Poster Session 1, June 12, Thursday, 12:00 – 14:00

P1-01 **Enhanced crystallization of GeS films via molecular beam deposition and metal-catalyzed annealing**
1. National Institute for Materials Science (Japan), 2. Univ. of Tsukuba (Japan)
*Ryo Matsumura[1], Qinqiang Zhang[1], Bowen Ma[1,2], Naoki Fukata[1,2]

P1-02 **UV photodiodes fabricated from the AlGaN/GaN heterostructure based epiwafer**
1. Chang Gung Univ. (Taiwan), 2. National Chin-Yi Univ. of Technology (Taiwan)
*Chia-Lung Tsai[1], Ajay Kumar[1], Mukta Sharma[2], Kuan-Lin Hsieh[1], Chang-Pei Chu[1], Kuan-Ying Lee[1]

P1-03 **Development of UV-cured plastic scintillator with 9,9-dimethylfluorene or 9-vinylcarbazole having high scintillation light yields**
1. Shizuoka Univ. (Japan)
*Naru Hayashi[1], Masanori Koshimizu[1]

P1-04 **Improving electrode conductivity and specific surface area of typical porous silicon capacitor structures via graphene embedding and laser pretreatment to prevent GHz-performance decay**
1. National Taipei Univ. (Taiwan), 2. Chung Hua Univ. (Taiwan), 3. Indian Inst. of Info. Tech., Design and Manufac. (India)
*Jia-Chuan Lin[1], Kuo-Chang Lo[1], Thi-Thi-Su Han[1], Hsu-Nan Yen[1], C. H. Wu[2], K. Settu[3]

P1-05 **High-speed micropatterning of oxide thin films by water lift-off with high-pressure water jet**
1. Kanazawa Univ.(Japan)
*Seiya Taguchi[1], Syunya Hashimoto[1], Chaohuang Hong[1], Kawae Takeshi[1]

P1-06 **X-ray response properties of Sm^{3+}-activated $BaO-B_2O_3$ glass scintillators**
1. Nara Inst. of Sci. and Tech. (Japan)
*Keita Miyajima[1], Akihiro Nishikawa[1], Kai Okazaki[1], Takumi Kato[1], Daisuke Nakauchi[1], Noriaki Kawaguchi[1], Takayuki Yanagida[1]

P1-07 **Effect of oxygen-modification on the switching of ZnO TFT**
1. Tatung Univ. (Taiwan)
*Chiung-Wei Lin[1], Bing-Ying Zhong[1]

P1-08 **Optical manipulation of colloidal semiconductor quantum dots in a room-temperature liquid**
1. Univ. of Fukui (Japan)
*Mitsutaka Kumakura[1], Taku Hashimoto[1], Hiroto Yokota[1], Hikaru Takeuchi[1], Takeshi Moriyasu[1]

P1-09 **Logic computing units designed via Gd_xO_y resistive random-access memory for low-power and high-performance non-volatile computing**
1. Chang Gung Univ. (Taiwan), 2. Chang Gung Memorial Hospital (Taiwan), 3. Ming Chi Univ. of Tech. (Taiwan)

*Jing-En Lin[1], Chen-Han Shen[1], Shih-Cheng Tsao[1], Wen-Ruey Yang[1], Jer-Chyi Wang[1,2,3]

P1-10 **Surface plasmon-excited organic schottky photodiode based on nanogolds**
1. Chiang Mai Univ. (Thailand), 2. Niigata Univ. (Japan), 3. Prince of Songkla Univ. (Thailand)
Supakeit Chanarsa[1], Apichat Phengdaam[3], Kazunari Shinbo[2], Keizo Kato[2], *Kontad Ounnunkad[1], Akira Baba[2]

P1-11 **BaO-B_2O_3-TiO_2 optical glass for radiation shielding**
1. National Inst. of Tech. (KOSEN), Fukui College (Japan)
*Tomoharu Hasegawa[1]

P1-12 **Electron spin dynamics of dilute nitride GaNAs-InGaAs quantum dot tunnel-coupled nanostructure sandwiched between AlGaAs barriers**
1. IST, Hokkaido Univ. (Japan)
Shunsuke Nomura[1], *Hiroto Kise[1], Junichi Takayama[1], Akihiro Murayama[1], Satoshi Hiura[1]

P1-13 **Effect of excitation spin density on oscillation characteristics of luminescence circular polarization from InGaAs quantum dots tunnel-coupled with a GaNAs quantum well with magnetic field**
1. IST, Hokkaido Univ. (Japan)
*Shunsuke Sakano[1], Shunsuke Nomura[1], Junichi Takayama[1], Akihiro Murayama[1], Satoshi Hiura[1]

P1-14 **Electroluminescence properties of InGaAs quantum dot light-emitting diodes with different stacking number of quantum dot layers**
1. IST, Hokkaido Univ. (Japan)
*Itsu Tanaka[1], Daiki Mineyama[1], Kohei Etou[1], Ayano Morita[1], Hiroto Kise[1], Junichi Takayama[1], Akihiro Murayama[1], Satoshi Hiura[1]

P1-15 **High tunneling electroresistance ratio of TiS_2/$HfZrO_2$/TiN ferroelectricTunnel junctions with an Al_2O_3 interfacial layer**
1. Dept. of Electronic Engineering, Chang Gung Univ. (Taiwan), 2. Dept. of Neurosurgery, Chang Gung Memorial Hospital (Taiwan), 3. Dept. of Electronic Engineering, Ming Chi Univ. of Tech. (Taiwan)
*Jun-Kai Lai[1], Kuan-Lin Chen[1], Chen Yang[1], Jer-Chyi Wang[1,2,3]

P1-16 **Study of spatial coherence properties in single-crystal polymorphs of a cyano-substituted thiophene/phenylene co-oligomer**
1. NAIST(Japan), 2. Toyama Prefectural Univ. (Japan)
*Nanang Adrianto[1], Hitoshi Mizuno[1,2], Andi Marwanti Panre[1], Tomomi Jinjyo[1], Garrek Stemo[1], Hiroyuki Katsuki[1]

P1-17 **Plasmonic and grating-enhanced light trapping in organic solar cells: a simulation study**
1. Niigata Univ. (Japan), 2. Chulalongkorn Univ.(Thailand)
*Thanapol Khamhla[1,2], Kanet Wongravee[2], Sachiko Jonai[1], Kazunari Shinbo[1], Sanong Ekgasit[2], Akira Baba[1]

P1-18 **Analysis of charge-discharge mechanism of layered double hydroxide cathode by X-ray photoelectron spectroscopy**

1. SUWA Univ. Sci(Japan)
*Katsuya Hatakeyama[1], Hikaru Sugihara[1], Satoshi Ogawa[1]

P1-19 **Zinc fuel balls produced by a combination of mechanical dispersion and electrochemical deposition for energy storage systems**

1. SUWA Univ. of Sci. (Japan), 2. Sojitz Inst. of Innov. Tech. (Japan)
*Taiki Murakoshi[1], Satoshi Ogawa[1], Yoshiharu Ajiki[2]

P1-20 **Effect of potassium concentration on electrical properties of stacked graphene layers**

1. AIST(Japan), 2. Nihon Univ. (Japan), 3. JAEA(Japan), 4. Shizuoka Univ. (Japan)
*Takatoshi Yamada[1], Shuichi Ogawa[2], Yasutaka Tsuda[3], Akitaka Yoshigoe[3], Tomoaki Masuzawa[4], Mitsuhiro Okada[1], Yuki Okigawa[1]

P1-21 **Fabrication of Co-Pt multilayer nanowires with controlled layer thickness prepared by dual-bath electrodeposition**

1. Gifu Univ. (Japan), 2. Nagoya Univ. (Japan), 3. Waseda Univ. (Japan), 4. Kyoto Univ. (Japan)
*Rio Kawana[1], Natsuko Ohguchi[1], Daiki Oshima[2], Michiyuki Yoshida[1], Takashi Sugiura[1], Mikiko Saito[3], Takayuki Homma[3], Takeshi Kato[2], Teruo Ono[4], Mutuhiro Shima[1], Keisuke Yamada[1]

P1-22 **Effect of in-plane magnetic anisotropy on crystal structure in cobalt thin films deposited on $LiTaO_3$ substrates**

1. Gifu Univ. (Japan), 2. Kanazawa Univ. (Japan), 3. Muroran Inst. of Tech. (Japan)
*Takuma Abe[1], Saki Shikano[1], Kazutoshi Shimamura[2], Hironori Sugiyama[2], Shota Ono[3], Mutsuhiro Shima[1], Keisuke Yamada[1]

P1-23 **Modeling the columnar structure effect of oblique evaporated SiO films for liquid crystal alignment**

1. Nagaoka Univ. Tech. (Japan)
*Yuki Enomoto[1], Yosei Shibata[1], Munehiro Kimura[1]

P1-24 **Zinc oxide-encapsulated alumina thin-film memristors**

1. Shinshu Univ. (Japan), 2. KOSEN Nagano (Japan)
*Motoki Iizuka[1], Hideto Aoyama[1], Myo Than Htay Yamamoto[1], Noritaka Momose[2], Makoto Sonehara[1], Yoshio Hashimoto[1]

P1-25 **Preparation of europium- and terbium-complexes as red and green emissive materials using carbon nitride dicyandiamide as ligand**

1. Doshisha Univ. (Japan)
*Ryo - Nakahara[1], Haruki Takemura[1], Taisei Hara[1], Taisei Tominaga[1], Naoki Ohtani[1]

P1-26 **Preparation of fluorescent powder using aluminum nitride powder and europium oxide**

1. Doshisha Univ. (Japan)
*Taisei Tominaga[1], Ryo Nakahara[1], Taisei Hara[1], Haruki Takemura[1], Naoki Ohtani[1]

P1-27 **Oxidation-induced effects of Al_2O_3 passivation layer on the performance of CIGS photoelectric conversion device**

1. National Inst. of Advanced Industrial Science and Tech. (AIST)(Japan), 2. Bowling Green State Univ. (United States of America)
*Yukiko Kamikawa[1], Marco Nardone[2]

P1-28 **Micropatterning of $YBa_2Cu_3O_{7-\delta}$ thin film using high-pressure water jet treatment**

1. Kanazawa Univ. (Japan), 2. Univ. Yamanashi (Japan)
*ChaoHuang Hong[1], Seiya Taguchi[1], Kyousuke Nakamura[1], Tasuku Mita[1], Masanori Nagao[2], Takeshi Kawae[1]

P1-29 **High current density diamond PIN diode using nitrogen-doped N⁺-type Layer**

1. Graduate School of Natural Sci. and Tech., Kanazawa Univ. (Japan), 2. Nanomaterials Res. Inst., Kanazawa Univ. (Japan)
*Taichi Miyazaki[1], Kan Hayashi[1,2], Kimiyoshi Ichikawa[2], Taro Yoshikawa[2], Satoshi Yamasaki[2], Takao Inokuma[1], Norio Tokuda[1,2], Tsubasa Matsumoto[1,2]

P1-30 **Development of slit-coated alignment films composed of liquid crystal and organic fluorophore for agricultural application**

1. Nagaoka Univ. of Tech. (Japan)
*Ryota Kobayashi[1], Yosei Shibata[1], Munehiro Kimura[1]

P1-31 **Characterization of structure and magnetic properties for Co_XPd_{100-X} > alloy nanowires fabricated by electrodeposition and nanoporous templates**

1. Gifu Univ. (Japan)
*Afifah Nur Chairinnisa[1], Shunpei Matsuoka[1], Kawana Rio[1], Shima Mutsuhiro[1], Keisuke Yamada[1]

P1-32 **Neutron-induced thermoluminescence of Mg^{2+}- and Pr^{3+}-co-doped $LiTaO_3$ ceramics**

1. Shizuoka Univ. (Japan), 2. Kindai Univ. (Japan)
*Yuta Hiramatsu[1], Genichiro Wakabayashi[2], Masanori Koshimizu[1]

P1-33 **Ion-exchange doping for poly(2,5-bis(3-tetradecylthiophen-2-yl)thieno[3,2-b]thiophene) thin films toward p^+-i-p^+ type transistor fabrication**

1. Keio Univ. (Japan)
*Yuuichi Nakajima[1], Kazuki Takayama[1], Kei Noda[1]

P1-34 **Degradation mechanism of Y6-based organic solar cells and their application to photo-diode and rectifier diodes**

1. Graduate School of Natural Science and Technology, Kanazawa Univ. (Japan), 2. NanoMaRi, Kanazawa Univ. (Japan)
*Naoya Tanaka[1], Md. Shahiduzzaman[1,2], Makoto Karakawa[1,2], Tetsuya Taima[1,2], Koichi Iiyama[1], Masahiro Nakano[1]

P1-35 **Optimizing the combination of activated carbon and redox electrodes in water-based hybrid capacitors**

1. Suwa Univ. of Sci. (Japan)
*Ryo Tawada[1], Hikaru Sugihara[1], Satoshi Ogawa[1]

P1-36 **Negative differential resistance as self-heating effects in crossbar diodes of pentacene and thiophene-based polymer films**
1. Keio Univ. (Japan)
*Kaito Nishijima[1], Shun Kanazawa[1], Kazuki Takayama[1], Kei Noda[1]

P1-37 **Fabrication of CTS thin-film solar cells via co-addition of Rb and Na**
1. NIT, Nagaoka Col. (Japan)
Kazuki Hasegawa[1], *Hideaki Araki[1]

P1-38 **Improvement of channel mobility in diamond MOSFET fabricated using surface planarization based on carbon-Solid-solution into Ni**
1. Kanazawa Univ. (Japan), 2. Nanomaterials Res. Inst. (Japan)
*Tsubasa Yoshimoto[1], Tsubasa Kano[1], Kai Sato[1], Kimiyoshi Ichikawa[1,2], Kan Hayashi[1,2], Taro Yoshikawa[2], Takao Inokuma[1], Satoshi Yamasaki[2], Norio Tokuda[1,2], Tsubasa Matsumoto[1,2]

P1-39 **Development of UV-emitting Pr-doped YAG nanoparticle scintillators**
1. Shizuoka Univ. (Japan)
*Yuma Takahashi[1], Masanori Koshimizu[1]

P1-40 **Preparation of Cu_2SnS_3 thin films by dip-coating process and variation of copper content in precursor solution**
1. National Institute of Technology, Tsuruoka College (Japan)
*Rikuto Abe[1], Ryo Miura[1], Tomoki Ishida[1], Taichi Kato[1], Katsuhiko Moriya[1]

P1-41 **Photovoltaic performance of the solar cell with Sumi Ink/Si stacked structure**
1. National Institute of Technology (KOSEN), Nagaoka College (Japan)
*Yosuke Shimamune[1], Kazuo Jimbo[1]

P1-42 **Analysis of space charge dynamics in low-density polyethylene before and after short circuit based on negative differential mobility**
1. Ehime Univ. (Japan), 2. National Institute of Technology, Niihama College (Japan)
*Ryotaro Ozaki[1], Shinya Itoh[1], Taichi Yano[1], Akira Ohno[2], Kazunori Kadowaki[1]

P1-43 **The properties of $Bi_{0.5}$ $(Na_{0.8}K_{0.2})_{0.5}TiO_3$ ceramics prepared from various mixed powders**
1. Shinshu Univ. (Japan)
Kento Kawaguchi[1], *Yushi Nagao[1], Noriko Bamba[1]

P1-44 **Formation of a phosphonic acid monolayer on an In_5GaZnO_{10} thin film**
1. Kobe Univ. (Japan)
*Takumi Maeda[1], Takato Nihongi[1], Yih-Ren Chang[1], Yoshiaki Hattori[1], Masatoshi Kitamura[1]

P1-45 **Large asymmetric spin-scattering at ferromagnet/nonmagnetic metal structures predicted from DFT and multichannel landauer approach**
1. University of Fukui (Japan), 2. Shinshu University (Japan)

*Mary Clare Escaño[1], Tien Quang Nguyen[2]

P1-46 **Nanoflower-like WO_3 photoanode for photoelectrochemical decomposition of polyethylene terephthalate**
1. Keio Univ. (Japan)
*Ibuki Koizumi[1], Ryota Uchida[1], Kosei Ito[1], Kei Noda[1]

P1-47 **Photon energy dependence of reduction of graphene oxide by soft X-ray irradiation and nitrogen doping using NH_3 gas**
1. Univ. of Hyogo (Japan)
*Misora Ueshimo[1], Junichi Inamoto[1], Yoshiaki Matsuo[1], Kazuhiro Kanda[1], Koji Sumitomo[1], Akira Heya[1]

P1-48 **Interlayer fracture of multilayer MoS_2 evaluated by in situ transmission electron microscopy**
1. JAIST(Japan)
*Xiong Xiong Wei[1], XIE Lilin[1], OSHIMA Yoshifumi[1]

P1-49 **Growth of niobium thin films on C-plane and R-plane sapphire substrates for superconducting devices**
1. National Defence Academy (Japan)
*Tomohiro Hirama[1], Yasushi Ishiguro[1], Takashi Tachiki[1]

P1-50 **THz radiation from UV-pumped Si (111)**
1. Graduate School of Engineering, Faculty of Engineering, Fukui Univ (Japan), 2. Research Center for Development of Far Infrared Region, Fukui Univ (Japan)
*Kodai Kato[1], Keiya Matsui[1], Masahiko Tani[2], Hideaki Kitahara[2], Mitsutaka Kumakura[1], Takeshi Moriyasu[1,2]

P1-51 **Microscopic study of Kanazawa gold leaves**
1. Jaist(Japan), 2. Osaka Univ (Japan)
*Yuanzhe - Xu[1], Satoshi Ichikawa[2], Kohei Aso[1], Hideyuki Murata[1], Yoshifumi Oshima[1]

P1-52 **Improvement of solar cell properties for ZnO/$CuBr_{1-x}I_x$ microstructural transparent solar cells with seed layer and nanorods annealing process**
1. Nagaoka Univ. Tech. (Japan)
*Koya Ochiai[1], Kotaro Yukinaga[1], Konon Kudo[1], Ayaka Kanai[1], Kunihiko Tanaka[1]

P1-53 **Photo-adhesion of dissimilar substrates with adhesive materials including 2-aminopyridyl groups**
1. National Inst. Tech., Fukui College (Japan)
*Hinata Okada[1], Masahiro Furutani[1]

P1-54 **Relationship between Ge/B ratio and segregation of B in B and Ge co-doped Si crystal growth**
1. Shinshu University (Japan)
*Lei Zhu[1], Shoma Tsukada[1], Hiroki Tsukada[1], Rintaro To[1], Takeshi Hoshikawa[1], Toshinori Taishi[1]

P1-55 **THz radiation from Ni/Pt films deposited under high background pressure**

1. Univ. of Fukui (Japan), 2. Kobe Univ. (Japan), 3. Fukui Univ. of Tech. (Japan)
*Takeshi Moriyasu[1], Kaede Miyaguchi[1], Toyoaki Hirata[1], Hikomitsu Kikuchi[2], Masahiko Tani[1], Hideaki Kitahara[1], Fumiyoshi Kuwashima[3], Mitsutaka Kumakura[1]

P1-56 **DFT study of CO and O_2 capture on silicon carbide monolayers decorated with alkali-metal atoms**

1. Instituto Politecnico Nacional (Mexico), 2. The University of Electro-Communications (Japan), 3. Universidad Nacional Autónoma de México (Mexico)
*Ranferi Cancino Betancourt[1,2], Lucia G. Arellano[1], Francisco De Santiago[3], Luis A. Perez[3], Miguel Cruz Irisson[1]

P1-57 **Zeeman-type spin-polarizer with applying voltage to FM structure**

1. JAIST(Japan)
*Soh Komatsu[1], Masashi Akabori[1]

P1-58 **Analysis of transient photocurrent of $CsPbBr_3$ thin film deposited by vacuum deposition**

1. Institute of Science Tokyo (Japan)
*Naoki Ito[1], Atsuto Watanabe[1], Shinsuke Miyajima[1]

P1-59 **Revealing electronic transport properties of organic solar cells using machine learning**

1. Osaka Prefecture Univ. (Japan), 2. Osaka Metropolitan Univ. (Japan), 3. Ritsumeikan Univ. (Japan)
Yuki Okuno[1], Atsushi Okada[2], Takashi Nagase[2], Takashi Kobayashi[2], *Hiroyoshi Naito[1,2,3]

P1-60 **Electrode-supported TPU separator for enhanced electrochemical performance in lithium-ion batteries**

1. Dept. of Nano Sci. and Tech., SKKU Adv. Inst. of Nanotech. (SAINT), Sungkyunkwan Univ.(Korea), 2. Natl. Nanofab Center, Korea Adv. Inst. of Sci. and Tech. (Korea), 3. Dept. of Nano Eng., Sungkyunkwan Univ. (Korea), 4. Dept. of Semiconductor Convergence Eng., Sungkyunkwan Univ. (Korea)
*Sungan Jeong[1], Hongseok Jo[2], Seongpil An[1,3,4]

P1-61 **First-principles study of thickness-dependent vertical polarization in hexagonal boron nitride**

1. Graduate School of Natural Sci. and Tech., Kanazawa Univ. (Japan), 2. Nanomaterials Res. Inst. (NanoMaRi), Kanazawa Univ. (Japan)
*Nadia Maharani Chadiza[1], Hana Pratiwi Kadarisman[2], Naoya Yamaguchi[2], Fumiyuki Ishii[2]

P1-62 **In-Situ TEM study of MoS_2 field-effect transistors using a sharp electron probe gate**

1. Japan Advanced Institute of Science and Technology (Japan)
*Limi Chen[1], Chunmeng Liu[1], Fayong Liu[1], Kareekunnan Afsal[1], Hiroshi Mizuta[1], Yoshifumi Oshima[1]

P1-63 **Fabrication of pseudo vertical diamond Schottky-pn diodes**

1. Kanazawa Univ. (Japan), 2. Nanomaterials Res. Inst. (Japan)
*Atomu Yamashita[1], Taro Yoshikawa[2], Kimiyoshi Ichikawa[2], Kan Hayashi[1,2], Satoshi Yamasaki[2], Takao Inokuma[1], Norio Tokuda[1,2], Tsubasa Matsumoto[1,2]

P1-64 **Fabrication of needle-like crystals using zinc acetylacetonate under atmospheric pressure**
1. National Institute of Technology (KOSEN), Sendai College (Japan)
Mio Sakuma[1], Yuma Yata[1], Yuji Imai[1], Koji Kawasaki[1], Yasuhiro Kashiwaba[1], *Jun Suzuki[1]

P1-65 **Optimization of contact metal selection for MoS_2-based extraordinary magnetoresistance devices**
1. Japan Advanced Institute of Science and Technology (Japan)
*YuFeng Lu[1], Akabori Masashi[1]

P1-66 **A dual TSP signal design for fast and accurate acquisition of complex impedance spectra in organic devices**
1. Osaka Metropolitan Univ. (Japan), 2. Ritsumeikan Univ. (Japan)
*Atsushi Okada[1], Koichi Okamoto[1], Hiroyoshi Naito[1,2]

P1-67 **Optical properties of semiconductor mixed crystals using coherent potential approximation**
1. University of Fukui (Japan)
*Souta Ikeda[1], Toshitaka Watanabe[1], Takayuki Makino[1]

P1-68 **Efficient screening and interpretable analysis of the anomalous hall effect via kernel mean embedding**
1. Nanomaterials Res. Inst., Kanazawa Univ. (Japan)
*Yaotang Zhang[1], Rifky Syariati[1], Naoya Yamaguchi[1], Fumiyuki Ishii[1]

P1-69 **Development of surface miniature resonator for electron spin resonance**
1. FIR-Center, Univ. of Fukui (Japan), 2. Dept. of Phys. and Astronomy, Univ. of Turku (Finland)
*Kyosuke Yabushita[1], Yutaka Kurachi[1], Yuya Ishikawa[1], Jarno Järvinen[2,] Sergey Vasiliev2, Yutaka Fujii[1]

P1-70 **Accurate measurement of electro-optic coefficients based on simple ellipsometric method for glass-organic optical modulators**
1. Nagasaki University (Japan)
*Yasufumi Enami[1]

P1-71 **Development of mm-wave band multi-frequency ESR systems**
1. FIR-Center, Univ. of Fukui (Japan), 2. Grad. Sch. of Sci., Kobe Univ. (Japan), 3. Technoassist Corp. Ltd. (Japan), 4. Mol. Photosci. Res. Center (Japan)
*Yuya Ishikawa[1], Eiji Ohmichi[2], Takero Ito[1], Keisuke Kawagita[1], Hideyuki Takahashi[3], Hitoshi Ohta[1,2,4], Yoshinori Tatematsu[1], Yutaka Fujii[1]

Poster Session 2, June 13, Friday, 12:30 – 14:30

P2-01 **Comparison of amino- and sulfate- terminated self-assembled monolayers for Cu/Porous Low-k dielectrics integration**
1. National Chi-Nan Univ. (Taiwan)
*Yi Lung Cheng[1]

P2-02 **Improving power output of a biofuel cell using plant-based fuel with decomposition enzymes of cellulase and pectinase**
1. Nihon Univ.(Japan)
*Gou Watanabe[1], Satomitu Imai[1]

P2-03 **Deposition of C-axis oriented $YBa_2Cu_3O_{7-x}$ thin film on Si substrates using self-oriented $LaNiO_3$ film**
1. Kanazawa Univ. (Japan), 2. Univ. Yamanashi (Japan), 3. Kojundo Chemical Lab. (Japan)
*Kyosuke Nakamura[1], Tasuku Mita[1], Kazutoshi Shimamura[1], Masanori Nagao[2], Masami Kawahara[3], Takeshi Kawae[1]

P2-04 **Theoretical proposal of double heterodyne interferometer for high dynamic thickness range surface profile measurements**
1. Kobe City College of Tech. (Japan)
*Taiki Tanaka[1], Kotaro Kawai[1]

P2-05 **Plasma-assisted synthesis of germanium-sulfur thin films**
1. Univ. of Tsukuba (Japan), 2. NIMS(Japan)
*Ahmed Mahmoud[1,2], Ryo Matsumura[2], Naoki Fukata[1,2]

P2-06 **Hybridization of surface-modified $LiAlO_2$ or $LiGaO_2$ nanoparticles and plastic scintillators for thermal neutron detection**
1. Shizuoka Univ. (Japan), 2. Kyushu Univ. (Japan)
Haruhisa Tsukahara[1], Kenichi Watanabe[2], *Masanori Koshimizu[1]

P2-07 **Radiophotoluminescence properties of KCl-doped willemite**
1. Natl. Inst. of Tech. Fukui (Japan), 2. Kanazawa Inst. of Tech. (Japan)
*Hiroyuki Fukushima[1], Susumu Takahashi[1], Go Okada[2]

P2-08 **Synthesis of highly efficient green luminescent terbium complex using carbon nitride as a matrix material**
1. Doshisha Univ. (Japan)
Haruki Takemura[1], Ryo Nakahara[1], Taisei Hara[1], Taisei Tominaga[1], *Naoki Ohtani[1]

P2-09 **Isomeric D-A-D chromophores derived from functionalized fluorene and benzo[1,2-d:4,5-d']bis([1,2,3]triazole) units as potential thin-film organic laser materials**
1. National Central Univ. (Taiwan), 2. Tunghai Univ. (Taiwan)
*Tzu-Chau Lin[1], Chen-Yu Chang[1], Yun-Yi Kao[1], Shu-Tse Cho[1], Qian-Wen Guo[1], Po-Han Chen[1], Jui-Fen Chang[1], Yun-Tzu Tseng[2], Yuan Jay Chang[2], Wei-Tao Peng[2]

P2-10 **Investigation on domain morphology effect of $LiCoO_2$ epitaxial film for model battery cathode**

1. Japan Advanced Inst. of Science and Tech. (Japan), 2. Inst. of Science Tokyo (Japan), 3. National Inst. for Materials Science (Japan)
*Takafumi Kakeya[1], Kohei Aso[1], Takumu Tsuchida[1], Kazuki Yamanaka[2], Li Yanzhao[2], Koshi Taniguchi[2], Kenta Watanabe[2], Kazutaka Mitsuishi[3], Keisuke Shinoda[3], Koji Kimoto[3], Takuya Masuda[3], Masaaki Hirayama[2], Yoshifumi Oshima[1]

P2-11 **Improvement of device performance of multilayered inverted polymer-based LEDs by inserting metal acetylacetonate layer**

1. Shinshu Univ. (Japan)
*Yuki Minakawa[1], Taisei Kamada[1], Eiji Itoh[1]

P2-12 **Diamond MOS structure with SiO_2/$Al2O_3$ bilayer gate insulator**

1. Grad. School of Natural Sci. & Tech. Kanazawa Univ. (Japan), 2. NanoMaRi. Kanazawa Univ. (Japan)
*Ryuichi Nakagawa[1], Taichi Saito[1], Kai Sato[1], Tsubasa Matsumoto[2], Norio Tokuda[2], Takeshi Kawae[1]

P2-13 **Development of graphene layers, grown by chemical vapor deposition (CVD) method for Organic solar cells (OSCs)**

1. Chulalongkorn Univ. (Thailand), 2. Niigata Univ. (Japan)
*Pathomporn Chaikhao[1,2], Sukkaneste Tungasmita[1], Akira Baba[2]

P2-14 **Fabrication and improvement of emission efficiency of lead-free perovskite quantum dots**

1. Doshisha Univ. (Japan)
*Tadahiro Tokuhara[1], Koshi Nishiguchi[1], Naoki Ohtani[1]

P2-15 **Fabrication and characterization of organic phototransistor utilizing plasmonic organic solar cell**

1. Niigata Univ. (Japan), 2. National College of Tech. (Japan)
*Tianshuo Wang[1], Yasuo Watanabe[1], Masahiro Minagawa[2], Sachiko Jonai[1], Yasuo Ohira[1], Akira Baba[1], Kazunari Shinbo[1]

P2-16 **Preparation and evaluation of cerium complexes for synthesizing blue light-emitting materials**

1. Doshisha Univ. (Japan)
*Taisei Hara[1], Seiya Kanagawa[1], Naoki Ohtani[1]

P2-17 **GaSb nanowire growth on hydrogen-silsesquioxane-coated GaAs (001) by molecular beam epitaxy**

1. JAIST(Japan)
*Soh Komatsu[1], Masashi Akabori[1]

P2-18 **Development of radiophotoluminescence dosimeters using radiation chemical reactions of polymer materials containing benzoic acid**

1. Shizuoka Univ. (Japan)
*Tomoaki Yashiro[1], Masanori Koshimizu[1]

P2-19 **Optical quantum phase control using surface-stabilized ferroelectric liquid crystal devices**
1.Toyama Univ. (Japan)
*Kentaro Yamada[1], Akira Terazawa[1], Hiroyuki Okada[1]

P2-20 **Photovoltaic effects in GaAs substrate and epitaxially grown nanowire**
1. Shinshu Univ. (Japan), 2. Hokkaido Univ. (Japan)
*Noriyuki Urakami[1], Yuri Suzuki[1], Keisuke Minehisa[2], Yoshio Hashimoto[1], Fumitaro Ishikawa[2]

P2-21 **Correlation between crystal structure and magnetic properties of Co-Ni-Al Alloy films synthesized by co-precipitation**
1. Gifu Univ. (Japan)
*Fadhilatu Zikra[1], Shuntaro Shibata[1], Koki Sasaki[1], Keisuke Yamada[1], Mutsuhiro Shima[1]

P2-22 **Effect of crystallinity on electrical properties of VN thin films**
1. Nagaoka Univ. of Tech. (Japan)
*Takumi Tanabe[1], Shu Sawaya[1], Tsuneo Suzuki[1]

P2-23 **Effects of Cu-Zn-Sn capping layer and annealing time on the growth of $Cu_2Zn(Sn,Ge)(S,Se)_4$ alloy thin films**
1. NIT (KOSEN), Nagano Coll. (Japan), 2. Shinshu Univ. (Japan)
*Sayaka Nishimura[1], Noritaka Momose[1], Shuji Takahashi[1], Myo Than Htay Yamamoto[2], Yoshio Hashimoto[2]

P2-24 **Preparation of single-phase (Cr,Zn)(N,O) by double substitution of ZnO into CrN**
1. Nagaoka Univ. of Tech. (Japan)
*Kenta Suitani[1], Khairul Abrar Bin Onn[1], Tsuneo Suzuki[1]

P2-25 **Interstitial point defect-induced gap states in GaAs and the STM characterization using first-principles methods**
1. Our Lady of Fatima Univ. (Philippines), 2. Inst. for Aqua Regeneration, Shinshu Univ. (Japan), 3. De La Salle Univ. (Philippines), 4. Research Center for Development of Far-Infrared Region, Univ. of Fukui (Japan)
*Dhonny Palingayan Bacuyag[1], Tien Quang Nguyen[2], Melanie David[3], Masahiko Tani[4], Mary Clare Escaño[4]

P2-26 **High pressure synthesis of $Sr_2Ca_2Cu_3O_y$ superconductor for oxygen content control with Ag_2O**
1. Nagaoka Univ. of Tech. (Japan), 2. Kisarazu College (Japan)
*Guiyuan Zhao[1], Thi Mai Dung Do[1], Tadachika Nakayama[1], Hisayuki Suematsu[1], Tomoya Aoba[2]

P2-27 **Effect of gas flow rate ratio in fabrication of nanocrystalline silicon/silicon oxide composite films on the density of nanocrystalline silicon**
1. Grad. Sch. Sci. Tech., Niigata Univ. (Japan), 2. Grad. Sch. Engr., Nagoya Univ. (Japan), 3. InFuS, Nagoya Univ. (Japan), 4. IRCNT, Niigata Univ. (Japan), 5. IMaSS, Nagoya Univ. (Japan)

*Kaori Takagi[1], Asaki Arata[2], Yasuyoshi Kurokawa[2,3], Atsushi Masuda[1,4], Noritaka Usami[2,3,5], Kazuhiro Gotoh[1,2,4]

P2-28 **Development of CsFA perovskite-based rectifier diodes exhibiting low turn-on voltage and high voltage tolerance**

1. Kanazawa Univ. (Japan), 2. Nanomaterial Research Inst. (NanoMaRI), Kanazawa Univ. (Japan), 3. Queens Univ. (Canada)

*Hiromu Hamazaki[1], Hiroki Matsui[1], Naoya Tanaka[1], Tomoki Kobayashi[1], Ruka Yazawa[1], Md. Shahiduzzaman[1,2], Tetsuya Taima[1,2], Makoto Karakawa[1,2], Koichi Iiyama[1], Jean-Michel Nunzi[3], Masahiro Nakano[1]

P2-29 **Growth mechanism of twin boundaries in borate crystal for the fabrication of periodically twinned structures**

1. Japan Advanced Ins. of Sci. and Tech. (Japan), 2. New Industory Creation Hatchery Center, Tohoku Univ. (Japan), 3. Inst. for Materials Research, Tohoku Univ. (Japan)

*Kensaku Maeda[1], Keisuke Ohdaira[1], Satoshi Uda[2], Kozo Fujiwara[3]

P2-30 **Magnetic and electric comparison between MnAs/InAs/MnAs double heterostructure and MnAs single layer on GaAs(111)B**

1. CNMT, JAIST(Japan)

Md Tauhidul Islam[1], Van Thuan Pham[1], Soh Komatsu[1], *Masashi Akabori[1]

P2-31 **Preparation of Cu_2SnS_3 thin films by sol-gel spin-coating method and effect of Na addition to the precursor solution**

1. National Inst. of Tech., Tsuruoka College (Japan)

*Ryo Miura[1], Rikuto Abe[1], Tomoki Ishida[1], Taichi Kato[1], Katsuhiko Moriya[1]

P2-32 **Cation intercalation into $MoO_{3-\delta}$-II under high oxygen partial pressure**

1. Nagaoka Univ. of Tech (Japan)

*Jiaming Zhao[1], Dachi Terasawa[1], Thi-Mai-Dung Do[1], Tadachika Nakayama[1], Hideto Furuno[1], Tuichi Ueno[1], Hisayuki Suematsu[1]

P2-33 **Photoluminescence and scintillation properties of Tm-doped GdVO₄ single crystals focusing on NIR emission**

1. Nara Inst. of Science and Tech. (Japan)

*Takayuki Yanagida Yanagida[1], Kai Okazaki[1], Takumi Kato[1], Daisuke Nakauchi[1], Noriaki Kawaguchi[1]

P2-34 **Accurate measurement of lattice constants and thermal expansion coefficients of halide perovskite alloy $CsSn_xPb_{1-x}Br_3$**

1. Fac. Eng, Univ. of Tokyo (Japan), 2. Coll. Eng., Shibaura Inst. Tech. (Japan), 3. RCAST, Univ. of Tokyo (Japan)

*Reo - Asahara[1], Masahiro Abe[2], Akiko Hori[2], Masato Sotome[1,3], Takashi Kondo[1,3]

P2-35 **Investigation of solvent ratio in the preparation of $CuCl_{1-x}I_x$ thin films by sol-gel dip-coating method**

1. National Inst. of Tech., Tsuruoka College (Japan)

*Tomoki Ishiguro[1], Kensuke Murayama[1], Riku Honma[1], Katsuhiko Moriya[1]

P2-36 **First-principles study of the effect of vacancies on intrinsic anomalous Hall conductivity in Co_2MnGa**

1. Kanazawa Univ. (Japan), 2. National Inst. for Quantum Sci. and Tech. (Japan)
*Naoya Yamaguchi[1], Atsuo Kawasuso[2], Fumiyuki Ishii[1]

P2-37 **Preparation of Cu_2SnS_3 thin films by the sol-gel dip-coating method and dependence of the sulfur composition ratio in the precursor solution**

1. National Inst. of Tech., Tsuruoka College (Japan)
*Taichi Kato[1], Tomoki Ishida[1], Ryo Miura[1], Rikuto Abe[1], Katsuhiko Moriya[1]

P2-38 **Development of a long-Life electrode device for the application of lateral voltages to artificial cell membrane systems**

1. Research Inst. of Electrical Communication, Tohoku Univ.(Japan), 2. Graduate School of Biomedical Engineering, Tohoku Univ. (Japan), 3. Advanced Inst. for Materials Research (WPI-AIMR), Tohoku Univ. (Japan)
*Tatsuya Nomoto[1,2], Komiya Maki[1], Daisuke Tadaki[1], Ayumi Hirano[1,2,3]

P2-39 **Cycle life improvement of lithium-ion batteries using particle size controlled silicon nanoparticle anodes**

1. Tokyo Denki Univ. (Japan)
*Hidetaka Nomura[1], Keisuke Sato[1]

P2-40 **Optically Pumped Lasing from Cyano Group-Substituted Thiophene/Phenylene Co-Oligomer Crystals Grown in a Quartz Microcapillary**

1. Toyama Prefectural Univ. (Japan), 2. NAIST(Japan), 3. Tsukuba Univ. (Japan)
*Hitoshi Mizuno[1], Tomomi Jinjo[2], Fumio Sasaki[3]

P2-41 **First-principles study of shift current photovoltaic effect in Janus WXY (X, Y = S, Se, Te) monolayers**

1. Kanazawa University (Japan), 2. Nanomaterials Research Institute, Kanazawa University (Japan)
*Yedija Yusua Sibuea Teweng[1], Naoya Yamaguchi[2], Fumiyuki Ishii[2]

P2-42 **Deposition and evaluation of $CsPbBr_3$ perovskite quantum dot thin films using electrostatic spraying deposition method**

1. Doshisha Univ. (Japan)
*Koshi Nishiguchi[1], Ryotaro Noguchi[1], Ginga Hamada[1], Tadahiro Tokuhara[1], Naoki Ohtani[1]

P2-43 **Hubbard energy dependence of electronic structures in rare-earth monoxides**

1. University of Fukui (Japan)
*Mizuki Tago[1], Tsukasa Kurachi[1], Takayuki Makino[1]

P2-44 **Post-deposition annealed iron OxideThin films via ECR sputtering: micromagnet fabrication for device integration**

1. JAIST(Japan)
*Jannatul Ferdousy[1], Yingshu Ma[1], Md. Faysal Kabir[1], Soh Komatsu[1], Md Tauhidul Islam[1], Masashi Akabori[1]

P2-45 **Preparation of $Mg_xZn_{1-x}O$ films by using a reactive sputtering method with Mg-Zn targets**

1. National Inst. of Tech. (KOSEN), Sendai College (Japan), 2. Iwate Univ. (Japan)
*Ryo Otoguro[1], Takami Abe[2], Mio Sakuma[1], Jun Suzuki[1], Yuji Imai[1], Koji Kawasaki[1], Hiroshi Osada[2], Yasuhiro Kashiwaba[1]

P2-46 **Time-resolved photoluminescence decay curve analysis in high-purity gallium nitride based on bayesian inference**

1. NAIST(Japan), 2. Kanazawa Inst. Tech. (Japan)
*Keita Ikebe[1], Osuke Ito[2], Kazunori Iwamitsu[1], Zentaro Akase[1], Atsushi A Yamaguchi[2], Shigetaka Tomiya[1]

P2-47 **Surface potential analysis of photoinduced carrier separation at MoS_2/g-C_3N_4 heterojunctions using kelvin probe force microscopy**

1. Keio Univ. (Japan)
*Yuto Suzuki[1], Kei Noda[1]

P2-48 **Improving the performance of water droplet power generator by inserting an electron trapping layer into a fluoropolymer coated polyimide film**

1. Shinshu Univ.(Japan)
*Weining Ying[1], Eiji Itoh[1]

P2-49 **Fabrication of ZnO nanorods and investigation of each composition ratio of $CuCl_{1-x}I_x$ thin films for fabrication of microstructured transparent solar cells**

1. National institute of Technology, Tsuruoka College (Japan)
*Riku Honma[1]

P2-50 **Numerical analysis on the distribution of stresses below the seeding interface in CZ-Si crystal growth**

1. Shinshu Univ. (Japan), 2. Global Wafers Japan Corp. (Japan)
*Hiroki Tsukada[1], Rintaro To[1], Takeshi Hoshikawa[1], Hiroyuki Saito[2], Hisashi Matsumura[1,2], Toshinori Taishi[1]

P2-52 **Crystal phase transition of devitrified silica glass reacted with LiCl**

1. Univ. of Fukui (Japan), 2. Fukui KOSEN (Japan), 3. Tosoh SGM Corp. (Japan)
*Nobu Kuzuu[1], Naohiro Horii[2], Hideharu Horii[3]

P2-53 **First-principles study on tensile test of magnetic carbon nanotubes**

1. Kanazawa University (Japan), 2. Nanomaterials Research Institute (Japan)
*Muhammad Rosyid Ridho[1], Naoya Yamaguchi[2], Fumiyuki Ishiii[2]

P2-54 **Dislocation behavior near seeding interface in <110>-oriented CZ-Si single crystals**

1. GlobalWafers Japan Co., Ltd. (Japan), 2. Faculity of Eng, Shinshu Univ. (Japan)
*Hisashi Matsumura[1,2], Hiroyuki Saito[1], Rintaro To[2], Hiroki Tsukada[2], Shoma Tsukada[2], Takeshi Hoshikawa[2], Toshinori Taishi[2]

P2-55 **Surface anomalous hall effect in antiferromagnetic chromium thin films: a first-principles study**

1. Nanomater. Res. Inst., Kanazawa Univ. (Japan), 2. Grad. Sch. Nat. Sci. Tech., Kanazawa Univ. (Japan)
*Hana Pratiwi Kadarisman[1], Yume Morishima[2], Naoya Yamaguchi[1], Fumiyuki Ishii[1]

P2-56 **Laser-assisted fabrication and structural control of layered hybrid lead halide perovskites**

1. Nagoya Inst. Tech. (Japan), 2. Muroran Inst. Tech. (Japan)
*Yasushi Hamanaka[1], Yoshimasa Fukuta[1], Ryunosuke Miyazawa[1], Takumi Iitsuka[1], Toshihiro Kuzuya[2]

P2-57 **Detecting of acetone on alkali metal-decorated germanene: A DFT study**

1. Instituto Politecnico Nacional, ESIME Culhuacan (Mexico), 2. Instituto de Fisica, Universidad Nacional Autonoma de Mexico (Mexico)
Brandom Jhoseph Cid[1], Jose Eduardo Santana[2], Alejandro Trejo[1], Alvaro Miranda[1], *Miguel Cruz Irisson[1]

P2-58 **Sensing of urea by pristine and doped silicene: DFT calculations**

1. Instituto Politecnico Nacional, Esime Culhuacan (Mexico)
Dinorah Romero[1], Jose Antonio Moreno[1], Mario Gonzalez[1], Fernando Salazar[1], *Miguel Cruz Irisson[1]

P2-59 **Fabrication and characterization N-Type doping of CNT thin films for p-n junction diode**

1. Shinshu University (Japan)
*Zheyuan Cho[1], Makoto Sonehara[1], Katsumi Kaneko[1], Toshiro Sato[1]

P2-60 **Analysis of trap levels using electron beam excitation thermoluminescence method**

1. Kanazawa Institute of Tech. (Japan)
*Takumi Shinogi[1], Shuto Sugito[1], Jofu Furusawa[1], Haruki Fukada[1], Atsushi Yamaguchi[1]

P2-61 **Thickness-dependent thermoelectric properties of 2D SnSe: A first-principles study**

1. Graduate School of Natural Science and Technology, Kanazawa University, Kakuma-machi, Kanazawa-shi, 920-1192, Japan (Japan), 2. Nanomaterials Research Institute (NanoMaRi), Kanazawa University, Kakuma-machi, Kanazawa-shi, 920-1192, Japan (Japan)
*Zohan Syah Fatomi[1], Rifky Syariati[2], Naoya Yamaguchi[2], Fumiyuki Ishii[2]

P2-62 **Real-space imaging of chern number in skyrmions**

1. Kanazawa Univ. (Japan), 2. Nanomaterials Res. Inst., Kanazawa Univ. (Japan)
*Jingwen Yang[1], Naoya Yamaguchi[2], Fumiyuki Ishii[2]

P2-63 **Surface stability of inorganic halide perovskites with water adsorption: A first-principles study**

1. Grad. Sch. Nat. Sci. Tech., Kanazawa Univ. (Japan), 2. Nanomaterials Res. Inst., Kanazawa Univ. (Japan)
*Shohei Miura[1], Naoya Yamaguchi[2], Fumiyuki Ishii[2]

P2-64 **Radioluminescence properties of Ti-doped α-Al_2O_3 single crystals**

1. Nara Inst. of Sci. and Tech. (Japan), 2. National Inst. of Advanced Indus. Sci. and Tech. (Japan)
*Toshiaki Kunikata[1], Hiromi Kimura[2], Haruaki Ezawa[1], Takumi Kato[1], Daisuke Nakauchi[1], Noriaki Kawaguchi[1], Takayuki Yanagida[1]

P2-65 **Microwave-assisted iron-based catalytic decomposition of biomass into hydrogen gas and carbon nanotubes**

1. Fukui Univ. (Japan), 2. FIR, Fukui Univ. (Japan), 3. HISAC, Fukui Univ. (Japan)
*I Putu Abdi Karya[1], Kohei Nakagawa[2], Al Jalali Muhammad[1], Fumihiro Nishimura[3], Toyohiko Nishiumi[1], Takayuki Asano[1,2], Seitaro Mitsudo[1,2]

P2-66 **Chemical passivation of MXene transparent conductive films via vaper phase reaction using silane coupling agents**

1. Grad. Sch. Sci., Nagoya Univ. (Japan), 2. IRCCS, Nagoya Univ. (Japan), 3. IMaSS, Nagoya Univ. (Japan), 4. Wakayama Medical Univ. (Japan)
Yuki Shibata[1], Atsumi Tsutakabe[2], Chen Zhao[2], *Haruka Omachi[1,2,3,4]

P2-67 **Rapid microwave annealing for oriented growth of Bi_2Te_3 thin films**

1. FIR, Univ. of Fukui (Japan), 2. Univ. of Fukui (Japan), 3. Tokai Univ. (Japan)
*Kohei Nakagawa[1], Takuma Iwamoto[2], I Putu Abdi Karya[2], Al Jalali Muhammad[2], Takayuki Asano[1,2], Seitaro Mitsudo[1,2], Tetsuya Takizawa[3], Masayuki Takashiri[3]

P2-68 **Investigation of ex-situ-AlN/AlGaN interfaces for MIS-HEMT applications**

1. Fukui Univ. (Japan), 2. Kwansei Gakuin Univ. (Japan)
*Masahiro Uno[1], Naeemul Islam[1], Kishi Sekiyama[1], Suguru Terai[1], Shundai Yamao[1], Rei Kato[1], Reaz Tanvir Ahmed[1], Ali Baratov[1], Masaaki Kuzuhara[2], Akio Yamamoto[1], Joel T. Asubar[1]

Poster Session 3, June 14, Saturday, 12:00 – 14:00

P3-01 **Hand-written digit image recognition using two parallelized gold-nanoparticle reservoirs**
1. Univ. Electro-Communications (Japan)
Yuki Hayashi[1], Hiroshi Shimada[1], *Yoshinao Mizugaki[1]

P3-02 **Electrostatic adhesion device capable of curved surface attachment**
1. Nihon Univ. (Japan)
*Eiichiro Kikuchi[1], Satomitsu Imai[1]

P3-03 **Effect of light irradiation on the electrolyzed-water neutralizing battery utilizing ZnO:Al/TiO_2 cathode**
1. Shinshu Univ. (Japan)
*Jumpei Yamashita[1], Myo Than Htay Yamamoto[1], Yoshio Hashimoto[1]

P3-04 **Design of molecular quantum-dot cellular automata using simple model**
1. Kogakuin Univ. (Japan)
*Ken Tokunaga[1], Yasunori Ando[1], Takumi Hiramatsu[1], Hayate Ando[1]

P3-05 **X-ray response properties for Yb-doped $Ca_3TaGa_3Si_2O_{14}$ crystals with near-infrared luminescence**
1. Nara Inst. Sci. Tech. (Japan)
*Ryosei Takahashi[1], Kai Okazaki[1], Daisuke Nakauchi[1], Takumi Kato[1], Noriaki Kawaguchi[1], Takayuki Yanagida[1]

P3-06 **Liquid-induced structural modification of azo particles irradiated by light**
1. Niigata Univ. (Japan)
*Yusuke Fujimoto[1], Tatsuki Inoue[1], Shogo Muramatsu[1], Kazunari Shinbo[1], Yasuo Ohdaira[1]

P3-07 **An ultra-sensitive label-free magnetic enrichment SERS technology for detection of SARS-CoV-2 variants and construction of raman databas**
1. Shanghai Inst. of Ceramics, Chinese Academy of Sciences(China)
*Yusi Peng Peng[1], Yong Yang[1]

P3-08 **Core-shell heteroarchitectures of Al-catalyzed Si Nanowire/Ge and their hole gas accumulation enhancement for transistor applications**
1. NIMS(Japan)
*Wipakorn Jevasuwan[1], Naoki Fukata[1]

P3-09 **Neutron detection characteristics of solar cell neutron dosimeterusing converter film by screen-printing**
1. NIT, Kisarazu Coll. (Japan), 2. RIKEN (Japan)
*Tamotsu Okamoto[1], Ayuto Kobayashi[1], Yuji Kurimoto[1], Yasuki Okuno[2], Tomohiro Kobayashi[2]

P3-10 **Charge and discharge characteristics of bipolar batteries with layered double hydroxides**
1. Suwa Univ. of Sci. (Japan)

*Rintaro Kagawa[1], Hikaru Sugihara[1], Satoshi Ogawa[1]

P3-11 **Crystal growth of n-Type organic semiconductor based on perylene derivative in planarly aligned nematic liquid crystal as a solvent**
1. Nagaoka Univ. of Tech. (Japan)
*Saho Ohtani[1], Yosei Shibata[1], Munehiro Kimura[1]

P3-12 **Preparation of hydrogen-doped chromium nitride (CrN:H) thin films**
1. Nagaoka Univ. and Tech. (Japan)
*Koma Tashiro[1], Shu Sawaya[1], Khairul Abrar Bin Onn[1], Tsuneo Suzuki[1]

P3-13 **Formation of mott-hubbard gap by substitutional solid solution of MnN in CrN**
1. Nagaoka Univ. of Tech. (Japan)
*Hiroaki Kato[1], Shu Sawaya[1], Tsuneo Suzuki[1]

P3-14 **Standard sample for measuring low oxygen concentration in thin films using resonance nuclear reactions**
1. Nagaoka Univ. of Tech. (Japan)
*Naoki Nagashima[1], Tsuneo Suzuki[1]

P3-15 **Human IgG biosensor based on a solution-gated P3HT FET**
1. Niigata Univ. (Japan)
*Reaksmey Ek[1], Layheng Chea[1], Akira Baba[1], Kazunari Shinbo[1]

P3-16 **Evaluation of polypyrrole thin film electrodeposition utilizing a hybrid sensor of surface plasmon resonance and quartz crystal microbalance**
1. Niigata Univ. (Japan)
Reaksmey Ek[1], Ruo Obuchi[1], Yasuo Ohdaira[1], Akira Baba[1], *Kazunari Shinbo[1]

P3-17 **Development of organic photovoltaics for bluetooth beacons operating under low-temperature conditions**
1. Graduate School of Natural Science and Tech., Kanazawa Univ. (Japan), 2. NanoMaRi, Kanazawa Univ. (Japan), 3. BME Inc. (Japan), 4. Reiko Corp., Ltd. (Japan)
*Hiroya Ota[1], Masahiro Nakano[1], Takumi Shoji[1], Akihiro Konishi[1], Md. Shahiduzzaman[1,2], Tetsuya Taima[1,2], Makoto Karakawa[1,2], Tetsuya Iwabuchi[3], Kazumi Yoshida[3], Tatsuya Arashitani[4], Shiro Ikuhara[4], Kouzou Kotani[4], Koshin Takahashi[4]

P3-18 **Development of plastic scintillators containing 9,9-dimethylfluorene to achieve high scintillation light yields**
1. Shizuoka Univ. (Japan)
*Taiyo Kanenari[1], Masanori Koshimizu[1]

P3-19 **Elemental analysis of indonesian volcanic ash by CO₂-Laser induced breakdown spectroscopy (CO₂-LIBS)**
1. Univ. of Fukui (Japan), 2. Diponegoro Univ. (Indonesia)
*Souta Imanishi[1], Takumi Uemaru[1], Souta Nakagawa[1], Riki Mitsuya[1], Ali Khumaeni[2], Kazuyoshi Kurihara[1]

P3-20 **Quantification of current fluctuation behavior on a non-volatile memory device by image classification using convolutional neural networks**
1. AIST(Japan)
*Mitsuhiro Okada[1], Takatoshi Yamada[1], Takeo Yamada[1]

P3-21 **Effect of atmospheric absorption for negative-illumination photovoltaic effect with terrestrial radiation**
1. NIT(KOSEN)-Fukui (Japan)
*Toru Matsuura[1], Ayuki Yoshimatsu[1], Riku Shimizu[1], Masakazu Arakawa[1]

P3-22 **Electrical and optical properties of $(Ti_{1-x},Yb_x)N$ thin films**
1. Nagaoka Univ. of Tech. (Japan)
*Khairul Abrar Bin Onn[1], Daiki Shimbori[1], Tsuneo Suzuki[1]

P3-23 **Electrical contacts for semiconductor devices based on 2D materials**
1. Inst. of Electrical Engineering Slovak Academy of Sciences (Slovakia), 2. Centre for Nanodiagnostics of Materials, MTF Trnava (Slovakia)
*Dagmar Gregušová[1], Ondrej Pohorelec[1], Milan Ťapajna[1], Jana Hrdá[1], Andrii Kozak[1], Martin Hulman[1], Matúš Maťko[2], Viliam Vretenár[2], Michaela Sojková[1]

P3-24 **Realization of micro-antennas using conductive polymers**
1. Tokyo Polytechnic Univ. (Japan)
*Ayumu Suzuki[1], Fukuro Koshiji[1], Katsumi Yamada[1]

P3-25 **Measurement of intrinsic "Electro-responsivity" of GaSe induced by high-energy electron irradiation**
1. Japan Advanced Inst. of Science and Tech. (Japan)
*Mai Nakashima[1], Limi Chen[1], Kohei Aso[1], Yukiko Yamada-Takamura[1], Yoshifumi Oshima[1]

P3-26 **Enhanced electron emission from heavily nitrogen-doped diamond films under visible light irradiation**
1. Kanazawa Univ. (Japan), 2. Daicel Corp. (Japan)
*Ryo Ishikawa[1], Kimiyoshi Ichikawa[1], Takao Inokuma[1], Kan Hayashi[1], Satoshi Yamasaki[1], Tsubasa Matsumoto[1], Taro Yoshikawa[1,2], Norio Tokuda[1]

P3-27 **XRD characterization of conductive fillers made of gold and silver leaves**
1. Japan Advanced Inst. of Sci. and Tech. (Japan)
*Jikai Hu[1], Keitaro Eguchi[1], Hideyuki Murata[1]

P3-28 **Storage of interhalogen compounds on single- and double- layered graphene nanoflake: A density functional theory (DFT) study**
1. Nagasaki Univ. (Japan)
*Shigeaki Abe[1]

P3-29 **Effects of synthesis time on microstructural and optical properties of $CuSbS_2$ powders prepared by polyol method**
1. NIT Kagawa Col. (Japan), 2. Kagawa Univ. (Japan), 3. NIT Nagaoka Col. (Japan)
Ryusei Omori[1], *Yasuhiro Shirahata[2,1], Michio Mikawa[1], Takashi Kawakubo[1], Hideaki Araki[3]

P3-30 **Hydrophilic/hydrophobic patterning for controlling droplet dynamics**

1. Kobe Univ. (Japan)
Shintaro Tsuda[1], Yih-Ren Chang[1], Masatoshi Kitamura[1], *Yoshiaki Hattori[1]

P3-31 **Diamond heteroepitaxy on Ni (111) substrate using diamond powder as nucleus**

1. Kanazawa University (Japan), 2. Nanomaterials Research Inst. (Japan), 3. Magnetic Materials Research Center, Shin-Etsu Chemical Corp., Ltd. (Japan)
*Tatsumu Sasaki[1], Kimiyoshi Ichikawa[1,2], Kan Hayashi[1,2], Taro Yoshikawa[2], Satoshi Yamasaki[2], Takao Inokuma[1], Tsubasa Matsumoto[1,2], Taiga Asai[3], Norio Tokuda[1,2]

P3-32 **A new tender XAFS system for characterization of organic thin films at SAGA light source**

1. SAGA-LS(Japan), 2. JASRI(Japan)
*Hiroyuki Setoyama[1], Takeshi Watanabe[2], Masahide Kawamoto[1], Ichiro Hirosawa[1]

P3-33 **Enhanced NV center generation in CVD diamond grown on patterned Ti films**

1. Kanazawa Univ.(Japan), 2. Nanomaterials Res. Inst. (Japan)
*Shuta Niimi[1], Yuto Nakamura[1], Akihiro Koike[1], Kimiyoshi Ichikawa[2], Taro Yoshikawa[2], Tsubasa Matsumoto[1,2], Takao Inokuma[1], Satoshi Yamasaki[2], Norio Tokuda[1,2], Kan Hayashi[1,2]

P3-34 **Post-annealing effect in p-channel thin-film transistors with SnOx as the channel layer**

1. Kobe University (Japan)
*Motonori Taki[1], Yoshiaki Hattori[1], Masatoshi Kitamura[1]

P3-35 **Development of N-Channel organic field-effect transistors with pyridine derivative electron injection layers**

1. National Institute of Tech, Nagaoka (Japan), 2. Niigata Univ. (Japan)
Masahiro Minagawa[1], *Tohki Koike[1], Reiji Shimobe[1], Kazunari Shinbo[2]

P3-36 **Magnetic domain of yttrium iron garnet single crystal**

1. Carlit Co., Ltd. (Japan), 2. Shinshu Univ. (Japan)
*Xiaoxi Liu[2], Tsuyoshi Satoh[1]

P3-37 **Fabrication of electron transport layer material by electrospray for the development of fibrous perovskite solar cells**

1. Aichi Inst. of Tech. (Japan), 2. Asahi Sunac Corp. (Japan), 3. la quaLab LLC. (Japan)
*Kensei Ueyama[1], Shunki Kusida[1], Shinnosuke Sakai[1], Yusuke Ichino[1], Tatsuo Mori[1], Noriyuki Taoka[1], Taishi Segawa[2], Ryosuke Usui[2], Keiji Miyachi[2], Yoshiyuki Seike[1,3]

P3-38 **First principles study of graphene and related 2D materials in quantum capacitance**

1. Graduate School of Natural Sci. and Tech., Kanazawa Univ. (Japan), 2. Nanomaterials Res. Inst. (NanoMaRi), Kanazawa Univ. (Japan)
*Ahmad Sohib[1], Naoya Yamaguchi[2], Fumiyuki Ishii[2]

P3-39 **Photon-controlled optical switching devices**
1. Toyama Univ. (Japan)
*Chikaya Hirabayashi[1], Hiroyuki Okada[1]

P3-40 **Precise temperature measurement assuming Ⅲ-Ⅴcompound semiconductor single crystal growth by vertical bridgman method**
1. Shinshu Univ. (Japan), 2. Sumitomo Electric Semiconductor Materials, Inc. (Japan)
*Daichi Takagi[1], Toshinori Taishi[1], Koichiro Aoyama[2]

P3-41 **Sodium distribution process in devitrification of Cl-containing silica glass**
1. Nat. Inst. of Tech. KOSEN Fukui (Japan), 2. Univ. of Fukui (Japan), 3. Tosoh SGM Corp. (Japan)
*Naohiro Horii[1], Shiho Sakaguchi[1], Nobu Kuzuu[2], Hideharu Horikoshi[3]

P3-42 **Investigation on nonselective etchant for β-Ga₂O₃ crystals**
1. Shinshu Univ. (Japan)
*Aoi Otsuka[1], Taro Tsukada[1], Toshinori Taishi[1]

P3-43 **Observation of dislocations generated at the seeding interface in Czochralski (CZ) Si single crystal growth**
1. Shinshu Univ. (Japan), 2. GlobalWafers Japan Co., Ltd. (Japan)
*Shoma Tsukada[1], Hiroki Tsukada[1], Rintaro To[1], Takeshi Hoshikawa[1], Hiroyuki Saito[2], Hisashi Matsumura[1,2], Toshinori Taishi[1]

P3-44 **Thickness-dependent thermoelectric properties of $CaGe_2$ thin films: A first-principles study**
1. Graduate School of Natural Sci. and Tech., Kanazawa Univ. (Japan), 2. Nanomaterials Res. Inst. (NanoMaRi), Kanazawa Univ. (Japan)
*Ahmad Al Ghiffari[1], Rifky Syariati[2], Yume Morishima[1], Naoya Yamaguchi[2], Fumiyuki Ishii[2]

P3-45 **Vapor phase SiC crystal growth by Si evaporation technique**
1. Shinshu Univ. (Japan)
*Takumi Hoshina[1], Taisei Horiuchi[1], Toshinori Taishi[1]

P3-46 **Vacuum referred binding energy (VRBE) analysis of anomalous yellow afterglow in β-Sr_2SiO_4:Eu, Dy**
1. Nagaoka Univ. of Tech. (Japan), 2. Chiba Univ. (Japan)
Homare Toyota[1], Kodai Tamaki[1], Takuro Arima[1], Masato Ishikawa[2], *Ariyuki Kato[1]

P3-47 **Solution growth of β-Ga_2O_3 using MoO_3 based flux**
1. Shinshu Univ. (Japan)
*Kentaro Ishida[1]

P3-48 **Evaluation on mechanical strength of β-Ga_2O_3 single crystals grown by the VB method using nanoindentation**
1. Shinshu Univ. (Japan)

*Ryuta Ogawa[1], Toshinori Taishi[1]

P3-49 **Relationship between additive impurities and formation of electron traps in $SrAl_2O_4$:Eu,Dy phosphors**
1. Kanazawa Institute of Tech. (Japan)
*Shuto Sugito[1], Haruki Fukata[1], Atsushi Yamaguchi[1], Takumi Shinogi[1]

P3-50 **Induction of chirality in polydiacetylene using evanescent waves**
1. Institute of Science Tokyo (Japan)
*Hongfei Sun[1], Feng Wei[1], Dai Taguchi[1], Takaaki Manaka[1]

P3-51 **Effect of Ag/Sn ratio for Ag-rich Ag_8SnS_6 thin films prepared by sulfurization process**
1. NIT, Miyakonojo College (Japan), 2. Tohoku Univ. (Japan), 3. NIT, Tsuyama College (Japan), 4. NIT, Nagaoka College (Japan)
*Yoji Akaki[1], Tomohiro Uchimura[2], Shigeyuki Nakamura[3], Hideaki Araki[4]

P3-52 **Preparation and evaluation of InP quantum dot thin films by electrostatic spraying deposition method**
1. Doshisha Univ. (Japan)
*Ryotaro Noguchi[1], Koshi Nishiguchi[1], Naoki Ohtani[1]

P3-53 **Optimization of a focused ion beam milling for a nitrogen-vacancy center diamond pillar probe fabrication**
1. Japan Advanced Inst. of Sci. and Tech. (Japan)
*Akito Fukuoka[1], Shunsuke Uesugi[1], Kunitaka Hayashi[1], Dwi Prananto[1], Toshu An[1]

P3-54 **Wide control of 3D QD density by SML growth: Experiments and Modeling**
1. Toyota Tech. Inst. (Japan)
*Ronel Christian Intal Roca[1], Itaru Kamiya[1]

P3-55 **Energy gap evaluation of Si nanoparticles surface terminated with hydrophilic organic molecules**
1. Toyama prefectural Univ. (Japan)
*Taisei Matsushita[1], Yuichi Ota[1], Hitoshi Mizuno[1], So Ito[1], Kazuhide Kamiya[1], Kimihisa Matsumoto[1]

P3-56 **Analysis of Cu_2SnS_3 thin film solar cells by photoluminescence**
1. Nagaoka Univ. Tech. (Japan), 2. Nat.Inst. Tech. (KOSEN), Nagaoka College (Japan)
*Ryodai Ichihara[1], Ayaka Kanai[1], Soichiro Saito[2], Hideaki Araki[2], Kunihiko Tanaka[1]

P3-57 **First-principles study on anomalous Nernst effect in ferromagnetic $CrGeTe_3$ thin film**
1. Kanazawa Univ. (Japan), 2. BRIN (Indonesia)
*Fumiyuki Ishii[1], Kaiki Shibata[1], Naoya Yamaguchi[1], Edi Suprayoga[2], Rifky Syariati[1]

P3-58 **Development of a scanning NV probe microscope with multiple near-surface NV centers**

1. Japan Advanced Inst of Sci and Tech. (Japan), 2. National Inst for Quantum Sci and Tech. (Japan)
*Shunsuke Uesugi[1], Akito Fukuoka[1], Kunitaka Hayashi[1], Dwi Pranato[1], Shinobu Onoda[2], Toshu An[1]

P3-59 **Fabrication and characteristics of transparent position sensitive detector using Al-doped ZnO and Ga-doped SnO_2 thin films**
1. National Institute of Tech., Kagawa College (Japan), 2. Osaka Univ. (Japan), 3. Nagaoka Univ. of Tech. (Japan)
*Yamato Ono[1], Hirotake Kajii[2], Michio Mikawa[1], Touya Takeuchi[1], Hiroshi Murakami[1], Kunihiko Tanaka[3], Taichiro Morimune[1]

P3-60 **Fabrication of single crystalline Fe_3O_4 films on graphene **
1. Hokkaido Univ. (Japan)
Shodai Iwasaki[1], Eko Ishihara[1], Kazuhisa Sueoka[1], *Agus Subagyo[1]

P3-61 **Development of simultaneous detection method of electrically-detected and conventional electron spin resonance signals of phosphorous-doped silicon at very low temperatures**
1. Res. Center for Develop. of FIR, Univ. of Fukui (Japan), 2. Dept of Phys., Sch. of Med., Hyogo Medical Univ. (Japan), 3. SANKEN, Osaka Univ. (Japan)
*Yuta Shimizu[1], Hayato Ito[1], Akinori Ohashi[1], Yutaka Kurachi[1], Kanata Hayashi[1], Yuya Ishikawa[1], Akira Fukuda[2], X. -F. Liu[3], G. M. Gabriel[3], Masayoshi Mori[3], Akira Oiwa[3], Yutaka Fujii[1]

P3-62 **Enhanced acetone gas sensing performance of spherical tungsten trioxide nanorods decorated with nitrogen-doped reduced graphene oxide**
1. National Sun Yat-sen Univ. (Taiwan)
*Feng-Renn Juang[1], Dong-Ting Lin[1]

P3-63 **Site-selected fabrication of MoS_2 transistor by direct sulfurization of pre-patterned Mo films**
1. Hokkaido Univ. (Japan)
Koki Nakane[1], Kazushi Inoue[1], Yuto Kimura[1], Kazuhisa Sueoka[1], *Agus Subagyo[1]

P3-64 **Fabrication of a stripline Printed on a thin film for force-detection ENDOR measurement**
1. Res. Center for Develop. of FIR, Univ. of Fukui (Japan), 2. Technoassist Corp. (Japan), 3. Grad. Sch. of Sci., Kobe Univ. (Japan), 4. AIST(Japan)
*Ryosuke Onogi[1], Yuya Ishikawa[1], Hideyuki Takahashi[2], Eiji Ohmichi[3], Konami Izumi[4], Hirobumi Ushijima[4], Yutaka Fujii[1]