ISNTT2021 Symposium Poster Session I

December 15, 2021 (Wednesday)

PST (UTC -08:00)	17:00 ~ 19:00
EST (UTC -05:00)	20:00 ~ 22:00
WET (UTC +00:00)	01:00 ~ 03:00
JST (UTC +09:00)	10:00 ~ 12:00

P1-01 : Electrically Controlled Two-dimensional Electron-hole Fluids

Y. Zeng, A. H. MacDonald

University of Texas at Austin

P1-02 : Real-time Ultraviolet Optical Imaging of Graphene CVD Growth

Y. Ogawa, T. Tawara, Y. Taniyasu

NTT Basic Research Laboratories

P1-03 : Fabrication of Single-Oriented Domains Bi_2Te_3 Thin Films on BaF_2 Substrates

Y. Tanaka, Y. Krockenberger, Y. Kunihashi, H. Sanada, H. Gotoh, K. Oguri

NTT Basic Research Laboratories

P1-04 : Semi-Empirical Model of Indium Atom Adsorption at InAs Surfaces Based on LT-STM Observation

K. Kanisawa

NTT Basic Research Laboratories

P1-05 : Polarity-dependent Incorporation Efficiency of Bi Atoms in <112>-Oriented Diluted $InP_{1-x}Bi_x$ Nanowires

G. Zhang, K. Oguri

NTT Basic Research Laboratories

P1-06 : Observation of High Carrier Density and Metallic Conductivity Down to 5 K in Multilayer MoS_2 Flakes with Aluminum Contacts

Y. Shimazu, S. Ono, T. Miyazawa, K. Yamada

Yokohama National University

P1-07 : Temperature Dependence of Low-frequency Capacitance Due to Variablerange Hopping

T. Hayashi, Y. Tokura, K. Nishiguchi

NTT Basic Research Laboratories

P1-08 : Cationic Stripes and Localization in Infinite-layer Cuprates

Y. Krockenberger, A. Ikeda, H. Yamamoto

NTT Basic Research Laboratories

P1-09 : Self-folding Graphene-based Film for Bio-sensing from 3D Tissues

K. Sakai, T. Teshima, T. Goto, H. Nakashima, M. Yamaguchi

NTT Basic Research Laboratories / Bio-Medical Informatics Research Center

Poster Session I

P1-10 : Hydrogel Fluidic Device Formed through the Buckle-delamination

R. Takahashi, H. Miyazako, A. Tanaka, M. Yamaguchi

NTT Basic Research Laboratories / Bio-Medical Informatics Research Center

P1-11 : Microwave Photoresistance in $Al_xGa_{1-x}As/Al_{0.24}Ga_{0.76}As$ Quantum Wells

I. B. MacKay, Q. Shi, G. C. Gardner, M. J. Manfra, M. A. Zudov

University of Minnesota

P1-12 : An asymptotic Expansion of Solution of Master Equation and its Application to Speed Limits

S. Nakajima Y. Utsumi

Mie University

P1-13 : Strong Room-temperature EL Emission from Ge-on-Si (111) Diodes with Ferromagnetic Schottky-tunnel Electrodes

Y. Sugiura, M. Sasaki, Y. Wagatsuma, K. Yamada, Y. Hoshi, M. Yamada, K. Hamaya, K. Sawano

Tokyo City University

P1-14 : Spin Diffusion Velocity Dependence of Spatiotemporal Evolution of Electron Spins in Close to Persistent Spin Helix State

T. Suzuki, J. Ishihara, T. Mori, Y. Ohno, K. Miyajima

Tokyo University of Science

P1-15 : Spin Selectivity through Time-reversal Symmetric Helical Junctions

Y. Utsumi, O. Entin-Wohlman, A. Aharony

Mie University

P1-16 : Proposal of Generalized Bloch Spheres

S. Sato, T. Matsumoto, Y. Nakano, K. Miyamoto, T. Omatsu, K. Morita

Chiba University

P1-17 : Time-resolved Measurement of Chiral Edge Transport in InAs/InGaSb Composite Quantum Wells

H. Kamata, H. Irie, N. Kumada, K. Muraki

NTT Basic Research Laboratories / JST, PRESTO

P1-18 : Capacitance Spectroscopy of Hybridized Landau Levels in InAs/InGaSb Quantum Wells

H. Irie, T. Akiho, K. Onomitsu, K. Muraki

NTT Basic Research Laboratories

P1-19 : Soft-magnetic Skyrmions Induced by Surface-state Coupling in a Sandwich Structure with an Intrinsic Ferromagnetic Topological Insulator

T. Takashiro, R. Akiyama, I. A. Kibirev, A. V. Matetskiy, R. Nakanishi, S. Sato, T. Fukasawa, T. Sasaki, H. Toyama, K. L. Hiwatari, A. V. Zotov, A. A. Saranin, T. Hirahara, S. Hasegawa

The University of Tokyo

P1-20 : Study on Exceptional Points in Graphene Loaded Photonic Crystals

S. Otsuka, T. Uemura, T. Yoda, Y. Moritake, M. Notomi

Tokyo Institute of Technology / NTT Basic Research Laboratories

Poster Session I

P1-21 : Photoluminescence Enhancement of Erbium Ions in Rare-earth Oxide Thin Films Using Si-based Microring Resonators

M. Hiraishi, T. Inaba, X. Xu, H. Sanada, T. Tsuchizawa, A. Ishizawa, T. Tawara, H. Omi, J. Longdell, K. Oguri, H. Gotoh

NTT Basic Research Laboratories / University of Otago

P1-22 : Entropy Pumping under Nonlinear Measurement and Feedback in a Micromechanical Resonator

M. Asano, H. Okamoto, H. Yamaguchi

NTT Basic Research Laboratories

P1-23 : Coupled Nonlinear Silicon Mechanical Resonators Driven by Piezoelectric Transducers

M. Kurosu, D. Hatanaka, H. Okamoto, H. Yamaguchi

NTT Basic Research Laboratories

P1-24 : Micromechanical Control of the Optical Resonances of Erbium Ions

R. Ohta, L. Herpin, V. M. Bastidas, T. Tawara, H. Yamaguchi, H. Okamoto

NTT Basic Research Laboratories

P1-25 : Quantum Metamorphism

V. M. Bastidas, M. P. Estarellas, K. Nemoto, W. J. Munro

NTT Basic Research Laboratories / National Institute of Informatics

P1-26 : Exceptional Points and Dissipative Phase Transition

J.Y. Han, J. Thingna

Institute for Basic Science / University of Science and Technology

P1-27 : Quantum Enhanced Heat Engine by Superabsorption

S. Kamimura, H. Hakoshima, Y. Matsuzaki, K. Yoshida, Y. Tokura

AIST / University of Tsukuba

P1-28 : Quantum Battery with Superabsorption Quantum Heat Engine

Y. Ueki, S. Kamimura, Y. Matsuzaki, K. Yoshida, Y. Tokura

University of Tsukuba

P1-29 : Estimation of the Spin Sensitivity of a Flux Qubit Dispersively Coupled to a Resonator

H. Toida, K. Kakuyanagi, L. V. Abdurakhimov, S. Saito

NTT Basic Research Laboratories

P1-30 : Saturable Purcell Filter for Circuit QED

I. Iakoupov, K. Koshino

Tokyo Medical and Dental University

P1-31 : Hamiltonian of a Flux Qubit-LC Oscillator Circuit in the Deep-strong-coupling Regime

F. Yoshihara, S. Ashhab, T. Fuse, M. Bamba, K. Semba

NICT Advanced ICT Research Institute

P1-32 : Development of Photonic Crystal Cavities on a 300 nm Silica Nanofiber for Single Atom Quantum Interface

K. P. Nayak, K. M. Shafi

University of Electro-Communications

P1-33 : Stimulated Emission of Superradiant Atoms in Waveguide QED

R. Asaoka, Y. Tokunaga, J. Gea-Banacloche, K. Koshino

Computer and Data Science Laboratories

P1-34 : Laser Frequency Measurement at UV-wavelength Region Using an Intermediate Laser and a Frequency Noise Cancellation Method

Y. Kojima, K. Ikeda, Y. Tanabe, D. Akamatsu, F.-L. Hong

Yokohama National University

P1-35 : Dependence of Supercontinuum Light on Incident Laser Polarization and Dispersion-controlled SiN Waveguides

K. Yoshida, A. Ishizawa, R. Kou, X. Xu, T. Tsuchizawa, T. Aihara, Y. Kikkawa, T. Nishikawa, K. Hitachi, G. Cong, N. Yamamoto, K. Yamada, K. Oguri

NTT Basic Research Laboratories / Tokyo Denki University

P1-36 : Transportable Optical Lattice Clocks to Test Gravitational Redshift in a Broadcasting Tower

N. Ohmae, M. Takamoto, I. Ushijima, T. Yahagi, K. Kokado, H. Shinkai, H. Katori

Fukuoka University / RIKEN

P1-37 : Quantum Metrology Based on Symmetry-protected Adiabatic Transformation

T. Hatomura, A. Yoshinaga, Y. Matsuzaki, M. Tatsuta

NTT Basic Research Laboratories

P1-38 : Anonymous Quantum Sensing

H. Kasai, Y. Takeuchi, H. Hakoshima, Y. Matsuzaki, Y. Tokura

University of Tsukuba / National institute of Advanced Industrial Science and Technology

P1-39 : Variational Quantum Approach to Learn Quantum Gates from Hamiltonian

A. Majumder, D. Lewis, S. Bose

Indian Institute of Technology Kharagpur

P1-40 : Ultrafast Landau-Zener-Stückelberg-Majorana (LZSM) Gates

O. V. Ivakhnenko, A. I. Ryzhov, S. N. Shevchenko, F. Nori

B. Verkin ILTPE of NASU / RIKEN

P1-41 : Consideration of Stabilization Methods of a Double Quantum Dot Towards Long-term and Stable Spin-qubit Operation

H. Takahashi, S. Nishiyama, S. I. Ibad, K. Kato, Y. Liu, S. Murakami, T. Mori, R. Mizokuchi, J. Yoneda, T. Kodera

Tokyo Institute of Technology

P1-42 : Emission and Absorption of Single Photon by a Controller Artificial Atom in the Waveguide Quantum Electrodynamics System

T. Yokoyama, R. Yoshida, T. Kato, H. Ishihara

Osaka University

ISNTT2021 Symposium Poster Session II

December 16, 2021 (Thursday)

PST (UTC -08:00)	02:00 ~ 04:00
EST (UTC -05:00)	05:00 ~ 07:00
WET (UTC +00:00)	10:00 ~ 12:00
JST (UTC +09:00)	19:00 ~ 21:00

P2-01 : Bloch-Lorentz Magnetoresistance Oscillations in Delafossites

K. Vilkelis, L. Wang, A. Akhmerov

Delft University of Technology

P2-02 : Graphene Based Hybrid Metasurfaces for Mid-IR Gas Sensors

T. Yager, Y. Fu, G. Chikvaidze, S. Iyer, Q. Wang, G. Mozolevskis

University of Latvia

P2-03 : Purcell-like Enhancement of Electron-phonon Interactions in Long-period Superlattices: Linear-T Resistivity and Cooling Power

H. Ishizuka, A. Fahimniya, F. Guinea, L. Levitov

Tokyo Institute of Technology

P2-04 : Improvement of Electrical Properties in hBN-encapsulated $MoTe_2$ Monolayers by Thermal Anneal

Y. Hoshi, Y. Odagiri, S. Hayashida, K. Watanabe, T. Taniguchi, K. Sawano

Tokyo City University

P2-05 : Theoretical Study of hBN/graphene Heterostructure CVD Growth

H. Kageshima, S. Wang, H. Hibino

Shimane University

P2-06 : Microscopic Mechanism of Hydrogen Intercalation in Graphene/SiC (0001)

R. Sakakibara, W. Norimatsu

Nagoya University

P2-07 : Weyl Fermions in an Epitaxial Ferromagnetic Oxide Grown by Machine-learning-assistedmolecular Beam Epitaxy

Y. K. Wakabayashi, K. Takiguchi, Y. Krockenberger, H. Irie,T. Otsuka, H. Sawada, S. A. Nikolaev, H. Das, M. Tanaka, Y. Taniyasu, H. Yamamoto

NTT Basic Research Laboratories

P2-08 : GaNAsBi/GaAs Multiple Quantum well Structures Grown by plasmaassisted Molecular Beam Epitaxy: Bi Incorporation Scheme at an Interface

S. Hasegawa, H. Kawata, R. Aoki, H. Nishinaka, M. Yoshimoto

Kyoto Institute of Technology

P2-09 : Origin of Ferromagnetism in Fe Nanoparticles Embedded in Diamond Films

M. Kawano, K. Hirama, K. Kumakura

NTT Basic Research Laboratories

P2-10 : Tunable Surface State Transport in Surface-engineered Topological Insulator Nanoribbons

E. Kauranens, K. Niherysh, D. Salnajs, D. Erts, G. Kunakova

University of Latvia

P2-11 : Optimal Accuracy of Single-electron Pumping Using a Dynamic Quantum Dot

G. Yamahata, N. Johnson, A. Fujiwara

NTT Basic Research Laboratories

P2-12 : Observation of Photoluminescence from SiGe/Ge MQW on Ge-on-Si(111)

Y. Wagatsuma, Md. M. Alam, K. Okada, R. Kanesawa, M. Yamada, K. Hamaya, K. Sawano

Tokyo City University

P2-13 : Strong Resonant Light Emission in Strained Ge Microbridges

T. Inoue, Y. Wagatsuma, L. Ikegaya, K. Okada, K. Sawano

Tokyo City University

P2-14 : Spin Pumping into Two-dimensional Electron Gas with Spin-orbit Interactions

M. Yama, M. Tatsuno, T. Kato, M. Matsuo

The University of Tokyo

P2-15 : Tunable Giant Spin-orbit Interaction in Gate-all-around Core-shell Nanowire

K. Takase, S. Tateno, S. Sasaki

NTT Basic Research Laboratories

P2-16 : Valley Polarization Recovery Driven by Intravalley Scattering in Mo-based Monolayer Transition-metal Dichalcogenides

T. Odagawa, E. Asakura, M. Suzuki, S. Karube, J. Nitta, M. Kohda

Tohoku University

P2-17 : Spin Dynamics Induced by In-plane Magnetic Field in GaAsBi

Y. Kunihashi, Y. Tanaka, H. Sanada, K. Oguri, M. Kohda, J. Nitta, S. Hasegawa, H. Nishinaka, M. Yoshimoto, H. Gotoh

NTT Basic Research Laboratories

P2-18 : High-precision Current-noise Measurements Using Homemade-HEMT-based Transimpedance Amplifiers

T. Shimizu, M. Hashisaka, H. Bohuslavskyi, T. Akiho, N. Kumada, S. Katsumoto, K. Muraki

NTT Basic Research Laboratories / The University of Tokyo

P2-19 : Energy Band Structures of Edge Magnetoplasmons in a Two-dimensional Domain Network

K. Sasaki

NTT Basic Research Laboratories

P2-20 : High Q-factor Free-standing Silicon Microdisk Resonators in the Mid-infrared Region

T. Miyake, X. Xu, K. Sawano, K. Oguri

NTT Basic Research Laboratories / Tokyo City University

P2-21 : Origin of High Transmission in Sharp Bends of Triangular-lattice Photonic Crystal Waveguides

W. Dai, T. Yoda, Y. Moritake, M. Ono, E. Kuramochi, M. Notomi

Tokyo Institute of Technology

P2-22 : On-chip Bi_2Se_3 Nanowire Nanoelectromechanical Switches for Cryogenic Switching

L. Jasulaneca, R. Meija, E. Kauranens, R. Sondors, J. Andzane, J. Prikulis, D. Erts

University of Latvia

P2-23 : Self-sustained Mechanical Oscillations Promoted by Superconducting Proximity Effect

O.M. Bahrova, L.Y. Gorelik, S.I. Kulinich, H.C. Park, R.I. Shekhter

Institute for Basic Science / B. Verkin ILTPE of NASU

P2-24 : Modulation of THz-wave for THz Wireless Communication Using Micro Soliton Comb

Y. Tokizane, Y. Okamura, H. Kishikawa, N. Kuse, T. Yasui

Tokushima University

P2-25 : Vortex Penetration and Expulsion in Mesoscopic-sized Atomically Thin Superconductor $NbSe_2$

L. Haoyun, R. Yanai, H. Tomori, T. Taniguchi, K. Watanabe, M. Hayashi, A. Kanda

University of Tsukuba

P2-26 : Designing a Josephson Ring Circuit for a Passive on-chip Microwave Circulator

Y. Takeda, Y. Nakamura

The University of Tokyo

P2-27 : Numerical Investigation of Gate Fidelity Using Optimal Control Theory on Bosonic Codes in a Circuit-QED System

K. Mizuno, T. Takenaka, I. Mahboob, S. Saito

NTT Basic Research Laboratories

P2-28 : High-Q Superconducting 3D Cavities for Bosonic Codes

T. Takenaka, I. Mahboob, K. Mizuno, T. Kubo, T. Saeki, S. Saito

NTT Basic Research Laboratories

P2-29 : Coherence Measurements of a Flux Qubit-LC Oscillator Circuit in the Deep-strong Coupling Regime

T. Fuse, F. Yoshihara, S. Ashhab, K. Kakuyanagi, S. Saito, K. Semba

NICT

P2-30 : Parameter Analysis Towards Deterministic Photon Down-conversion in Ultra-strong Coupling Regime

Z. Ao, F. Yoshihara, T. Fuse, T. Aoki, K. Koshino, K. Semba

Waseda University

P2-31 : Gauge-sensitive Selection Rule in the Ultrastrong Coupling Regime

T. Shitara, K. Koshino

Tokyo Medical and Dental University

P2-32 : Multiphoton Pulses in Waveguide QED with Coherent Time-Delayed Feedback

K. Barkemeyer, A. Knorr, A. Carmele

Technische Universität Berlin

P2-33 : Enhanced Inelastic Scattering of Photons in Remote-coupled Optomechanical Systems

T. Yokoyama, S. Tamaki, H. Ishihsara

Osaka University

P2-34 : Four Regimes of Excitations of a Double Quantum Dot

A. I. Ryzhov, M. P. Liul, S. N. Shevchenko, M. F. Gonzalez-Zalba, F. Nori

B. Verkin ILTPE of NASU

P2-35 : Degenerate Optical Parametric Oscillators in Non-equilibrium Thermo Field Dynamics

K. Yoshida

University of Tsukuba

P2-36 : Towards Optical Polarization of Nuclear Spins via the Negatively Charged Tin-Vacancy Center in Diamond

A. M. Stramma, R. Debroux, C. P. Michaels, C. M. Purser, N. Wan, M. E. Trusheim, J. A. Martínez, R. A. Parker, K. C. Chen, L. de Santis, D. Englund, D. A. Ganglo, M. Atatüre

University of Cambridge

P2-37 : Development of Yb+ ion Based Optical Frequency Standard at CSIR-National Physical Laboratory, India

M. Das, S. Utreja, H. Rathore, S. Panja

CSIR-National Physical laboratory India

P2-38 : Optical Lattice Clock Frequency-linked Over 100 km with 2.9×10^{-17} Uncertainty

H. Imai, T. Akatsuka, K. Oguri, A. Ishizawa, M. Takamoto, I. Ushijima, Y. Tanaka, H. Katori, T. Hashimoto, H. Gotoh, T. Sogawa

NTT Basic Research Laboratories

P2-39 : Towards GHz Offset Locking for 420nm Laser Systems Using Free-space EOMs

K. Urakawa, K. Honda, T. Kishimoto

The University of Electro-Communications

P2-40 : Magnetic-field-insensitive Coherent-population-trapping Resonances for Miniature Atomic Clock Applications

K. Matsumoto, S. Kagami, A. Kirihara, S. Yanagimachi, T. Ikegami, A. Morinaga

NEC Corporation / NEC-AIST Quantum Technology Cooperative Research Laboratory

P2-41：Advances in Quantum Metrology for Precise Measurement

A. Majumder, H. Shrotriya, L.-C. Kwek

Indian institute of technology Kharagpur

P2-42：Quantum Sensing of the Electron Electric Dipole Moment Using Quantum Entangled Atoms

T. Aoki, R. Sreekantham, B. K. Sahoo, B. Arora, A. Kastberg, T. Sato, H. Ikeda, N. Okamoto, Y. Torii, T. Hayamizu, K. Nakamura, S. Nagase, M. Ohtsuka, H. Nagahama, N. Ozawa, M. Sato, T. Nakashita, K. Yamane, K. S Tanaka, K. Harada, H. Kawamura, T. Inoue, A. Uchiyama, A. Hatakeyama, A. Takamine, H. Ueno, Y. Ichikawa, Y. Matsuda, H. Haba, Y. Sakemi

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