45 - 16:30)

Location: Room 2

3B3-1 (Invited 30 min.)	
Nanoscale Engineering of Dissimilar Materials using Pulsed Laser Deposition for Integrated Optics	82
*Animesh Jha, T Toney Fernandez, G Jose, P Steenson, Z Zhao, M Pasha, A Hassanpour (Univ. of Leeds, U.K.)	
3B3-2 (Invited 30 min.)	
Micro- and Nanoscale Patterning and Characterisation of Materials for Improved Materials and Device Characteristics	83
*Mogens Rysholt Poulsen (Tech. Univ. of Denmark, Denmark)	
3B3-3 (Invited 30 min.)	
Ultrafast Laser Inscription - Science Today Technology Tomorrow	84
*Ajoy Kumar Kar (Heriot Watt Univ., U.K.)	
3B3-4 (15 min.)	
Active Glass-Semiconductor Integrated Waveguide Amplifier by UV Pulsed Laser Deposition and Femtosecond Laser Micromachining	85
Mehrdad Irannejad, Mehrdad Pasha, Toney Teddy Fernandez, Gin Jose, Paul Steenson, *Animesh Jha (Univ. of Leeds, U.K.)	

Session 3C3 Photovoltaic Materials and Devices III (14:45 - 16:30)

Location: Room 3

3C3-1 (Invited 30 min.)	
Multicarrier Recombination Dynamics in Semiconductor Nanomaterials	86
*Yoshihiko Kanemitsu, Makoto Okano, Taishi Nishihara, Seiji Taguchi, Yasuhiro Yamada (Kyoto Univ., Japan)	
3C3-2 (Invited 30 min.)	
Photonic Crystals for Light Trapping in Solar Cells	87
Jo Gjessing, Erik Stensrud Marstein, Einar Haugan (Institute for Energy Technology, Norway), Håvard Granlund (Norwegian Univ. of Science and Tech., Norway), *Aasmund S. Sudbø (Univ. of Oslo, Norway)	
3C3-3 (Invited 30 min.)	
Theory to Charge Generation, Transport and Recombination in Organic Solar Cells	88
*Sergei Baranovskii (Philipps Univ. Marburg, Germany)	
3C3-4 (15 min.)	
The Role of Binding Energies and Exciton Diffusion Lengths in Singlet and Triplet States in Heterojunction Organic Solar Cells	89
*Monishka Rita Narayan, Jai Singh (Charles Darwin Univ., Australia)	

Session 3P Poster II (16:45 - 19:00)

Location: Reception Hall

[Thursday, June 7, 2012]

Session 4A1 Luminescence IV (9:00 - 10:45)

Location: Room 1

4A1-1 (Invited 30 min.)

Persistent Luminescence: Traps in Materials and in Research 90
*Dirk Poelman, Koen Van den Eeckhout, Katleen Korthout, Katrien W Meert, Jonas Botterman, Philippe F Smet (Ghent Univ., Belgium)

4A1-2 (15 min.)

Electronic processes in Eu^{2+} - Dy^{3+} Codoped SrAl_2O_4 Ceramic Phosphors Induced with Thermo- and Persistent-Luminescence Behaviors 91
*Jumpei Ueda (Kyoto Univ., Japan), Takayuki Nakanishi (Hokkaido Univ., Japan), Yumiko Katayama, Setsuhisa Tanabe (Kyoto Univ., Japan)

4A1-3 (Invited 30 min.)

Novel Glasses and Glass-ceramics for Broadband Optical Amplification 92
*Jianrong Qiu (South China Univ. of Tech., China), Shifeng Zhou (Zhejiang Univ., China)

4A1-4 (Invited 30 min.)

High Optical Gain in $\text{Er}_x\text{Y}_{2-x}\text{O}_5$ Slot Waveguides and Possibility for Compact Light Amplifiers and Optical Sources 93
*Tadamasa Kimura, Takayuki Nakajima, Takuya Sato, Hideo Isshiki (Univ. of Electro-Communications, Japan)

Session 4B1 Optoelectronic and Photonic Devices (9:00 - 10:45)

Location: Room 2

4B1-1 (Invited 30 min.)

Recent Advances in Avalanche Amorphous Selenium Technology and Its Applications in Optical, x-ray and gamma-ray Imaging 94
*Alla Reznik (Lakehead Univ., Canada), John A. Rowlands (Thunder Bay Regional Research Institute, Canada)

4B1-2 (15 min.)

HARP Photoconductive Film using CdSe Layer with High Quantum Efficiency 95
*Kazunori Miyakawa (NHK Science & Technology Research Laboratories, Japan), Yuji Ohkawa (NHK Broadcast Engineering Department, Japan), Tomoki Matsubara, Kenji Kikuchi, Misao Kubota, Norifumi Egami (NHK Science & Technology Research Laboratories, Japan), Hideyuki Suzuki, Akira Kobayashi (Hamamatsu Photonics K.K., Japan)

4B1-3 (15 min.)

Organic/inorganic Hybrid Optical Upconversion Devices for Near-infrared Imaging 96
*Dayan Ban, Jun Chen, Jianchen Tao (Univ. of Waterloo, Canada), Michael G. Helander, Zhibin Wang, Jacky Qiu, Zhenghong Lu (Univ. of Toronto, Canada)

4B1-4 (15 min.)

Thin-film Phototransistors with nc-Si:H/a-Si:H Bilayer Channel 97
*Andrei Sazonov (Univ. of Waterloo, Canada), Yuri Vygranenko, Miguel Fernandes, Manuela Vieira (ISEL, Portugal), Arokia Nathan (Univ. of Cambridge, U.K.)

4B1-5 (15 min.)

New Configurations and Novel Fabrication of Optical Microresonators 98
*Ganapathy Senthil Murugan, James S Wilkinson, Michalis N Zervas (Univ. of Southampton, U.K.)

4B1-6 (15 min.)

Novel Tellurite-phosphate Composite Microstructured Optical Fibers for Highly Nonlinear Applications 99
*Tong Hoang Tuan, Koji Asano, Zhongchao Duan, Meisong Liao, Takenobu Suzuki, Yasutake Ohishi (Toyota Technological Institute, Japan)

Session 4C1 Terahertz Materials, Devices and Techniques I (9:00 - 10:45)

Location: Room 3

4C1-1 (Invited 30 min.)

- THz Conductivities of Indium-tin-oxide Nanowhiskers as a Graded-refractive-index Structure 100
*Ci-Ling Pan, Chan-Shan Yang (National Tsing Hua Univ., Taiwan), Chia-Hua Chang (National Chiao Tung Univ., Taiwan), Mao-Hsiang Lin (National Tsing Hua Univ., Taiwan), Peichen Yu (National Chiao Tung Univ., Taiwan), Osamu Wada (Kobe Univ., Japan)

4C1-2 (Invited 30 min.)

- Correlation between THz AC Conductivity and DC Conductivity Mapping of Large-area Graphene 101
Jonas D. Buron, Dirch Hjorth Pedersen, Peter Bøggild (Tech. Univ. of Denmark, Denmark), David G. Cooke (McGill Univ., Canada), Jie Sun (Chalmers Univ. of Tech., Sweden), Michael Hilke, Eric Whiteway (McGill Univ., Canada), Peter Folmer Nielsen (Capres A/S, Denmark), Avgust Yurgens (Chalmers Univ. of Tech., Sweden), *Peter Uhd Jepsen (Tech. Univ. of Denmark, Denmark)

4C1-3 (Invited 30 min.)

- Ultra-broadband THz Spectroscopy Revealing Sub-picosecond Mobile Charge Dynamics in Conjugated Polymers 102
*David G. Cooke (McGill Univ., Canada), Frederik C. Krebs, Peter Uhd Jepsen (Tech. Univ. of Denmark, Denmark)

4C1-4 (15 min.)

- Nonlinear Transport Phenomena Induced by Intense Terahertz Pulses 103
*Hideki Hirori, Keisuke Shinokita, Masanobu Shirai, Shutaro Tani (Kyoto Univ., Japan), Yutaka Kadoya (Hiroshima Univ., Japan), Koichiro Tanaka (Kyoto Univ., Japan)

Session 4A2 Materials for Optoelectronics and Photonics V (11:00 - 12:00)

Location: Room 1

4A2-1 (Invited 30 min.)

- Pulsed Laser Deposition of High-k Dielectric Y_2CuTiO_6 Thin Films 104
*Maurizio Martino, Anna Paola Caricato, Maura Cesaria, Anna Grazia Monteduro, Ameer Zoobia, Giuseppe Maruccio (Univ. of Salento, Italy), DD Sarma (Indian Institute of Science, India)

4A2-2 (Invited 30 min.)

- High Refractive Index Glasses Prepared by Containerless Processing 105
*Atsunobu Masuno, Hiroyuki Inoue (Univ. of Tokyo, Japan)

Session 4B2 Photovoltaic Materials and Devices IV (11:00 - 12:15)

Location: Room 2

4B2-1 (Invited 30 min.)

- Highly Efficient Dye-Sensitized Solar Cells 106
*Liyuan Han (NIMS, Japan)

4B2-2 (Invited 30 min.)

- Mechanism of Surface Pretreatments and Modification for Dye-Sensitized Solar Cells 107
*Linhua Hu, Songyuan Dai (Chinese Academy of Sciences, China)

4B2-3 (15 min.)

- Photocarrier Recombination Dynamics in Rutile and Anatase TiO_2 108
*Yasuhiro Yamada, Yoshihiko Kanemitsu (Kyoto Univ., Japan)

Session 4C2 Terahertz Materials, Devices and Techniques II (11:00 - 12:15)

Location: Room 3

4C2-1 (Invited 30 min.)

- Monte Carlo Simulations of the Emission of Terahertz-frequency Electromagnetic Radiation from Semiconductors 109
D. L. Cortie, *R. A. Lewis (Univ. of Wollongong, Australia)

4C2-2 (15 min.)

- Non-Drude Terahertz Conductivity in Nanomaterials 110
*Koichi Shimakawa, Takasi Itoh (Gifu Univ., Japan), Hiroyoshi Naito (Osaka Prefecture Univ., Japan), Safa O. Kasap (Univ. of Saskatchewan, Canada)

- 4C2-3 (15 min.)
Toward the Creation of Terahertz Graphene Injection Lasers 111
*Taiichi Otsuji, Stephane Albon Boubanga Tombet, Akira Satou (Tohoku Univ., Japan), Maxim Ryzhii, Victor Ryzhii (Univ. of Aizu, Japan)
- 4C2-4 (15 min.)
Proposal of Composite Photonic Structure Element for Efficient Terahertz Generation 112
*Atsuyuki Oyamada, Hisanobu Kitaguchi (Osaka Prefecture Univ., Japan), Keiji Ebata (Sumitomo Electric Industries, Japan), Hajime Ishihara (Osaka Prefecture Univ., Japan)

Session 4A3 Materials for Optoelectronics and Photonics VI (13:30 - 14:30)

Location: Room 1

- 4A3-1 (15 min.)
Photo-functionality of Azochromophores: Impact of Light, Temperature and Substrate 113
*Roland Tomašiūnas, Gediminas Seniutinas (Vilnius Univ., Lithuania), Raimondas Petruškevičius (Center for Physical Sciences and Technology, Lithuania), Vytautas Getautis (Kaunas Univ. of Tech., Lithuania), Valdis Kampars (Riga Technical Univ., Latvia)
- 4A3-2 (15 min.)
Microlens Array based on Azo-dye Doped Liquid Crystals 114
*Andy Y.-G. Fuh, San-Yi Huang (National Cheng Kung Univ., Taiwan)
- 4A3-3 (15 min.)
Electro-Optic Devices based on Organic Nonlinear Optical Chromophores for Applications in Communications and Sensing 115
*James W. Quilty, Sebastiampillai G. Raymond, Yasar Kutuvantavida (Industrial Research Ltd., New Zealand), Grant V.M. Williams (MacDiarmid Institute for Advanced Materials and Nanotechnology, New Zealand), Andrew J. Kay (Industrial Research Ltd., New Zealand)
- 4A3-4 (15 min.)
Selective Formation of Novel Fluorescent Aggregates of Rhodamine Dyes: Contribution of Surface SiO₂ Layer and Underlying Si Layer 116
*Akihiro Tomioka, Kouhei Takada (Osaka Electro-Communication Univ., Japan)

Session 4B3 Photovoltaic Materials and Devices V (13:30 - 14:45)

Location: Room 2

- 4B3-1 (Invited 30 min.)
Cu-chalcogenide Photovoltaic Materials from CuInSe₂ to Cu₂ZnSnS₄ and Other Ternary and Multinary Compounds 117
*Takahiro Wada, Satoshi Nakamura, Tsuyoshi Maeda (Ryukoku Univ., Japan)
- 4B3-2 (Invited 30 min.)
CIGSe Thin Film Solar Cells on Polyimide Substrates 118
*Christian A. Kaufmann (Helmholtz-Zentrum Berlin für Materialien und Energie, Germany), Raquel Caballero (Univ. Autonoma de Madrid, Spain), Thorsten Rissom, Dieter Greiner, Marc Daniel Heinemann, Thomas Unold, Hans-Werner Schock (Helmholtz-Zentrum Berlin für Materialien und Energie, Germany)
- 4B3-3 (15 min.)
Low-temperature Electrophoretic Deposition of Cu_{2-x}Se Nanoparticles 119
*Chu-Chi Ting, Wen-Yuan Lee (National Chung Cheng Univ., Taiwan)

Session 4C3 Nano-optoelectronics and Photonics III (13:30 - 14:30)

Location: Room 3

- 4C3-1 (Invited 30 min.)
Influence of Defects on Optoelectronic Response of Nanowires 120
*Harry E. Ruda (Univ. of Toronto, Canada)
- 4C3-2 (15 min.)
Photonic Properties and Applications of Nanoporous Anodic Alumina 121
*Josep Ferré-Borrull, Mohammad Mahbubur Rahman, Pedro Granero, Pilar Formentin, Josep Pallarès, Lluís F. Marsal (Univ. Rovira i Virgili, Spain)

- 4C3-3 (15 min.)
 Architectural Design of Nanoporous Anodic Materials for Biotechnological Applications 122
 *Lluis F. Marsal, Abel Santos, Pilar Formentin, Pedro Granero, Gerard Macias, Maria Alba, Josep Pallares, Josep Ferre-Borrull (Univ. Rovira i Virgili, Spain)

Session 4A4 Luminescence V (15:00 - 16:15)

Location: Room 1

- 4A4-1 (Invited 30 min.)
 Ultra-violet Light Emitting Nanoparticles for Clean Water Technology 123
 *Ramaswami Sammynaiken (Univ. of Saskatchewan, Canada)
- 4A4-2 (15 min.)
 Quantum Dots Doped in Glass as a New Tool for Laser Cooling of Solids 124
 Galina Nemova, Sebastien Loranger, Elton Soares, *Raman Kashyap (École Polytechnique de Montréal, Canada)
- 4A4-3 (15 min.)
 Approximate Relaxation Time Distribution of Distant-Pair Recombination (Application to QFRS of PL in a-Si:H) 125
 *Takeshi Aoki (Tokyo Polytechnic Univ., Japan)
- 4A4-4 (15 min.)
 Infrared to Visible Up-conversion Emission in Er³⁺/Yb³⁺ Co-doped Fluoro-phosphate Glass-ceramics 126
 Yannick Ledemi, Mohammed El Amraoui, *Younès Messaddeq (Univ. Laval, Canada)

Session 4B4 Materials for Optoelectronics and Photonics VII (15:00 - 16:00)

Location: Room 2

- 4B4-1 (Invited 30 min.)
 Photoluminescence Study of Oxygen Exchange at the Internal Surface of Amorphous SiO₂ 127
 *Koichi Kajihara (Tokyo Metropolitan Univ., Japan), Linards Skuja (Univ. of Latvia, Latvia), Hideo Hosono (Tokyo Inst. of Tech., Japan)
- 4B4-2 (15 min.)
 Luminescence from Cerium and Terbium Co-Doped Silicon Oxide Films Studied Using Synchrotron-Based Spectroscopies 128
 *Patrick R. J. Wilson, Zahra Khatami, Ryszard Dabkowski, Kayne Dunn, Evgueni Chelomentsev, Jacek Wojcik, Peter Mascher (McMaster Univ., Canada)
- 4B4-3 (15 min.)
 Intrinsic bonding Defects in Non-crystalline (nc-) SiO₂ and GeO₂: Spectroscopic Detection of Differences between Vacancy Sites with and without O-atom Occupancy 129
 *Gerald Lucovsky, Kun Wu, Brian Pappas, Jerry Whitten (NC State Univ., U.S.A.)

Session 4C4 Nano-optoelectronics and Photonics IV (15:00 - 15:45)

Location: Room 3

- 4C4-1 (15 min.)
 Towards CuBr based Blue/UV Nanowires Grown using the Vapor-Liquid-Solid (VLS) Method 130
 *Aidan Cowley, KV Rajani, Patrick McNally (Dublin City Univ., Ireland)
- 4C4-2 (15 min.)
 Photoinduced Current in Molecular Conduction Junctions with Semiconductor Contacts 131
 *Boris Fainberg (Holon Inst. of Tech., Israel), Tamar Seideman (Northwestern Univ., U.S.A.)
- 4C4-3 (15 min.)
 Full-quantum Analysis of Energy Transparency on an Antenna-molecule Coupled System 132
 *Takanori Yano, Masatoshi Nakatani, Hajime Ishihara (Osaka Prefecture Univ., Japan)

Poster Session

[Monday, June 4, 2012]

Session 1P Poster I (17:30 - 19:30)

Location: Reception Hall

Scintillators I

- 1P-1 Scintillation Properties of Ce-doped $Gd_3Al_2Ga_3O_{12}$ Crystal Grown by Floating Zone Method 133
*Akira Suzuki, Akihiro Yamaji, Shunsuke Kurosawa, Mafuyu Seki, Jan Pejchal, Yoshisuke Futami, Yuui Yokota, Kunio Yubuta, Toetsu Shishido, Masae Kikuchi (Tohoku Univ., Japan), Martin Nikl (Institute of Physics AS CR, Czech Republic), Akira Yoshikawa (Tohoku Univ., Japan)
- 1P-2 Optical and Scintillation Properties of $Y_3Al_5O_{12}$ Crystals Doped with Rare Earth 134
*Mafuyu Seki (Tohoku Univ., Japan), Vladimir V. Kochurikhin (General Physics Institute, Russian Federation), Shunsuke Kurosawa, Akira Suzuki, Akihiro Yamaji, Yutaka Fujimoto, Shingo Wakahara, Yuui Yokota, Akira Yoshikawa (Tohoku Univ., Japan)
- 1P-3 Growth and Scintillation Properties of Ce^{3+} -doped $(Y_{x-1}Gd_x)AlO_3$ Crystals 135
*Yutaka Fujimoto, Takayuki Yanagida, Shunsuke Kurosawa, Akira Yoshikawa (Tohoku Univ., Japan)
- 1P-4 Crystal Growth and Scintillation Properties of Ce doped $(Gd,Y)_3Al_5O_{12}$ Single Crystal 136
*Kei Kamada (Furukawa Co. Ltd., Japan), Takayuki Yanagida (Tohoku Univ., Japan), Jan Pejchal, Martin Nikl (Institute of Physics, ASCR, Czech Republic), Takanori Endo, Kousuke Tsutumi, Yoshiyuki Usuki (Furukawa Co. Ltd., Japan), Akira Yoshikawa (Tohoku Univ., Japan)
- 1P-5 Optical Properties and Radiation Response of Ce^{3+} -doped $GdScO_3$ Crystals 137
*Akihiro Yamaji (Tohoku Univ., Japan), Vladimir V Kochurikhin (General Physics Institute, Russian Federation), Yutaka Fujimoto, Takayuki Yanagida, Shunsuke Kurosawa, Yuui Yokota, Akira Yoshikawa (Tohoku Univ., Japan)
- 1P-6 The Effect of x-ray Exposure on Dark Current Levels Produced by Stabilized Amorphous Selenium x-ray Photoconductors 138
Kalaivani Karthikeyan, Joel Brandon Frey, George Belev, *Safa O. Kasap (Univ. of Saskatchewan, Canada)
- 1P-7 Excess Noise in Multi-Layer Layer Amorphous Selenium X-Ray Photoconductor Type Devices 139
Thomas J Meyer, *Robert E Johanson, Safa O Kasap (Univ. of Saskatchewan, Canada)

Luminescence I

- 1P-8 High Performance Far-field Imaging of Relativistic Soft-X-Ray Harmonics by Sub-micron Resolution LiF Film Detector 140
*Tatiana A. Pikuz (Japan Atomic Energy Agency, Japan), Anatoly Ya. Faenov (Russian Academy of Sciences, Russian Federation), Alexander S. Pirozhkov (Japan Atomic Energy Agency, Japan), Artem S. Astapov, Georgij D. Klushin, S.A. Pikuz Jr (Russian Academy of Sciences, Russian Federation), N.M. Nagorskiy, S.A. Magnitskii (M.V. Lomonosov Moscow State Univ., Russian Federation), T.Zh. Esirkepov, J.K. Koga, T. Nakamura, S.V. Bulanov, Y. Fukuda, Y. Hayashi, H. Kotaki (Japan Atomic Energy Agency, Japan), Y. Kato (The Graduate School for the Creation of New Photonics Industries, Japan), M. Kando (Japan Atomic Energy Agency, Japan)
- 1P-9 Nonlinear Optical Properties of Binary White and Green LEDs with Multiligand Phosphors 141
*Naum Soschin (Scientific Research Institute PLATAN, Russian Federation), Vladimir Ulasyuk (Corp. ELTAN Ltd., Russian Federation)
- 1P-10 Photoluminescence in Mineral-Derived Titanosilicates with Various Ti-Polyhedral Types for Rare-Earth Free Phosphor 142
*Yoshihiro Takahashi, Kenichiro Iwasaki, Takumi Fujiwara (Tohoku Univ., Japan)
- 1P-11 Wideband Near-Infrared Phosphor Made by Stacking Sm^{3+} -doped and Pr^{3+} -doped Glass Phosphors 143
*Koji Oshima, Kengo Terasawa, Shingo Fuchi, Yoshikazu Takeda (Nagoya Univ., Japan)
- 1P-12 The Photoluminescence Properties of $Ba_3Si_6O_{12}N_2:Eu^{2+}$ nano Oxynitride Phosphor for White Light Emitting Diodes 144
*Seong-Gwan Shin, Chung-Wung Bark, Hyung-Wook Choi (Gachon Univ., Republic of Korea)

1P-13	Photoluminescence Properties of the Nano Zn ₂ SiO ₄ :La Phosphor Powder Under Different Atmosphere Treatment using Solid-State Reaction Method	145
	*Kai-Huang Chen (Tung Fang Design Univ., Taiwan), Chien-Min Cheng (Southern Taiwan Univ., Taiwan), Jen-Hwan Tsai (Chinese Air Force Academy, Taiwan), Ying-Shang Huang (Southern Taiwan Univ., Taiwan)	
1P-14	Optical Properties of Nd ³⁺ -doped Phosphate Glass for Solar-pumped Lasers	146
	*Kohei Nogata, Takenobu Suzuki, Yasutake Ohishi (Toyota Technological Institute, Japan)	
1P-15	Optical Properties of Er ³⁺ -doped Glasses for Solar-pumped Lasers	147
	*Yasuyuki Iwata, Takenobu Suzuki, Yasutake Ohishi (Toyota Technological Institute, Japan)	
1P-16	Photoluminescence Properties of Phosphorus and Boron Co-doped Silicon Quantum Dots Dispersed in Solution	148
	*Hiroshi Sugimoto, Minoru Fujii, Kenji Imakita, Shinji Hayashi (Kobe Univ., Japan)	
1P-17	All-laser Fabricated Tm ³⁺ Doped Silicon Thin Film and Waveguides for Mid-IR Sources	149
	*Matthew Murray, Toney Fernandez, Billy Richards, Gin Jose, Animesh Jha (Univ. of Leeds, U.K.)	
1P-18	Luminescence Properties of Bismuth-doped Oxidized Nanoporous Silicon Thin Films	150
	*Sachuronggui Bai, Kenji Imakita, Zhenhua Bai, Minoru Fujii, Shinji Hayashi (Kobe Univ., Japan)	

Excitonic Processes

1P-19	Photoluminescence Dynamics in CuCl Thin Films under High-Dense One- and Two-Photon Excitations ..	151
	Mitsutake Ando, Shinichi Uozumi, Ikufumi Katayama (Yokohama National Univ., Japan), Masayoshi Ichimiya (Osaka Dental Univ., Japan), Masaaki Ashida (Osaka Univ., Japan), *Jun Takeda (Yokohama National Univ., Japan)	
1P-20	Photoluminescence Dynamics from Exciton-exciton Scattering and Exciton-electron Scattering in GaN Thin Film	152
	*Shuji Wakaiki (Osaka Univ., Japan), Hitoshi Tokumaru (Osaka City Univ., Japan), Hideki Ichida (Osaka Univ., Japan), Kohji Mizoguchi (Osaka Prefecture Univ., Japan), DaeGwi Kim (Osaka City Univ., Japan), Yasuo Kanematsu (Osaka Univ., Japan), Masaaki Nakayama (Osaka City Univ., Japan)	
1P-21	Photoluminescence of Excitons and Biexcitons in (C ₄ H ₉ NH ₃) ₂ PbBr ₄ Crystals under High Excitation Density	153
	*Yasuo Yamamoto, Goro Oohata (Osaka Prefecture Univ., Japan), Hideki Ichida, Yasuo Kanematsu (Osaka Univ., Japan), Kohji Mizoguchi (Osaka Prefecture Univ., Japan)	
1P-22	Polarization Dependence of Four Wave Mixing via Biexcitons in CuCl Microcavities	154
	*Shimpei Matsuura, Yasuyoshi Mitsumori, Hideo Kosaka, Keiichi Edamatsu (Tohoku Univ., Japan), Ken-ichi Miyazaki, Yuka Kanatani, DaeGwi Kim, Masaaki Nakayama (Osaka City Univ., Japan), Goro Ohata (Osaka Prefecture Univ., Japan), Hisaki Oka, Hiroshi Ajiki (Osaka Univ., Japan), Hajime Ishihara (Osaka Prefecture Univ., Japan)	
1P-23	High Density Excitation Effects in Excitonic Diffusion Processes in L _z -Gradient Quantum Well	155
	*Syunya Konishi, Yusuke Nagatomo, Kazunori Iwamitsu, Tomoshige Shimamoto, Atsuhiko Fujii, Ichiro Akai (Kumamoto Univ., Japan)	
1P-24	Carrier Dynamics in Multiple Stacked Quantum Dots under Spacer Layer Excitation Conditions	156
	*Junya Tasaki, Osamu Kojima, Takashi Kita (Kobe Univ., Japan), Kouichi Akahane (NICT, Japan)	
1P-25	Excitonic Rabi Oscillations in Self-assembled Quantum Dots Studied by Photon Echoes	157
	*Kenta Asakura, Yasuyoshi Mitsumori, Hideo Kosaka, Keiichi Edamatsu (Tohoku Univ., Japan), Kouichi Akahane, Naokatsu Yamamoto, Masahide Sasaki (NICT, Japan), Naoki Ohtani (Doshisha Univ., Japan)	
1P-26	The Role of Exciton-photon Coupling in the Temporal Behaviour of a Quantum Dot-photonic Crystal Microcavity System	158
	Akram Mehdizadeh, Saeid Shojaei, *Ali Soltani Vala, Manouchehr Kalafi (Univ. of Tabriz, Iran)	
1P-27	Coherent Phonon Dynamics in Graphene on Silicon	159
	*Ikufumi Katayama, Sho Koga, Jun Takeda (Yokohama National Univ., Japan), Shunsuke Abe, Hirokazu Fukidome, Maki Suemitsu (Tohoku Univ., Japan), Masahiro Kitajima (National Defense Academy, Japan)	

Photoinduced Effects I

- 1P-28 Diffusion Dynamics of the Relaxed Excited State in SrTiO₃ 160
*Daiki Ikeda, Xiaobing Liang, Takeshi Moriyasu, Toshiro Kohmoto (Kobe Univ., Japan)
- 1P-29 Photo-induced Insulator-ferromagnetic Metal Transition and Magnetic Solitons in the Perovskite GdSrMnO 161
*Ikuzo Kanazawa (Tokyo Gakugei Univ., Japan)
- 1P-30 Photon-Induced Molecular-Nuclear Quantum Transitions 162
Vladimir B. Belyaev (Joint Institute for Nuclear Research, Dubna, Russian Federation), *Michael B. Miller (Institute in Physical-Technical Problems, Dubna, Russian Federation), Alexandr Yu. Didyk (Joint Institute for Nuclear Research, Dubna, Russian Federation)
- 1P-31 Photoelectrocatalytic Activity of BiFeO₃ Thin Film 163
Baojie Zhao, *Shengwen Yu, Chen Xi, Dengyu Pan (Shanghai Univ., China)
- 1P-32 Photocatalytic Activity and Glass Structure of Sr_{0.5}Ba_{0.5}Nb₂O₆-precipitated Glass 164
*Kazuki Yoshida (Tohoku Univ., Japan), Hirokazu Masai (Kyoto Univ., Japan), Yoshihiro Takahashi, Rie Ihara, Takumi Fujiwara (Tohoku Univ., Japan)

Optical Fibers

- 1P-33 Chalcogenide/Tellurite Hybrid Microstructured Optical Fiber with High Nonlinearity and Flattened Dispersion 165
*Hiroyasu Kawashima, Tomas Kohoutek, Xin Yan, Takenobu Suzuki, Yasutake Ohishi (Toyota Technological Institute, Japan)
- 1P-34 Tellurite Hybrid Microstructured Optical Fibers with Flattened Dispersion at the Telecom Window 166
*Koji Asano, Zhongchao Duan, Tong Hoang Tuan, Takenobu Suzuki, Yasutake Ohishi (Toyota Technological Institute, Japan)

Nonlinear Optical Properties and Applications I

- 1P-35 Optically Induced Spin Echoes in a Tm²⁺ Doped Crystal 167
*Takeshi Moriyasu, Takahiro Yamauchi, Toshiro Kohmoto (Kobe Univ., Japan)
- 1P-36 A Nonlinear Photoexcitation Process for Wavelength Conversion in Antenna-molecule Coupled Systems . 168
*Nobuhiko Yokoshi, Hajime Ishihara (Osaka Prefecture Univ., Japan)
- 1P-37 Nonlinear Optical Constants of Ionic Conductors: Study based on the Sheik-Bahae Equation 169
Shosuke Ikeda, *Masaru Aniya (Kumamoto Univ., Japan)
- 1P-38 Photoinduced Transmittance of Near-IR Chirped InGaAs Quantum Dot based Semiconductor Optical Amplifier 170
Edgaras Jelmakas, *Roland Tomašiūnas, Mikas Vengris (Vilnius Univ., Lithuania), Edik Rafailov (Univ. of Dundee, U.K.), Igor Krestnikov (Innolume GmbH, Germany)
- 1P-39 Fabrication of Highly-oriented Optical Thin Films by Sol-gel Method 171
*Rie Ihara, Keito Sato, Yoshihiro Takahashi (Tohoku Univ., Japan), Hirokazu Masai (Kyoto Univ., Japan), Takumi Fujiwara (Tohoku Univ., Japan)
- 1P-40 Femtosecond Laser Induced Waveguide inside Lithium Tantalate Single Crystal 172
*Miki Nakabayashi (Kyoto Univ., Japan), Makoto Kumatoriya (Murata Manufacturing Co., Ltd., Japan), Yasuhiko Shimotsuma, Kiyotaka Miura, Kazuyuki Hirao (Kyoto Univ., Japan)

Plasmons and Surface Plasmons

- 1P-41 Plasmonic Circular Dichroism using Au Fine Particles and Riboflavin 173
*Yuuka Kosaka, Kazutaka Egami, Satoshi Tomita, Hisao Yanagi (NAIST, Japan)
- 1P-42 Localized Surface Plasmon Substrate for Photocurrent Enhancement in Si-based Thin Film Solar Cells ... 174
*Yasushi Sobajima, Kazuki Itatani, Chitose Sada, Akihisa Matsuda, Hiroaki Okamoto (Osaka Univ., Japan)
- 1P-43 Surface Plasmon Resonance Enhanced Quantum Transport in a Closely Spaced Nanoparticle Array 175
Sishi Zhang, Bo Xie, Xi Chen, Hanchao Yao, Fengqi Song, *Min Han (Nanjing Univ., China)
- 1P-44 Design of Plasmonic Waveguides with Conductive Metal Oxide Thin Films 176
*Ryuichiro Yasuhara, Koji Fujita, Shunsuke Murai, Katsuhisa Tanaka (Kyoto Univ., Japan)

- 1P-45 Synthesis of Au@SiO₂ Core-shell Nanoparticles and Their Application to Random Lasers 177
 *Yusuke Moriguchi, Xiangeng Meng, Koji Fujita, Shunsuke Murai, Katsuhisa Tanaka (Kyoto Univ., Japan)

Photovoltaic Materials and Devices I

- 1P-46 The Effect of Different Concentration and Dipping Time in TiCl₄ Treatment on the Performance of Dye-sensitized Solar Cells 178
 *Tae-Sung Eom, Kyung-Hwan Kim, Hyung-Wook Choi (Gachon Univ., Republic of Korea)
- 1P-47 Theoretical Modelling of Back Contact Dye-sensitized Solar Cells 179
 *Shoichi Tajima, Takashi Nagase, Takashi Kobayashi (Osaka Prefecture Univ., Japan), Masatoshi Yanagida, Liyuan Han (NIMS, Japan), Hiroyoshi Naito (Osaka Prefecture Univ., Japan)
- 1P-48 Bulk-Heterojunction Solar Cells with Indenoindene-Based Low Band Gap Polymers as Electron Donors . 180
 *Joo Young Shim (Pusan National Univ., Republic of Korea), Byoung Hoon Lee (Gwangju Inst. of Science and Tech., Republic of Korea), Suhee Song, Minjung Kim, Jiyeon Baek (Pusan National Univ., Republic of Korea), Youngeup Jin (Pukyong National Univ., Republic of Korea), Kwanghee Lee (Gwangju Inst. of Science and Tech., Republic of Korea), Hongsuk Suh (Pusan National Univ., Republic of Korea)
- 1P-49 Spectroscopic Investigation of Charge Injection Process in the Bulk-Heterojunction P3HT:PCBM Solar Cell 181
 *Katsuichi Kanemoto, Shinya Domoto, Yukihiro Ohta, Akihiko Ogata, Hideki Hashimoto (Osaka City Univ., Japan)
- 1P-50 Carrier Transport and Charge Transfer Properties in Coumarin-Doped Bulk-Heterojunction Materials 182
 Tomoki Watanabe, Tatsuya Maeda, *Kenichi Yamashita (Kyoto Inst. of Tech., Japan), Hisao Yanagi (NAIST, Japan)
- 1P-51 Synthesis and Application for Dimethyl-2H-benzimidazole based Oligomer for Bulk Heterojunction Organic Photovoltaics 183
 *Kyoungah Shin, Suhee Song, Joo Young Shim, Hyeji Park (Pusan National Univ., Republic of Korea), Byoung Hoon Lee (Gwangju Inst. of Science and Tech., Republic of Korea), Youngeup Jin (Pukyong National Univ., Republic of Korea), Kwanghee Lee (Gwangju Inst. of Science and Tech., Republic of Korea), Hongsuk Suh (Pusan National Univ., Republic of Korea)
- 1P-52 Characteristics of Various Thiophene and Benzimidazole Based conjugated Copolymers for Solar Cells 184
 *Nam Hee Kim, Suhee Song, Joo Young Shim, Su Yeon Bang (Pusan National Univ., Republic of Korea), Gihwan Kim (Ulsan National Inst. of Science and Tech., Republic of Korea), Youngeup Jin (Pukyong National Univ., Republic of Korea), Jin Young Kim (Ulsan National Inst. of Science and Tech., Republic of Korea), Hongsuk Suh (Pusan National Univ., Republic of Korea)
- 1P-53 Determination of Trapped and Free Carrier Lifetimes in Bulk-heterojunction Solar Cell 185
 *Yosuke Terada, Takashi Kobayashi, Takashi Nagase, Hiroyoshi Naito (Osaka Prefecture Univ., Japan)
- 1P-54 Photovoltaic Properties of the 2H-Benzimidazole-Based Copolymers with Various Thiophene Units for Solar Cells 186
 *Su Yeon Bang, Suhee Song, Joo Young Shim, Hyeji Park, Jiyeon Baek (Pusan National Univ., Republic of Korea), Junghwan Kim, Byoung Hoon Lee (Gwangju Inst. of Science and Tech., Republic of Korea), Youngeup Jin (Pukyong National Univ., Republic of Korea), Kwanghee Lee (Gwangju Inst. of Science and Tech., Republic of Korea), Hongsuk Suh (Pusan National Univ., Republic of Korea)
- 1P-55 Annealing Effect on Optoelectronic Properties of Inverted Organic Solar Cells 187
 Masamune Hamamatsu, *Takashi Kobayashi, Takashi Nagase, Hiroyoshi Naito (Osaka Prefecture Univ., Japan)
- 1P-56 Benzimidazole-Based Conjugated Copolymers for Organic Bulk Heterojunction Solar Cells 188
 *Ju Young Yoon, Suhee Song, Joo Young Shim, Kyoungah Shin, Nam Hee Kim (Pusan National Univ., Republic of Korea), Gi-hwan Kim (Ulsan National Inst. of Science and Tech., Republic of Korea), Youngeup Jin (Pukyong National Univ., Republic of Korea), Jin Young Kim (Ulsan National Inst. of Science and Tech., Republic of Korea), Hongsuk Suh (Pusan National Univ., Republic of Korea)

- 1P-57 Novel Conjugated Copolymers Containing Cyclopenta[def]phenanthrene and Benzimidazole Moieties for Solar Cells 189
 *Jun Kuk Kim, Suhee Song, Joo Young Shim, Juae Kim (Pusan National Univ., Republic of Korea), Geunjin Kim, Byoung Hoon Lee (Gwangju Inst. of Science and Tech., Republic of Korea), Youngeup Jin (Pukyong National Univ., Republic of Korea), Kwanghee Lee (Gwangju Inst. of Science and Tech., Republic of Korea), Hongsuk Suh (Pusan National Univ., Republic of Korea)
- 1P-58 Heterojunction Organic Solar Cells based on 5-hexyl-2,2'-bithiophene and DTMBI Derivatives 190
 *Hyeji Park, Suhee Song, Joo Young Shim, Nam Hee Kim (Pusan National Univ., Republic of Korea), Seojin Ko (Ulsan National Inst. of Science and Tech., Republic of Korea), Youngeup Jin (Pukyong National Univ., Republic of Korea), Jin Young Kim (Ulsan National Inst. of Science and Tech., Republic of Korea), Hongsuk Suh (Pusan National Univ., Republic of Korea)
- 1P-59 Two Novel Conjugated Copolymers based 4,7-dithien-2-yl-2,1,3-benzothiadiazole with Cyano Group for Solar Cells 191
 *Juae Kim, Suhee Song, Joo Young Shim, Su Yeon Bang, Jiyeon Baek (Pusan National Univ., Republic of Korea), Mihee Heo (Ulsan National Inst. of Science and Tech., Republic of Korea), Youngeup Jin (Pukyong National Univ., Republic of Korea), Jin Young Kim (Ulsan National Inst. of Science and Tech., Republic of Korea), Hongsuk Suh (Pusan National Univ., Republic of Korea)

Photoconductivity

- 1P-60 Effect of Substrate Treatment on Localized-State Distributions in Polymer Semiconductors Studied by Transient Photoconductivity Measurements 192
 *Takashi Nagase, Akinori Kanehara, Takashi Kobayashi, Hiroyoshi Naito (Osaka Prefecture Univ., Japan)
- 1P-61 Preparation of P(VDF/TrFE/CTFE) Terpolymer Thin Films for Infrared Sensor of Dielectric Bolometer Mode 193
 *Shuichi Murakami, Kazuo Satoh, Mayumi Uno, Yoshiaki Sakurai (Technology Research Institute of Osaka Prefecture, Japan)

Electro-optic Properties and Applications

- 1P-62 Growth and Characterization of Single Crystalline $Zn_{1-x}Mg_{0.2}Al_xO$ Films with UV Bandgap on GaN/ Al_2O_3 Template by RF Magnetron Sputtering 194
 *Min-Sung Kim, Byung-Teak Lee (Chonnam National Univ., Republic of Korea)
- 1P-63 Effects of Growth Variables on the Properties of ZnMgBeO Thin Films Lattice-matched to SiC/Si (111) .. 195
 *Seon-hwa Lee, Byung-Teak Lee (Chonnam National Univ., Republic of Korea)
- 1P-64 Low-frequency Raman Scattering and Elastic Property in Alkali-silicate Glasses 196
 *Kensaku Nakamura, Yoshihiro Takahashi (Tohoku Univ., Japan), Minoru Osada (NIMS, Japan), Rie Ihara, Takumi Fujiwara (Tohoku Univ., Japan)

Materials for Optoelectronics and Photonics I

- 1P-65 First-principles Studies of Elastic and Thermodynamic Properties of $CsXBr_3$ (X=Ca, Ge, Sn) Single Crystals 197
 *Mikhail G. Brik (Univ. of Tartu, Estonia)
- 1P-66 Traceable Measurements of Electrical Conductivity and Seebeck Coefficient of β - $Fe_{0.95}Co_{0.05}Si_2$ and Ge in the Temperature Range from 300 K to 850 K 198
 *Ernst Lenz, Frank Edler, Sebastian Haupt (Physikalisch-Technische Bundesanstalt, Germany), Pawel Ziolkowski (Institute of Materials Research, Germany), Hans-Fridtjof Pernau (Fraunhofer Institute for Physical Measurement Techniques IPM, Germany)
- 1P-67 Enable Abrupt S/D Extension Formation with AstraTM DSA 199
 *Shiyu Sun, Adam Brand, Shankar Muthukrishnan, Ben NG, Stephen Nagy, Alan Zojaji, Rubi Lapena, Yihwan Kim, Stephen Moffatt, Vivek Rao, Dimitry Kouzminov, Naushad Variam (Applied Materials Inc., U.S.A.)
- 1P-68 Photoluminescence Tailoring of InGaN/GaN Quantum Wells with Silver Nanoparticle-assembled Films .. 200
 Ling Sun, Ji Chen, Yijie Liu, Tao Tao, Chaochao shi (Nanjing Univ., China), Yan Shen (Shandong Univ, China), *Min Han (Nanjing Univ., China)

1P-69	New Organic-inorganic Hybrid Ureasil-based Polymer and Glass-polymer Composites with Ion-implanted Silver Nanoparticles	201
	*Taras Kavetskyy (Drohobych Ivan Franko State Pedagogical Univ., Ukraine), Nikolay Lyadov, Valery Valeev (Russian Academy of Sciences, Russian Federation), Volodymyr Tsmots (Drohobych Ivan Franko State Pedagogical Univ., Ukraine), Tamara Petkova, Viktor Boev (Bulgarian Academy of Sciences, Bulgaria), Plamen Petkov (Univ. of Chemical Technology and Metallurgy, Bulgaria), Andrey L. Stepanov (Russian Academy of Sciences, Russian Federation)	
1P-70	Silver Incorporation and Generation of Silver Nanoparticles in Aluminoborosilicate Glasses through a Staining Method	202
	*Noriyuki Akiyama, Takashi Wakasugi, Kohei Kadono (Kyoto Inst. of Tech., Japan)	
1P-71	GaN Epilayer/sapphire Interface: Investigation of Gradual Transformation Depended on Growth Conditions	203
	Aurina Arnatkevičiūtė, Arunas Kadys, Tomas Grinys, Tadas Malinauskas, *Roland Tomašiūnas (Vilnius Univ., Lithuania)	
1P-72	uGaN Growth on Laser Patterned Sapphire Substrate: Quality Analysis	204
	Edgaras Jelmakas, Marius Alslys, Arūnas Kadys, *Roland Tomašiūnas (Vilnius Univ., Lithuania), Paulius Gečys (Center for Physical Sciences and Technology, Lithuania)	
1P-73	Ultra-short Pulse Laser Ablation of Gallium Arsenide: Plasma Dynamics and Nanoparticles Deposition ..	205
	*Roberto Teghil, Angela De Bonis, Agostino Galasso, Neluta Ibris, Alessandro Laurita (Univ. della Basilicata, Italy), Antonio Santagata (Istituto Metodologie Inorganiche e Plasmi, IMIP-CNR, Italy)	
1P-74	Wideband Near-infrared Light Source with over 1mW Power by Stacked InAs Quantum Dots/GaAs LED	206
	*Shingo Fuchi, Kazuma Tani, Takanori Arai (Nagoya Univ., Japan), Satoshi Kamiyama (Meijo Univ., Japan), Yoshikazu Takeda (Nagoya Univ., Japan)	
1P-75	Highly Aligned Uniaxial p-n Junction Nanowires Grown by MOCVD	207
	*Ji-Hyeon Park, R. Navamathavan, Min-Hee Kim, Seong-Un Park, Cheul-Ro Lee (Chonbuk National Univ., Republic of Korea)	
1P-76	Fabrication of Hierarchical GaN NWs on Si(111) Substrate by using Two-step MOCVD Technique	208
	*Yong-Ho Ra, Ki-Young Jang, San Kang, Hee-il Yoo, Cheul-Ro Lee (Chonbuk National Univ., Republic of Korea)	
1P-77	Simulation of an InAsSb/InAsSbP DH-Laser for Free Space Optical Communication in Mid-infrared Spectral Region	209
	*Sanjeev (MJP Rohilkhand Univ., Bareilly, India), P. Chakrabarti (BHU Varanasi, India)	

[Wednesday, June 6, 2012]

Session 3P Poster II (16:45 - 19:00)

Location: Reception Hall

Scintillators II

3P-1	X-ray and Photo-luminescence Properties of Sm ³⁺ Doped Barium Sulfide	210
	*Nao Kawaida, Ryutaro Tsudome, Kouji Maeda, Kentaro Sakai, Tetsuo Ikari (Miyazaki Univ., Japan)	
3P-2	Effects of Sm ³⁺ on Optical and X-Rays Luminescence Properties of Bismuth Barium Borate Glasses	211
	R. Ruamnikhom (King Mongkut's Univ. of Tech. Thonburi, Thailand), *S. Insiripong (Muban Chombueng Rajabhat Univ., Thailand), J. Kaewkhao (Nakhon Pathom Rajabhat Univ., Thailand), J.M. Park, H.J. Kim (Kyungpook National Univ., Republic of Korea), P. Limsuwan (King Mongkut's Univ. of Tech. Thonburi, Thailand)	
3P-3	Eu-Concentration Dependence of Optical and Scintillation Properties for Eu-doped SrF ₂ Single Crystals ...	212
	*Shunsuke Kurosawa, Yuui Yokota, Takayuki Yanagida, Akira Yoshikawa (Tohoku Univ., Japan)	
3P-4	Growth of Ce Doped LiYF ₄ Bulk Crystal with High Ce Concentration by Cz Method and the Scintillation Properties	213
	*Yuui Yokota, Akihiro Yamaji, Shunsuke Kurosawa (Tohoku Univ., Japan), Noriaki Kawaguchi, Kentaro Fukuda (Tokuyama Corp., Japan), Akira Yoshikawa (Tohoku Univ., Japan)	

3P-5	Optical and Scintillation Properties of Bulk ZnO Crystal	214
	*Takayuki Yanagida, Yutaka Fujimoto (Tohoku Univ., Japan), Kohei Yamanoi (Osaka Univ., Japan), Masataka Kano, Akira Wakamiya (DAISHINKU CORP., Japan), Shunsuke Kurosawa, Yuui Yokota, Akira Yoshikawa (Tohoku Univ., Japan), Nobuhiko Sarukura (Osaka Univ., Japan)	
3P-6	Crystal Growth and Scintillation Properties of Ce : Li(Ca,Sr)AlF ₆	215
	*Akihiro Yamaji, Yuui Yokota, Yutaka Fujimoto (Tohoku Univ., Japan), Noriaki Kawaguchi (Tokuyama Corp., Japan), Shunsuke Kurosawa, Akira Yoshikawa (Tohoku Univ., Japan)	
3P-7	Crystal Growth and Scintillation Properties of Ce, Pr and Eu doped La _{2.75} Lu _{2.25} Ga ₃ O ₁₂ Single Crystal	216
	*Kei Kamada (Furukawa Co. Ltd., Japan), Takayuki Yanagida (Tohoku Univ., Japan), Takanori Endo, Kousuke Tsutumi (Furukawa Co. Ltd., Japan), Akira Yoshikawa (Tohoku Univ., Japan)	
3P-8	Growth of Ce Doped (Gd,Y)AlO ₃ Single Crystal by Micro-pulling-down Method and Their Scintillation Properties	217
	*Kei Kamada, Takanori Endo, Kousuke Tsutumi (Furukawa Co. Ltd., Japan)	

Luminescence II

3P-9	Absorption Properties of TlInSe ₂ in Band-Edge Region	218
	*Yoshito Araki, Ryo Asaba, Kazuki Wakita (Chiba Inst. of Tech., Japan), Yong-Gu Shim (Osaka Prefecture Univ., Japan), Nazim Mamedov (National Academy of Sciences of Azerbaijan, Azerbaijan)	
3P-10	Mn-doping Effect of Photoluminescence on AgInS ₂	219
	*Raul Paucar, Umihito Miyamoto (Chiba Inst. of Tech., Japan), Kazuhiro Honjo (Nyquist Inc, Japan), Yong-Gu Shim (Osaka Prefecture Univ., Japan), Takahiro Tokuda, Kenji Yoshino (Univ. of Miyazaki, Japan), Kazuki Wakita (Chiba Inst. of Tech., Japan)	
3P-11	Two-Dimensional Image of Free Exciton of AgInS ₂ Crystals	220
	*Kazuki Wakita, Umihito Miyamoto, Raul Paucar (Chiba Inst. of Tech., Japan), Kazuhiro Honjo (Nyquist Inc., Japan), Yong-Gu Shim (Osaka Prefecture Univ., Japan), Takahiro Tokuda, Kenji Yoshino (Univ. of Miyazaki, Japan)	
3P-12	Free Excitons of CuInS ₂ Crystals	221
	Yusuke Horikawa (Chiba Inst. of Tech., Japan), Yong-Gu Shim (Osaka Prefecture Univ., Japan), *Kazuki Wakita (Chiba Inst. of Tech., Japan)	
3P-13	Photoluminescence in Palygorskite Clay Doped with Rare Earth Ion	222
	*Hiroyasu Nakata, Takanari Hirami, Nariko Toyohara (Osaka Kyoiku Univ., Japan), Sumio Kaizaki (Osaka Univ., Japan)	
3P-14	Luminescence Properties of Rare Earth and Transition Metal Doped BaMgF ₄ Nanoparticles	223
	Stefaan Janssens, Grant V. M. Williams (Victoria Univ., New Zealand), Dave J. Clarke (Industrial Research Ltd., New Zealand), *Christin Gaedtke (Victoria Univ., New Zealand)	
3P-15	Fabrication and Photoluminescence Properties of Semiconductor Microtubes Separated from Substrates Like Bridge Structures	224
	*Yuki Ito (Doshisha Univ., Japan), Koichi Akahane (NICT, Japan), Makoto Hosoda (Osaka City Univ., Japan), Naoki Ohtani (Doshisha Univ., Japan)	
3P-16	Photoluminescence and Cathodoluminescence Properties of Wide Bandgap Zn _{1-x} Mg _x O Nanocrystals	225
	*Takaaki Sugiyama, Tomokatsu Hayakawa (Nagoya Inst. of Tech., Japan), Koji Inoue (Mie Industrial Research Institute, Japan)	
3P-17	Size and Concentration Dependent Luminescence of Mono-dispersed Tb ³⁺ -Yb ³⁺ Co-doped LiYF ₄ Nanoparticles	226
	*Shinya Uechi, Xiaojie Xue, Takenobu Suzuki, Yasutake Ohishi (Toyota Technological Institute, Japan)	
3P-18	Relationship between Excitation Energy and Luminescence Lifetime of ZnO	227
	*R Sammynaiken, Safa Kasap (Univ. of Saskatchewan, Canada), Wei Chen (Univ. of Texas, Arlington, U.S.A.), TK Sham (Univ. of Western Ontario, Canada), T Regier (Canadian Light Source Inc, Canada)	
3P-19	Improved Biodegradable Fluorescent Films of Starch Conjugated Gold and CdS Nanoparticles: Synthesis and Properties	228
	Caitlyn Gallant, Suzanna Snow (College of the North Atlantic, Canada), Mandeep Singh Bakshi (Wilfrid Laurier Univ., Canada), Harpreet Kaur (Guru Nanak Dev Univ., Amritsar, India), *Gurinder Kaur Ahluwalia (College of the North Atlantic, Canada)	

3P-20	Uranium Activated Lithium Tungstates for Solid State Lighting	229
	*Swapnil Suresh Rao Pote (Gurunak Institute of Engineering and Management, India), Charusheela P. Joshi (Shri Ramdeobaba College of Engineering and Management, India), Sanjiv V. Moharil (Nagpur Univ., India)	
3P-21	Effects of Au Co-doping on Eu ³⁺ Photoluminescence Properties in Eu-doped ZnO Grown by SA-MOCVD	230
	*Takahiro Tsuji, Yoshikazu Terai, Wei Miao, Yukihiko Hatagishi, Yasufumi Fujiwara (Osaka Univ., Japan)	
3P-22	Up-conversion Luminescence in the Ultraviolet (UV) Range Excited by IR-laser Diodes in Active Medium BaY ₂ F ₈ :Yb ³⁺ , Pr ³⁺ , Ce ³⁺	231
	Nina Kozlova, Sergey Kuznetsov (National Univ. of Science and Tech. (MISIS), Russian Federation), *Tatiana Uvarova (Russian Academy of Sciences, Russian Federation)	
3P-23	Active Single Crystal Media for the Emitters of Ultra-violet (UV) and Vacuum Ultra-violet (VUV) Spectrum Ranges	232
	*Tatiana Uvarova (Russian Academy of Sciences, Russian Federation)	
3P-24	Angular Selective Antireflection of Titanium Dioxide Nanoparticle Films Fabricated with Low Energy Cluster Beam Deposition	233
	Peng Mao, Jinhui Chen, Yang Zhou, Kaiming Liao, *Min Han, Guanghou Wang (Nanjing Univ., China)	
3P-25	Nanostructured Molybdenum Carbide Thin Films Obtained by Femtosecond Pulsed Laser Deposition	234
	*Roberto Teghil, Angela De Bonis (Univ. della Basilicata, Italy), Takao Mori (NIMS, Japan), Julietta V. Rau (Istituto di Struttura della Materia, ISM-CNR, Italy), Maria Sansone (Univ. della Basilicata, Italy), Antonio Santagata (Istituto Metodologie Inorganiche e Plasm, IMIP-CNR, Italy)	

Photovoltaic Materials and Devices II

3P-26	Fabrication of SrTiO ₃ : Pr, Al and CaTiO ₃ : Pr Fluorescent Thin Films using rf Sputtering for Si Solar Cells	235
	*Kousaku Shimizu (Nihon Univ., Japan)	
3P-27	Fabrication and Characterization of InGaZnO ₄ /CuAlO ₂ Heterojunction Solar Cell	236
	*Kousaku Shimizu, Toshiyuki Sato, Koki Kitano, Kiyozumi Niizuma, Toshihiko Hiaki (Nihon Univ., Japan)	
3P-28	Spectral Dispersion of Optical Constants of CdS:O Window Layers for Solar Cells	237
	*Atsushi Kitano, Yong-Gu Shim (Osaka Prefecture Univ., Japan), Kazuki Wakita (Chiba Inst. of Tech., Japan), Nazim Mamedov, Ayaz Bayramov, Emil Huseynov, Khuraman Khalilova, Ilham Hasanov (Azerbaijan National Academy of Sciences, Azerbaijan)	
3P-29	Optical Properties and Electronic Band Structure of Cu ₂ ZnSnSe ₄ Kesterite Semiconductor	238
	*Shunji Ozaki, Toru Namba (Gunma Univ., Japan)	
3P-30	Sub-gap Absorption Study of SnS Films Deposited by Thermal Evaporation of Sulfurized Sn Powder	239
	*Tamihiro Gotoh (Gunma Univ., Japan)	
3P-31	Mg-Doped In _x Ga _{1-x} N Films Deposited by Reactive RF-Magnetron Sputtering	240
	*Takashi Itoh, Yoshinori Kato, Syun Hibino, Ryuichi Katayama, Fumitaka Ohashi, Shuichi Nonomura (Gifu Univ., Japan)	
3P-32	Carrier Diffusion Length in μ c-Si:H Thin Films Covered with Thin a-Si:H Films Estimated by Surface Photovoltage Measurements	241
	*Norimitsu Yoshida, Kotaro Hayashi, Osuke Watanabe, Hironori Natsuhara, Shuichi Nonomura (Gifu Univ., Japan)	
3P-33	Influence of Degas Pressure on Crystallization of Na Doped Si Clathrate	242
	*Fumitaka Ohashi, Tomoya Sugiyama, Takuya Ogura, Masamitsu Furuhashi, Roto Himeno, Tetsuji Kume, Takayuki Ban, Hironori Natsuhara, Shuichi Nonomura (Gifu Univ., Japan)	

Photoinduced Effects II

3P-34	Photo-induced Expansion of TlSe, TlGaTe ₂ and TlInSe ₂ Single Crystals	243
	*Mia Umesaki, Yong-Gu Shim (Osaka Prefecture Univ., Japan), Kazuki Wakita (Chiba Inst. of Tech., Japan), Nazim Mamedov (Azerbaijan National Academy of Sciences, Azerbaijan)	

3P-35	Good Stoichiometry Achieved by Simple Vacuum-thermal Deposition of GeTe and Ge ₂ Sb ₂ Te ₅ Thin Films	244
	*Hiroki Satoh, Toshihiro Nakaoka (Sophia Univ., Japan), Hideo Takeuchi (Univ. of Shiga Prefecture, Japan)	
3P-36	Photoinduced Mass Transport in Amorphous As-S-Se Films	245
	*Mara Reinfelde, Janis Teteris (Univ. of Latvia, Latvia)	
3P-37	Direct e-beam Formation of Giant Surface Relief in Amorphous As-Se Layers	246
	*Mihail Trunov (Uzhgorod National Univ., Ukraine), Csaba Cserhati (Univ. of Debrecen, Hungary), Peter Lytvyn (NAS of Ukraine, Ukraine), Istvan Charnovich (Univ. of Debrecen, Hungary), Yuri Kaganovskii (Bar-Ilan Univ., Israel), Sandor Kokenyesi (Univ. of Debrecen, Hungary)	
3P-38	Effect of Bi Layer on the Optical Properties of Bi/As ₂ Se ₃ Bilayer Thin Film	247
	*Ramakanta Naik, Sanjit Parida, E.M Vinod, R Ganesan, K.S Sangunni (Indian Institute of Science, India)	
3P-39	Temperature Studies of Optical Absorption Edge in (Ag ₃ AsS ₃) _{0.3} (As ₂ S ₃) _{0.7} Superionic Glass	248
	*Yuriy Neimet, Ihor Studenyak, Mykhailo Pop, Ivan Makauz (Uzhhorod National Univ., Ukraine), Sandor Kökényesi (Debrecen Univ., Hungary)	

Nonlinear Optical Properties and Applications II

3P-40	Optically Pumped Lasing from Vapor-Grown Crystals of Methoxy-Substituted Thiophene/Phenylene Co-Oligomer	249
	*Hitoshi Mizuno, Hisao Yanagi (NAIST, Japan), Fumio Sasaki (AIST, Japan), Shu Hotta (Kyoto Inst. of Tech., Japan)	
3P-41	Synthesis and Two-Photon Properties of Small Dendritic Chromophores with Symmetrical and Unsymmetrical Substituted Skeletons	250
	*Tzu-Chau Lin, Ying-Hsuan Lee, Chia-Ling Hu, Yu-Kai Li, Yu-Jhen Huang (National Central Univ., Taiwan)	
3P-42	Impact of Donor/acceptor Strengths and Sugar-chain Substitution on Two-photon Absorption Properties of D- π -A Chromophores	251
	*Kazuya Tokunaga (Kwansei Gakuin Univ., Japan), Kenji Kamada, Koji Ohta (AIST, Japan), Julien Massin, Redon Sebastien (Ecole Normale Supérieure de Lyon, France), Stéphane Chambert (Institut National des Sciences Appliquées de Lyon, France), Yann Bretonniere, Chantal Andraud (Ecole Normale Supérieure de Lyon, France)	
3P-43	Two-Photon Excited Fluorescence of J-Aggregates using Surface Plasmon Resonance Excitation	252
	*Takumi Iizuka, Masahiko Usami, Noritaka Kato (Meiji Univ., Japan)	
3P-44	Cellular Uptake of Microparticles Observed by Nonlinear Optical Microscope	253
	*Takuya Ashizawa, Noritaka Kato (Meiji Univ., Japan)	
3P-45	Two-Photon Excited Fluorescence Properties of the Aqueous Dispersions of J-aggregated Cyanine Dyes and the Monomeric Solutions of Cyanine Dyes	254
	*Tomohiro Kawamata, Haruyuki Semba, Noritaka Kato (Meiji Univ., Japan)	
3P-46	Photoresponsive Behavior of LCs Doped with Fluorescent Materials	255
	*Motoi Kinoshita (Tokyo Inst. of Tech., Japan)	
3P-47	Determination of Electronic Structures of Ordered and Disordered poly(9,9-dioctylfluorene) by means of Electroabsorption Spectroscopy	256
	*Takashi Kobayashi, Toshiyuki Endo, Takashi Nagase (Osaka Prefecture Univ., Japan), Shuichi Murakami (Technology Research Institute of Osaka Prefecture, Japan), Hiroyoshi Naito (Osaka Prefecture Univ., Japan)	

Terahertz Materials, Devices and Techniques

3P-48	Photogenerated-carrier-induced Band Bending Effects on Generation of a Coherent Longitudinal Optical Phonon in a GaAs Buffer Layer Optically Masked by a GaSb Top Epitaxial Layer	257
	*Hideo Takeuchi (Univ. of Shiga Prefecture, Japan), Syuichi Tsuruta, Masaaki Nakayama (Osaka City Univ., Japan)	
3P-49	Tunable Far-IR Bandgaps in 1D Graphene-dielectric Photonic Crystals	258
	Hodjat Hajian, *Ali Soltani-Vala, Manouchehr Kalafi (Univ. of Tabriz, Iran)	

3P-50	Temperature-dependent Absorbance Spectrum of Semiconductor-dielectric Photonic Crystals	259
	*Jamal Barvestani (Univ. of Tabriz, Iran)	

Nano-optoelectronics and Photonics

3P-51	Sub-wavelength Imaging with 2D Partitioned Square Lattice Photonic Crystal in the Second Band	260
	*Somayeh Rafiee Dastjerdi, Majid Ghanaatshoar (Shahid Beheshti Univ., Iran)	
3P-52	Thermo-Optically Tunable 2D Slab Silicon Photonic Crystals	261
	*Jeong Bong Lee (Univ. of Texas, Dallas, U.S.A.)	
3P-53	Optical Properties of Self-Assembled Monolayer of CdSe Quantum Dot	262
	*Hiroki Yokota, Kunio Shimura, Masaaki Nakayama, DaeGwi Kim (Osaka City Univ., Japan)	
3P-54	Fabrication and Optical Properties of Mn ²⁺ -doped CdS/ZnS Core/Shell Nanocrystals	263
	Masahiro Takada, *Atsushi Ishizumi, Hisao Yanagi (NAIST, Japan)	
3P-55	High-Resolution Optical Coherence Tomography Using Broadband Light Sources with Strain-Controlled InAs/GaAs Quantum Dots	264
	*Ippei Tsubaki, Takashi Kita (Kobe Univ., Japan)	
3P-56	Optical Properties of InGaN/GaN Nanocolumns in Yellow-to-Red Region	265
	*Joji Naka, Yuta Inose, Hideyuki Kunugita, Kazuhiro Ema, Vadivelu Ramesh, Akihiko Kikuchi, Katsumi Kishino (Sophia Univ., Japan)	
3P-57	Investigation of Local Field Effect of α -NaYF ₄ : Nd ³⁺ Nanocrystals	266
	Xiaojie Xue, Takenobu Suzuki, *HoangTuan Tong, Yasutake Ohishi (Toyota Technological Institute, Japan)	
3P-58	Fabrication of Whispering Gallery Mode Cavities using Crystal Growth	267
	*Hiroshi Kudo, Yohei Ogawa, Takasumi Tanabe (Keio Univ., Japan), Atsushi Yokoo (NTT Corp., Japan)	
3P-59	Optical Properties of Dye-doped Polymer Films Incorporating Photonic Nanostructures	268
	Kazutaka Egami, Tomoya Nakayama, Yuuka Kosaka, *Satoshi Tomita, Atsushi Ishizumi, Hisao Yanagi (NAIST, Japan), Kenichi Yamashita, Kunishige Oe (Kyoto Inst. of Tech., Japan)	
3P-60	Protein Sensing with Conjugated Polymer Nanodots via Energy Transfer	269
	*Jaeguk Noh, Geunseok Jang, Taek Seung Lee (Chungnam National Univ., Republic of Korea)	
3P-61	Synthesis and Characterization of Conjugated Polyquinoxaline for Fluorescence Patterning and Sensing	270
	*Sunyoung Jo, Daigeun Kim, Taek Seung Lee (Chungnam National Univ., Republic of Korea)	

Light Emitting Devices

3P-62	Current-Injected Spectrally-Narrowed Emissions from Organic-Crystal Light-Emitting Transistors Having a Diffraction Grating	271
	Akinori Okada, Yoshitaka Makino, Shu Hotta, *Takeshi Yamao (Kyoto Inst. of Tech., Japan)	
3P-63	Preparation of Carbon Nanotube/Polyelectrolyte Hollow Microcapsules and Their Response to the Near Infrared Beam Irradiation	272
	*Shouzou Koumoto, Nobuaki Makihara, Noritaka Kato (Meiji Univ., Japan)	
3P-64	Fabrication of Organic Light-emitting Diodes Containing SiO ₂ Layer in Active Region	273
	*Shimpei Kimura, Yusuke Jitsui, Naoki Ohtani (Doshisha Univ., Japan)	
3P-65	Organic Light-emitting Diodes using Nature Pigment Extracted from Plants	274
	*Yusuke Nishida, Naoki Ohtani (Doshisha Univ., Japan)	
3P-66	Influence of Hole-transport Layer on Luminescent Properties in Near-ultraviolet Organic Light-emitting Diodes	275
	*Masato Ohsumi, Masayuki Takahashi, Tomoyuki Tanii, Naoki Ohtani (Doshisha Univ., Japan)	
3P-67	Performance of Blue Fluorescence and Red Phosphorescent Organic Light-Emitting Diodes Using a Molecular Material with High Hole Drift Mobility	276
	*Tomoyuki Oshiro, Takeshi Tamura (Osaka Univ., Japan), Hiroshi Kageyama (Univ. of the Ryukyus, Japan), Yasuhiko Shirota (Fukui Univ. of Tech., Japan), Hirotake Kajii, Yutaka Ohmori (Osaka Univ., Japan)	

3P-68	White Polymer Light-emitting Diodes Co-doped with Phosphorescent Iridium Complexes Bearing the Same Cyclometalated Ligand	277
	Shigeru Ikawa, *Shigeyuki Yagi, Takeshi Maeda, Hiroyuki Nakazumi (Osaka Prefecture Univ., Japan)	
3P-69	Operating Voltage-independent White Electroluminescence from Two Phosphorescent Ir(III) Complexes Embedded in Poly(N-vinylcarbazole)	278
	*Yoshiaki Sakurai (Technology Research Institute of Osaka Prefecture, Japan), Shigeyuki Yagi, Shigeru Ikawa, Hotaka Asuka, Takeshi Maeda, Hiroyuki Nakazumi (Osaka Prefecture Univ., Japan)	
3P-70	Impedance Spectroscopy Study of Charge Carrier Mobilities of Organic Semiconducting Materials in Organic Light-emitting Diodes	279
	Shingo Ishihara, Takayuki Okachi, *Hiroyoshi Naito (Osaka Prefecture Univ., Japan)	
3P-71	Simulation of Impedance Spectra of Double-layer Organic Light-emitting Diodes (OLEDs)- Measurements of Charge Carrier Mobility of NPB/Alq ₃ Diodes by means of Impedance Spectroscopy	280
	*Shingo Ishihara, Hiroyuki Hase, Takayuki Okachi, Hiroyoshi Naito (Osaka Prefecture Univ., Japan)	
3P-72	Light Emitting Flexible Sheets Composed of Various Shaped-Matrices based on PMMA	281
	*Jongho Kim, Go Eun Park, Daigeun Kim, Won Ho Park, Taek Seung Lee (Chungnam National Univ., Republic of Korea)	
3P-73	Tunable Yg:Ag Cathode for Transparent Organic Light-emitting Diodes	282
	*Suet Ying Ching, Kok Wai Cheah (Hong Kong Baptist Univ., Hong Kong)	
3P-74	Electrical Characterization of Hybrid Organic-Inorganic Light-Emitting Diodes	283
	*Suguru Furuta, Takashi Kobayashi, Takashi Nagase, Hiroyoshi Naito (Osaka Prefecture Univ., Japan)	
3P-75	Polarized Luminescence of Ultra-Thin α -Sexithiophene Films on Oriented β -Phase Polyfluorene	284
	*Claire Heck, Toshiko Mizokuro, Nobutaka Tanigaki (AIST, Japan)	

Materials for Optoelectronics and Photonics II

3P-76	Improvement of Dark Current Properties in Organic Photodetectors Due to Bi-layer Structures	285
	Shouta Majima, *Naoki Ohtani (Doshisha Univ., Japan)	
3P-77	Synthesis and Fundamental Characterization of Polycyclic Hydrocarbons Oriented for Organic Radical Electronics	286
	Minoru Shigemori, *Eisuke Ohta, Toshiyuki Endo, Hiroyoshi Naito, Kazuhiko Mizuno, Hiroshi Ikeda (Osaka Prefecture Univ., Japan)	
3P-78	Fluorescent Conjugated Polyelectrolytes for Variable Biological Applications	287
	*Taek Seung Lee, Daigeun Kim, Geunseok Jang, Jongho Kim, Seongwon Seo, Jaeguk Noh, Sunyoung Jo (Chungnam National Univ., Republic of Korea)	
3P-79	Solution-Phase Visible Laser Processing of MEHPPV Polymer: Phase-Transition to Blue-Shifted Photoluminescence	288
	*Kouhei Takada, Akihiro Tomioka (Osaka Electro-Communication Univ., Japan)	
3P-80	Synthesis and Optical Properties of Novel Fluorescence Chemosensor based on Rhodamine 6G	289
	*Hyung-Joo Kim, June-Min Park, A-Reum Lee (Chungnam National Univ., Republic of Korea), Do-Hyun Lee (Korea Dyeing Technology Center, Republic of Korea), Young-A Son (Chungnam National Univ., Republic of Korea)	
3P-81	Development of a Novel Rhodamine-based Fluorescent Probe to Determine Metal Cations	290
	*A-Reum Lee, Hyung-Joo Kim, June-Min Park, Young-A Son (Chungnam National Univ., Republic of Korea)	
3P-82	Rhodamine 6G Based New Fluorophore Chemosensor	291
	*June-Min Park, Hyung-Joo Kim, A-Reum Lee, Young-A Son (Chungnam National Univ., Republic of Korea)	
3P-83	Synthesis and Optical Properties of a Naphthalimide Dimer	292
	Xiaochuan Li, Wenjing Ma, Jiao Sun, Kuan Mei, Min Yang, Fuli Xie (Henan Normal Univ., China), Hyung-Joo Kim, *Young-A Son (Chungnam National Univ., Republic of Korea)	
3P-84	Synthesis and Base-induced Spectral Switching of Naphthalimide-Coumarin Chromophore	293
	Xiaochuan Li, Wenjuan Jiang, Kaijuan Zhu (Henan Normal Univ., China), Hyung-Joo Kim, *Young-A Son (Chungnam National Univ., Republic of Korea)	