

Poster Session Oct. 27 (Mon), 17:45–19:30

- P-01** Molecular Detection by Dark-Field Microscopic Observation of Heterogeneous Metal Nanoparticle Complexes Combined with Machine Learning-Based Bright Spot Classification
○Ryosuke Izumi¹, Gen Hirao¹, Tsuyoshi Asahi¹, Mizuo Maeda², Takuo Tanaka², Hideo Yokota², Tamotsu Zako^{1,2} (1. Univ. of Ehime (Japan), 2. RIKEN (Japan))
- P-02** Nucleic Acid Detection Using Cross-Linking Aggregation of DNA Density-Controlled Gold Nanoparticles
○Yuki Tanaka¹, Gen Hirao¹, Nanami Fukuzumi¹, Tsuyoshi Asahi¹, Mizuo Maeda², Atsushi Ogawa³, Tamotsu Zako¹ (1. Ehime-Univ. (Japan), 2. RIKEN Cluster for Pioneering Res. (Japan), 3. Proteo-Science Center, Ehime Univ. (Japan))
- P-03** Microphysiological systems integrated porous membrane electrode for in situ cell analysis
○Yoshinobu Utagawa, Hiroya Abe, Hitoshi Shiku, Kosuke Ino (Tohoku Univ. (Japan))
- P-04** Fluorescence-Detected Magnetic Imaging Using NV Diamonds
○Miki Toshima¹, Yasuhiro Shimizu², Andrey Jarmola³, Dmitry Budker^{3,4}, Yuto Esaki¹ (1. Nagoya Univ. (Japan), 2. Shizuoka Univ. (Japan), 3. Univ. of California Berkeley (United States of America), 4. Johannes Gutenberg Univ. Mainz (Germany))
- P-05** Thermometry with nitrogen-vacancy center in detonation nanodiamond
○Masanori Fujiwara¹, Frederick T. K. So^{1,2}, Nene Hariki¹, Masaya Nemoto¹, Alexander I Shames³, Ming Liu⁴, Akihiko Tsurui⁴, Taro Yoshikawa⁴, Yuto Makino⁴, Masanao Ohori¹, Ernst David Herbschleb¹, Naoya Morioka^{1,5}, Izuru Ohki¹, Masahiro Shirakawa^{2,6}, Ryuji Igarashi^{2,7}, Masahiro Nishikawa⁴, Norikazu Mizuochi^{1,5} (1. ICR, Kyoto Univ. (Japan), 2. IQLS, QST (Japan), 3. Department of Phys., Ben Gurion Univ. of the Negev (Israel), 4. Daicel Corp. (Japan), 5. CSRN, ICR, Kyoto Univ. (Japan), 6. Department of Mol. Eng., Kyoto Univ. (Japan), 7. School of Life Sci. and Tech., Science Tokyo (Japan))
- P-06** Visualization of current-induced magnetic field distribution in graphene FETs using NV centers in diamond
○Kazuki Nishibara, Seiji Akita, Takayuki Arie (Osaka Metropolitan Univ. (Japan))
- P-07** Suppression of Nanosheet Fragmentation During Protonation of $K_{0.3}MnO_2$ Single Crystals for Fabrication of Large-Area MnO_2 Nanosheets
Koki Shinagawa, Takuro Dazai, ○Kenjiro Fujimoto (Tokyo Univ. of Sci. (Japan))
- P-08** Phase selective growth of SnS_x thin-films by molecular beam deposition combined with plasma cracked sulfur source
○Ryo Matsumura¹, Naoki Fukata^{1,2} (1. NIMS (Japan), 2. Univ. of Tsukuba (Japan))
- P-09** Observation of nonlinear transport properties induced by insertion of nanocarbon spacers between monolayer graphene sheets
○Hayato Watanabe, Mingda Ding, Shinnosuke Yoshida, Taiki Inoue, Yoshihiro Kobayashi (Univ. of Osaka (Japan))

- P-10** Direct Observation of Charge Transfer in Graphene Field Effect Transistors Using Multi-tip Operando Raman Microscopy
 ○Naoka Nagamura^{1,2,3}, Riku Gotoh^{1,2}, Yuta Suwa^{1,2}, Takuya Iwasaki¹, Masato Kotsugi² (1. NIMS (Japan), 2. Tokyo Univ. of Science (Japan), 3. Tohoku Univ. (Japan))
- P-11** Thermal dissolution of hexagonal boron nitride into electrode metals towards heteronanotube device fabrication
 ○Atsutaka Watanabe, Yoshinori Murase, Taiki Inoue, Yoshihiro Kobayashi (Univ. of Osaka (Japan))
- P-12** Strain engineering of graphene using nanoimprint technology
 ○Takuya Ishibashi, Hiroaki Kawata, Seiji Akita, Takayuki Arie (Osaka Metropolitan Univ. (Japan))
- P-13** Effect of Ethanol Atmosphere on the Crystal Growth of Graphene Islands
 ○Satoshi Kanda¹, Shunji Kurosu², Fumitaka Sakamoto², Tatsuro Hanajiri^{1,2}, Yuta Nishina³, Ryota Negishi^{1,2} (1. Toyo Univ. (Japan), 2. Bio-nanoelectronics Research Centre (Japan), 3. Okayama Univ. (Japan))
- P-14** Enhanced Optical Absorption Modulation of Multilayer Graphene by Nanospacer-Induced Ionic Liquid Intercalation
 ○Shinnosuke Yoshida, Mingda Ding, Hayato Watanabe, Taiki Inoue, Yoshihiro Kobayashi (Univ. of Osaka (Japan))
- P-15** Optimization of Magnetic Topological Insulators for Superconducting Applications
 ○Jan Karthein^{1,2}, Jonas Buchhorn^{1,2}, Gion Toehgiono^{1,2}, Abdur Rehman Jalil^{1,2}, Max Vaßen-Carl^{1,2}, Kaycee Underwood^{1,2}, Taizo Kawano³, Sosuke Otsubo³, Jun Ishihara³, Makoto Kohda³, Peter Schüffelgen^{1,2}, Detlev Grützmacher^{1,2}, Thomas Schäpers^{1,2,3} (1. Peter Grünberg Inst. (PGI-9), Forschungszentrum Jülich (Germany), 2. JARA-Fundamentals of Future Info. Tech., Jülich-Aachen Res. Alliance, Forschungszentrum Jülich and RWTH Aachen Univ. (Germany), 3. Tohoku Univ. (Japan))
- P-16** Optimizing epitaxial growth of Bi₂Te₃ layers on sapphire towards high mobilities
 ○Jonas Buchhorn^{1,2}, Abdur Rehman Jalil^{1,3}, Detlev Grützmacher^{1,2}, Thomas Schäpers^{1,2,4} (1. Peter-Grünberg-Inst. (PGI-9), Forschungszentrum Jülich (Germany), 2. JARA-Fundamentals of Future Info. Tech., Jülich-Aachen Res. Alliance (Germany), 3. Inst. of Experimental Physics III, Univ. of Würzburg (Germany), 4. Tohoku Univ. (Japan))
- P-17** Cryogenic On-Board Calibrated RF Measurement for Characterizing SrTiO₃-Based Capacitors
 ○Akitomi Shirachi^{1,2,6}, Motoya Shinozaki^{3,6}, Yasuhide Tomioka⁴, Hisashi Inoue⁴, Kenta Itoh^{5,6}, Yusuke Kozuka^{3,5,6}, Takanobu Watanabe⁵, Shoichi Sato³, Takeshi Kumasaka³, Tomohiro Otsuka^{1,2,3,6,7,8} (1. Res. Inst. of Electrical Communication, Tohoku Univ. (Japan), 2. Department of Electronic Eng., Graduate School of Eng., Tohoku Univ. (Japan), 3. WPI Advanced Inst. for Materials Res., Tohoku Univ. (Japan), 4. National Inst. of Advanced Indus. Sci. and Tech. (AIST) (Japan), 5. Faculty of Sci. and Eng., Waseda Univ. (Japan), 6. Res. Center for Materials Nanoarchitectonics (MANA), National Inst. for Material Sci. (NIMS) (Japan), 7. Center for Sci. and Innovation in Spintronics, Tohoku Univ. (Japan), 8. RIKEN Center for Emergent Matter Sci. (Japan))

- P-18** Robust Shape Matching for Integration of Multimodal 3D Microscopy Data
○Zentaro Akase¹, Taisei Bessho¹, Kazunori Iwamitsu¹, Yoshito Otake¹, Jun Uzutashi², Hiroshi Nakajima³, Jun Yamasaki³, Tadakatsu Ohkubo², Shigetaka Tomiya¹ (1. Nara Institute of Science and Technology (Japan), 2. National Institute for Materials Science (Japan), 3. The University of Osaka (Japan))
- P-19** Atomic Structure at the Interface Layer of GaN/SiO₂ by Photoelectron Holography
○Nanda Shabrina¹, Hiroto Tomita¹, Zexu Sun¹, Shougo Yamada¹, Yuya Yamada¹, Keisuke Tokuhara¹, Hironobu Murakami¹, Yusuke Hashimoto¹, Yuta Yamamoto¹, Mutsunori Uenuma², Tomohiro Matsushita¹ (1. Nara Institute of Science and Technology (Japan), 2. National Institute of Advanced Industrial Science and Technology (Japan))
- P-20** Photon-Assisted Tunneling through Double Quantum Dot in Magnetic Field
○Miyu Umebayashi, Mikio Eto (Keio Univ. (Japan))
- P-21** Spin-Superconducting Resonator Hybrid Quantum Transducer Device
○Leul Demile¹, Ido Levy², Shigehito Miki³, Javad Shabani², Akira Oiwa^{1,4} (1. SANKEN, Univ. of Osaka (Japan), 2. New York Univ. (United States of America), 3. National Inst. of Info. and Communications Tech. (Japan), 4. QIQB, Univ. of Osaka (Japan))
- P-22** Non-Zero and Low Group-Velocity Mismatch in a Long PPLN Waveguide for Temporal-Mode-Selective Frequency Upconversion of Photons
○Naoto Namekata, Shuichiro Inoue (Nihon Univ. (Japan))
- P-23** Strong Light–Matter Coupling in a H₂O@C₆₀ Single-Molecule THz Cavity Transistor
○Yongqi Ye¹, Dongbao Yin¹, Yoshifumi Hashikawa², Yasujiro Murata², Kazuhiko Hirakawa³, Shaoqing Du^{1,3} (1. SIMIT, CAS (China), 2. Kyoto Univ. (Japan), 3. Univ. of Tokyo (Japan))
- P-24** Discrete time crystals of nuclear spins in quantum liquids
○Yasuhiro Shimizu (Shizuoka Univ. (Japan))
- P-25** Influence of Well/Barrier Widths on Momentum Relaxation Mechanisms in Strongly Coupled Semiconductor Superlattices
○Nagi Maeda¹, Jing Huang¹, Xiangyu Zhu¹, Marc Bescond^{1,2}, Naomi Nagai¹, Kazuyuki Kuroyama¹, Kazuhiko Hirakawa¹ (1. IIS, Univ. of Tokyo (Japan), 2. IN2MP, Aix-Marseille Univ. (France))
- P-26** Optical properties of α-Ga₂O₃ grown on c-, a-, m-, and r-plane sapphire substrates by mist-CVD
○Riena Jinno, Natthajuks Pholsen, Satoshi Iwamoto (Univ. of Tokyo (Japan))
- P-27** Spin readout using Pauli spin blockade in an InAs gate-defined quadruple quantum dot
○Yuki Yokoyama (Univ. of Kyushu (Japan))

- P-28** Exciton Controlled-NOT Gate as an Entangled Photon Source
○Akira Hida, Koji Ishibashi (RIKEN (Japan))
- P-29** Scan Speed Effect on The Laser Induced Crystallization of Ge Film on Quartz
○Yuta Goto^{1,2}, Ryo Matsumura¹, Naoki Fukata^{1,2} (1. NIMS (Japan), 2. Univ. of Tsukuba (Japan))
- P-30** Effect of Dirac frequency on mode distribution in valley photonic crystal heterostructure waveguide
○Xiaomeng Chi, Chengkun Zhang, Guangtai Lu, Nao Harada, Satoshi Iwamoto (Univ. of Tokyo (Japan))
- P-31** High-Sensitivity Silicon Nitride MEMS Resonator for Room-Temperature Bolometric Terahertz Sensing
○Yuto Amano, Akira Kojima, Nobuyoshi Koshida, Ya Zhang (Tokyo Univ. of Agriculture and Technology (Japan))
- P-32** Uncooled Terahertz Detection using SOI MEMS Beam Resonators with Piezoresistive Readout
○Ryotaro Takeuchi¹, Qian Liu¹, Zihao Zhao¹, Isao Morohashi², Kazuhiko Hirakawa^{1,3}, Ya Zhang¹ (1. Tokyo University of Agriculture and Technology (Japan), 2. National Institute of Information and Communications Technology (Japan), 3. University of Tokyo (Japan))
- P-33** Selective MOVPE growth in microcavity for the fabrication of InP/InGaAs lateral HBTs
○Shota Watanabe, Yasuyuki Miyamoto (Science Tokyo (Japan))
- P-34** Tight-Binding Model with Compact 4×4 Hamiltonian Matrix for 4H-SiC Conduction Band
○Sachika Nagamizo, Hajime Tanaka, Nobuya Mori (The Univ. of Osaka (Japan))
- P-35** Physics-Informed Neural Network Framework for 3D Monte Carlo Simulation of GAA Transistors
○Yusuke Otsuki, Nobuya Mori (Univ. of Osaka (Japan))
- P-36** Dependence of the Device Characteristics of Stacked Nanosheet FETs on Substrate Structures: TCAD Simulation Analysis
○Jin Hyong Lim¹, Yi-Cheng Liu², Hajime Tanaka¹, Nobuya Mori¹ (1. The University of Osaka (Japan), 2. National Taiwan University (Taiwan))
- P-37** Effect of Substrate Acceptor Concentration on the Density of States in Si MOS Structures at Cryogenic Temperatures
○Kaoru Kato, Hajime Tanaka, Nobuya Mori (Univ. of Osaka (Japan))
- P-38** 10,000-Cycle Bending Durability of ZnO Thin-Films on Flexible Polymer Substrates for Flexible Oxide Devices
○Toshihiko Maemoto, Kazuyori Oura, Kensuke Nakata, Naoki Takada, Hideo Wada, Masatoshi Koyama, Akihiko Fujii (Osaka Inst. of Tech. (Japan))

P-39 AlOx/ZnO MIM Diodes for Transparent Rectenna Applications

○Haruto Monda, Kensuke Nakata, Naoki Takada, Hideo Wada, Masatoshi Koyama, Akihiko Fujii, Toshihiko Maemoto (Osaka Inst. of Tech. (Japan))

P-40 Characterization of Indium Oxide TFTs Fabricated from an Aqueous Precursor with 172-nm Excimer-Light Activation

○Kazuki Ueda¹, Ryosuke Kasahara¹, Hideya Ochiai¹, Takuya Nomura¹, Akira Fujimoto¹, Hideo Wada¹, Masatoshi Koyama¹, Akihiko Fujii¹, Akihiro Shimizu², Noritaka Takezoe², Hiroyasu Ito², Toshihiko Maemoto¹ (1. Osaka Inst. of Tech. (Japan), 2. Optical Process GBU, Indus. Process Division, Ushio Inc. (Japan))

P-41 Single-Electron Stochastic Resonance Driven by Thermal Fluctuation

○Seiya Kasai (Hokkaido Univ. (Japan))