Program

September 11 (Mon)

(8:30-8:45)
Opening Remarks

Session MO-A1: NV Centers

MO-A1-1 (8:45-9:15)
"Hybrid quantum systems for quantum limited sensing" (invited)
J. Wrachtrup
Institute for Quantum Science and Technology, University of Stuttgart

MO-A1-2 (9:15-9:30)
Electrical extension of spin coherence time of single electron spin in diamond
S. Kobayashi[1], Y. Matsuzaki[2], H. Morishita[3], S. Miwa[1], Y. Suzuki[1], M. Fujiwara[3], and N. Mizuochi[3]
[1]Graduate School of Engineering Science, Osaka University, [2]NTT Basic Research Laboratories, NTT Corporation, [3]Institute for Chemical Research, Kyoto University

MO-A1-3 (9:30-9:45)
Optical holonomic quantum gates over an NV spin in diamond
Y. Sekiguchi, N. Niikura, R. Kuroiwa, H. Kano and H. Kosaka
Yokohama National University

MO-A1-4 (9:45-10:00)
Hybrid quantum sensing using quantum virtual memories in single NV center in diamond
H. Morishita[1], T. Tashima[2], and N. Mizuochi[1]
[1]Institute for Chemical Research, Kyoto University, [2]Department of Electronic Science and Engineering, Kyoto University

MO-A1-5 (10:00-10:15)
Hybridization: a tool to explore nonlinear quantum phenomena
W. J. Munro[1,4], A. Angerer[2], S. Putz[2], T. Astner[2], R. Glattauer[2], D. O. Krimer[3], K. Nemoto[4], S.

Rotter[3], J. Schmiedmayer[2], J. Majer[2]
[1]NTT Basic Research Laboratories, [2]Vienna Center for Quantum Science and Technology, Atominstitut, TU Wien, [3]Institute for Theoretical Physics, TU Wien, [4]National Institute of Informatics

Coffee Break

Session MO-A2: Quantum Transport

MO-A2-1 (10:45-11: 15)
Landau-Zener transitions as universal tool for studying the dynamics of coupled systems (invited)
S. Ludwig
Paul-Drude-Institut für Festkörperelektronik (PDI)

MO-A2-2 (11:15-11:30)
Anisotropic heavy-hole g-factors and relevance to photon-to-spin conversion schemes in semiconductor quantum dot circuits
A. Bogan,[1,2] S. A. Studenikin,[1] M. Korkusinski,[1] G. C. Aers,[1] L. Gaudreau,[1] P. Zawadski,[1] A. Kam,[1] A. S. Sachrajda,[1] D. G. Austing,[1] L. A. Tracy,[3] J. L. Reno,[3] and T. W. Hargett[3]
[1]Security and Disruptive Technologies Portfolio, National Research Council of Canada, [2]Department of Physics and Astronomy, University of Waterloo, [3]Sandia National Laboratories

MO-A2-3 (11:30-11:45)
Symmetry and selection rules in a qubit-oscillator coupled system
T. Fuse[1], F. Yoshihara[1], S. Ashhab[2], K. Kakuyanagi[3], S. Saito[3], K. Semba[1]
[1]National Institute of Information and Communication Technology, [2]Qatar Environment and Energy Research Institute, [3]NTT Basic Research Laboratories

MO-A2-4 (11:45-12:00)
Quantum algorithm for universal implementation of projective measurement of energy
S. Nakayama,[1] A. Soeda,[1,2] and M. Murao[1,3]
[1]Department of Physics, University of Tokyo, [2]Centre for Quantum Technologies, National University of Singapore, [3]Institute for Nano Quantum Information Electronics, University of Tokyo

Conference Photo

Lunch Break

Session MO-P1: Quantum Spin Systems

MO-P1-1 (13:15-13:45)

Towards nitrogen-vacancy colour centre lasers for high sensitivity magnetometry (invited)

A. Greentree
RMIT University

MO-P1-2 (13:45-14:00)

Magnetic-field sensing with quantum error detection under the effect of energy relaxation

Y. Matsuzaki[1] and S. Benjamin[2]
[1]NTT Basic Research Laboratories, [2]Department of Materials, University of Oxford,

MO-P1-3 (14:00-14:15)

Electron transport in quantum point contact with hyperfine interaction under finite magnetic field

T. Aono,[1] M. Kawamura,[2] P. Stano,[2,3] K. Ono,[2] and T. Komine[1]
[1]Faculty of Engineering, Ibaraki University, [2]RIKEN Center for Emergent Matter Science, [3]Institute of Physics, Slovak Academy of Sciences

MO-P1-4 (14:15-14:30)

Resistively detected NMR line shapes in a quasi-one-dimensional electron system

M. H. Fauzi[1,2], A. Singha[3], M. F. Sahdan[1], M. Takahashi[1], K. Sato[1], K. Nagase[1], B. Muralidharan[3], and Y. Hirayama[1,2]
[1]Department of Physics, Tohoku University, [2]CSRN, Tohoku University, [3]Department of Electrical Engineering, IIT-Bombay

MO-P1-5 (14:30-14:45)

Relaxation to negative temperatures in spin domain systems

Y. Hama,[1] W. J. Munro,[1,2] K. Nemoto[1]
[1]National Institute of Informatics, [2]NTT Basic Research Laboratories

MO-P1-6 (14:45-15:00)

Nuclear spins in quantum dot spin qubits

P. Stano,[1] T. Nakajima,[1] T. Otsuka,[1] J. Yoneda,[1] L. Camenzind,[2] L. Yu,[2] D. Loss,[1,2] S. Tarucha,[1] D. Zumbühl[2]

[1]CEMS, RIKEN, [2]Department of Physics, University of Basel

MO-P1-7 (15:00-15:15)
Real-space mapping of nuclear resonance spectroscopy in a quantum-Hall system
K. Hashimoto, T. Tomimatsu, and Y. Hirayama
Department of Physics, Tohoku University

Coffee Break

Session MO-P2: Quantum Manipulation

MO-P2-1 (15:45-16:15)
Andreev quantum dots (invited)
C. Urbina
CEA-Saclay

MO-P2-2 (16:15-16:30)
Microwave irradiation as an alternative method for controlling the energy detuning of a superconducting flux qubit
H. Toida, T. Ohrai, Y. Matsuzaki, K. Kakuyanagi, H. Yamaguchi, and S. Saito
NTT Basic Research Laboratories

MO-P2-3 (16:30-16:45)
Toward spin coupling of double QDs to superconducting coplanar waveguide cavities
R. Wang,[1] R.S. Deacon,[1,2] J. Sun,[1] J. Yao,[3] C.M. Lieber,[4] D. Car[5], E.P.A.M. Bakkers,[5] and K. Ishibashi[1,2]
[1]Advanced Device Laboratory, RIKEN, [2]Center for Emergent Matter Science (CEMS), RIKEN, [3]Deparment of Chemical Biology, Harvard University, [4]Division of Engineering and Applied Sciences, Harvard University, [5]Department of Applied Physics, Eindhoven University of Technology

MO-P2-4 (16:45-17:00)
Quantum transport assisted by non-Markovian environment
C. Uchiyama[1], W. J. Munro[2] and K. Nemoto[3]
[1]Graduate School of Interdisciplinary Research, Univ. of Yamanashi, [2]NTT Basic Research Laboratories, [3]National Institute of Informatics

MO-P2-5 (17:00-17:15)

Characteristic spectra of circuit quantum electrodynamics systems from the ultrastrong- to the deep-strong-coupling regime

F. Yoshihara,[1] T. Fuse,[1] S. Ashhab,[2] K. Kakuyanagi,[3] S. Saito,[3] and K. Semba[1]

[1]National Institute of Information and Communications Technology, [2]Qatar Environment and Energy Research Institute, [3]NTT Basic Research Laboratories

MO-P2-6 (17:15-17:30)

Strong coupling between an electron in a quantum dot circuit and a photon in a cavity

L.E Bruhat,[1] T. Cubaynes,[1] J.J. Viennot,[2] M. C. Dartiailh,[1] M.M. Desjardins,[1] A. Cottet,[1] and T. Kontos[1]

[1]Laboratoire Pierre Aigrain, Ecole Normale Supérieure-PSL Research University, CNRS, Université Pierre et Marie Curie-Sorbonne Universités, Université Paris Diderot-Sorbonne Paris Cité, [2]JILA and Department of Physics, University of Colorado

MO-P2-7 (17:30-17:45)

Quantum teleinteraction algorithm: Entanglement assisted LOCC protocol implementing multi-body interaction between spatially and chronologically distant systems

S. Nakayama and K. Nemoto

National Institute of Informatics

MO-P2-8 (17:45-18:00)

Giant Lamb shift observed in deep-strongly-coupled superconducting qubit-oscillator circuit

Z. Ao,[1,2] F. Yoshihara,[2] T. Fuse,[2] S. Ashhab,[3] K. Kakuyanagi,[4] S. Saito,[4] T. Aoki,[1] K. Semba[2]

[1]Waseda University, [2]NICT, [3]QEERI, [4]NTT BRL

Break

Poster Session (18:15-20:15)

September 12 (Tue)

Session TU-A1: Phononic Structures

TU-A1-1 (8:30-9:00)

Piezo-optomechanical transducers as a link between radio frequency, optical, and acoustic waves (invited)

K. Srinivasan
NIST

TU-A1-2 (9:00-9:15)

Heat flux engineering in Si membrane by phononic nanostructures

M. Nomura[1,2], R. Anufriev[1], A. Ramiere[1], J. Maire[1], and R. Yanagisawa[1]
[1]Institute of Industrial Science, The University of Tokyo, [2]PRESTO, Japan Science and Technology Agency

TU-A1-3 (9:15-9:30)

Dynamic coupling control of dark and bright bound excitons in a mechanical resonator

R. Ohta, H. Okamoto, T. Tawara, H. Gotoh, and H. Yamaguchi
NTT Basic Research Laboratories, NTT Corporation

TU-A1-4 (9:30-9:45)

Coherent control of the phonon density of states using phononic nanostructures

R. Anufriev[1] and M. Nomura[1,2]
[1]Institute of Industrial Science, The University of Tokyo, [2]PRESTO, Japan Science and Technology Agency

TU-A1-5 (9:45-10:00)

Sub-10-nm pitch nanopore array in graphene by helium ion beam milling for heat phonon engineering

M.E. Schmidt[1], T. Kanzaki[1], M. Haque[1], T. Iwasaki[1], M. Muruganathan[1], S. Ogawa[2], and H. Mizuta[1]
[1]Japan Advanced Institute of Science and Technology, [2]National Institute of Advanced Industrial Science and Technology

TU-A1-6 (10:00-10:15)

Diameter and defect-density dependence of intermediate frequency Raman mode measured with single-walled carbon nanotubes

T. Inaba,[1] S. Konabe,[2] and Y. Homma[1,2]
[1]Department of Physics, Tokyo University of Science, [2]Research Institute of Science and Technology, Tokyo University of Science

Coffee Break

Session TU-A2: Optical Properties of Nanostructures

TU-A2-1 (10:45-11:00)

Circularly polarized spontaneous emission from quantum dots in three-dimensional semiconductor chiral photonic crystals

S. Takahashi,[1,2] T. Tajiri,[3] Y. Ota,[1] J. Tatebayashi,[1] S. Iwamoto,[1,3] and Y. Arakawa[1,3]
[1]Institute for Nano Quantum Information Electronics, University of Tokyo, [2]Kyoto Institute of Technology, [3]Institute of Industrial Science, University of Tokyo

TU-A2-2 (11:00-11:15)

Carrier dynamics in hybrid structure of quantum dot and quantum well superlattice

K. Akahane[1], H. Yamamoto[2], A. Matsumoto[1], T. Umezawa[1], H. Sotobayashi[2], and N. Yamamoto[1]
[1]National Institute of Information and Communications Technology, [2]Aoyama Gakuin University

TU-A2-3 (11:15-11:30)

Optical probe of single Cr spin in a self-assembled CdTe dot

A. Lauente-Sampietro[1,2,3], H. Utsumi[1], M. Sunaga[1], L. Besombes[2,3], H. Boukari[2,3], and S. Kuroda[1]
[1]Insitute of Materials Science, University of Tsukuba, [2]Université Grenoble Alpes, Institut Neél, [3]CNRS, Institut Neél

TU-A2-4 (11:30-11:45)

Λ-system initialization through spectral hole burning in $^{167}Er^{3+}$:Y_2SiO_5

M. IJspeert,[1] G. Mariani,[1] T. Tawara,[1,2] K. Shimizu,[1] H. Omi,[1,2] S. Adachi,[3] and H. Gotoh[1]
[1]NTT Basic Research Laboratories, [2]NTT Nanophotonics Center, [3]Hokkaido University

TU-A2-5 (11:45-12:00)

Nanofiber cavity QED systems coupled by an optical fiber

T. Aoki[1], S. Kato[2], and A. S. Parkins[3]
[1]Department of Applied Physics, Waseda University, [2]PRESTO, JST, [3]University of Auckland

Lunch Break

Session TU-P1: Nanomechanics and Nanoprobes

TU-P1-1 (13:00-13:30)

Nanomechanics with graphene drums (invited)

M. Deshmukh
Tata Institute of Fundamental Research

TU-P1-2 (13:30-13:45)

The coupling between electron transport and mechanical motion in nanoelectromechanical systems with a two-dimensional electron gas

A. A. Shevyrin,[1,2] A.G. Pogosov,[1,2] A. K. Bakarov,[1,2] and A. A. Shklyaev[1,2]
[1]Rzhanov Institute of Semiconductor Physics SB RAS, [2]Novosibirsk State University

TU-P1-3 (13:45-14:00)

Terahertz spectroscopy of a single atom in a fullerene cage

S.Q. Du[1], Y. Zhang[1], K. Yoshida[1], and K. Hirakawa[1,2]
[1]Institute of Industrial Science, University of Tokyo, [2]Institute for Nano Quantum Information Electronics, University of Tokyo

TU-P1-4 (14:00-14:15)

A two-electron double quantum dot coupled with a coherent phonon field

T. Fujisawa[1], Y. Sato[1], J. C. H. Chen[1], M. Hashisaka[1], K. Muraki[2]
[1]Department of Physics, Tokyo Institute of Technology, [2]NTT Basic Research Laboratories

TU-P1-5 (14:15-14:30)

Quantum state readout of individual quantum dots enabled by coupling to mechanical resonator with high quality factor

Y. Miyahara, A. Roy-Gobeil, and P. Grutter
Department of Physics, McGill University

TU-P1-6 (14:30-14:45)

Incompressible strips in quantum Hall system investigated by scanning gate microscopy

T. Tomimatsu, K. Hashimoto, S. Taninaka, K. Sato, and Y. Hirayama
Department of Physics, Tohoku University

Coffee Break

Session TU-P2: 2D Materials

TU-P2-1 (15:15-15:45)

Hybrid quantum systems based on two-dimensional van der Waals crystals (invited)

Amalia Patane
School of Physics and Astronomy, The University of Nottingham

TU-P2-2 (15:45-16:00)

Far- and mid-infrared photodetectors based on van der Waals/graphene heterostructures: concept and characteristics

V. Ryzhii[1,2], T. Otsuji[1], M. Ryzhii[3], V. E. Karasik[2], V. G. Leiman[4], D. Svintsov[4], V. Ya. Aleshkin[5], A. A. Dubinov[5], V. Mitin[6], and M. S. Shur[7]
[1]Research Inst. for Electrical Communication, Tohoku University, [2]Center of Photonics and Infrared Eng., Bauman Moscow State Technical University, [3]Dept. of Computer Science and Eng., University of Aizu, [4]Lab. of 2D Material's Optoelectronics, Moscow Institute of Physics and Technology, [5]Inst. for Physics of Microstructures RAS and Lobachevsky State University, [6]Dept. of Electrical Eng., University at Buffalo, SUNY, [7]Dept. of Electrical, Computer, and Systems Eng., Rensselaer Polytechnic Institute

TU-P2-3 (16:00-16:15)

Spin-flip processes and radiative decay of dark intravalley excitons in transition metal dichalcogenide monolayers

A. O. Slobodeniuk[1] and D. M. Basko[2]
[1]Laboratoire National des Champs Magnétiques Intenses, CNRS-UJF-UPS-INSA, [2]Laboratoire de Physique et Modélisation des Milieux Condensés, Université de Grenoble-Alpes and CNRS

TU-P2-4 (16:15-16:30)

Topological properties in single-wall carbon nanotube: effective one-dimensional lattice model approach

R. Okuyama,[1] W. Izumida,[2] M. Eto[1]
[1]Faculty of Science and Technology, Keio University, [2]Department of Physics, Tohoku University

TU-P2-5 (16:30-16:45)

Monte Carlo simulation of carrier transport in hybrid graphene-quantum dot transistors

N. Mori,[1] L. Turyanska,[2] O. Makarovsky,[2] A. Patane,[2] and L. Eaves[2]

[1]Graduate School of Engineering, Osaka University, [2]School of Physics and Astronomy, The University of Nottingham

TU-P2-6 (16:45-17:00)

Fabrication and electrical properties of single layer graphene nanoribbons obtained by unzipping of single- or double-walled carbon nanotubes

Hirofumi Tanaka
Kyusyu Institute of Technology

TU-P2-7 (17:00-17:15)

Graphene strain engineering for band gap opening

H. Tomori,[1,2] R. Hiraide,[1] K. Nakamura,[1] N. Hoshi,[1] T. Kichikawa,[1] T. Tanaka,[1] K. Watanabe,[3] T. Taniguchi,[3] A. Kanda[1]
[1]Division of Physics and TIMS, University of Tsukuba, [2]PRESTO, Japan Science and Technology Agency, [3]National Institute for Materials Science (NIMS)

TU-P2-8 (17:15-17:30)

Band-like transport in highly crystalline graphene thin films from defective graphene oxide material

R. Negishi,[1] M. Akabori,[2] T. Ito,[3,4] Y. Watanabe,[5] and Y. Kobayashi[1]
[1]Graduate School of Engineering, Osaka University, [2]Cetnet for Nano Materials and Technology, JAIST, [3]Nagoya University Synchrotron Radiation Research Center (NUSR), [4]Graduate School of Engineering, Nagoya University, [5]Aichi Synchrotron Radiation Center

Break

Banquet

September 13 (Wed)

Session WE-A1: Hybrid Quantum Materials (I)

WE-A1-1 (8:30-9:00)

Topological Josephson junctions (invited)

A. Brinkman
University of Twente

WE-A1-2 (9:00-9:15)

Signatures of topological superconductivity in the dynamics of HgTe Josephson junctions

R.S. Deacon[1], J. Wiedenmann[2], E. Bocquillon[2], F. Dominguez[2], T. Klapwijk[3], E.M. Hankiewicz[2], S. Tarucha[1,4], L.W. Molenkamp[2], and K. Ishibashi[1]
[1]RIKEN Center for Emergent Matter Science (CEMS), Wako, [2]Physikalisches Institut (EP3), Universität Würzburg, [3]Kavli Institute of Nanoscience, Faculty of Applied Sciences, Delft University of Technology, [4]Department of Applied Physics, University of Tokyo

WE-A1-3 (9:15-9:30)

Topology of zero energy edge states in carbon nanotubes with proximity induced superconductivity

W. Izumida,[1,2] M. Marganska,[2] L. Milz,[2] and M. Grifoni[2]
[1]Department of Physics, Tohoku University, [2]Institute of Theoretical Physics, University of Regensburg

WE-A1-4 (9:30-9:45)

Robust superconductivity of surface atomic layers with the Rashba effect

Takashi Uchihashi[1] and Shunsuke Yoshizawa[2]
[1]International Center for Materials Nanoarchitectonics (WPI-MANA), National Institute for Materials Science, [2]International Center for Young Scientists (ICYS), National Institute for Materials Science

WE-A1-5 (9:45-10:00)

Tailoring magnetic heterostructures of topological insulators for quantum anomalous Hall effect and axion electrodynamics

M. Mogi,[1] M. Kawamura,[2] K. N. Okada,[1] R. Yoshimi,[2] A. Tsukazaki,[3] K. S. Takahashi,[2] Y. Takahashi,[1] M. Kawasaki,[1,2] and Y. Tokura[1,2]
[1]Department of Applied Physics, University of Tokyo, [2]RIKEN CEMS, [3]IMR, Tohoku University

WE-A1-6 (10:00-10:15)

Nuclear spin-induced edge resistance in two-dimensional topological insulators

C.-H. Hsu,[1] P. Stano,[1,2] J. Klinovaja,[3] and D. Loss[1,3]

[1]RIKEN, [2]Institute of Physics, Slovak Academy of Sciences, [3]Department of Physics, University of Basel

Coffee Break

Session WE-A2: Hybrid Quantum Materials (II)

WE-A2-1 (10:45-11:00)

Imaging electron flow in atomically thin materials

S. Bhandari[1], G-H. Lee[1], K. Wang[1], K. Watanabe[2], T. Taniguchi[2], P. Kim[1] and R. M. Westervelt[1]

[1]Department of Physics and School of Engineering and Applied Sciences, Harvard University, [2]National Institute for Materials Science

WE-A2-2 (11:00-11:15)

Gate tunable spin-orbit coupling and weak antilocalization effect in an epitaxial $La_{2/3}Sr_{1/3}MnO_3$ thin film

S.-P. Chiu[1], M. Yamanouchi[2,3], T. Oyamada[3], H. Ohta[2,3], and J.-J. Lin[1,4]

[1]Institute of Physics, National Chiao Tung University, [2]Research Institute for Electronic Science, Hokkaido University, [3]Institute of Materials Research, University of Tokyo, [4]Department of Electrophysics, National Chiao Tung University

WE-A2-3 (11:15-11:30)

Strong coupling of spin and dipole in strain gradient hetero-structured garnet thin films

H.Tabata, H.Yamahara, A.Katogi, R.Kikuchi, A.Katogi, H.Sato

Graduate School of Engineering, University of Tokyo

WE-A2-4 (11:30-11:45)

Molecular beam epitaxy of remotely-doped Sb quantum-well structures

K.S. Wickramasinghe, S. Cairns, J. Massengale, Z. Liu, C.K. Gaspe, T.D. Mishima, J.C. Keay, M.B. Johnson, S.Q. Murphy, and M.B. Santos

Homer L. Dodge Department of Physics and Astronomy, University of Oklahoma

WE-A2-5 (11:45-12:00)

Anomalous quantum Hall skyrmion transition with long-range ordering

J. N. Moore,[1] J. Hayakawa,[1] H. Iwata,[1] T. Mano,[2] T. Noda,[2] G. Yusa[1]
[1]Department of Physics, Tohoku University, [2]National Institute for Materials Science

WE-A2-6 (12:00-12:30)
Majorana fermions and Andreev bound states in hybrid superconductor-semiconductor nanostructure quantum systems (invited)
H. Q. Xu
Peking University

(12:30-13:00)
Closing

Excursion (optional)

Poster Presentations (18:15-20:15, Monday, September 11)

P1

High-temperature spin qubit in silicon tunnel field-effect transistor

Keiji Ono[1], Takahiro Mori[2], and Satoshi Moriyama[3]
[1]RIKEN, [2]AIST, [3]NIMS

P2

Improvement of generation efficiency of photon echo from inhomogeneous quantum dot ensemble using chirped pulse

N. Aonuma,[1] Y. Sato,[1] K. Akahane,[2] and J. Ishi-Hayase[1]
[1]School of Fundamental Science and Technology, Keio University, [2]National Institute of Information and Communications Technology (NICT)

P3

Towards quantum control of ultracold atoms in an optical lattice by optical means

S. Yamanaka, S. Sunami, D. Okuno, T. Tomita, Y. Suzuki, S. Nakajima, J. Kobayashi, Y. Takahashi
Department of Physics, Graduate School of Science, Kyoto University

P4

Alternative Leggett-Garg test in a superconducting flux qubit

K. Kakuyanagi[1], G. C. Knee[1], M-C. Yeh[2], Y. Matsuzaki[1], H. Toida[1], H. Yamaguchi[1], S. Saito[1], A. J. Leggett[2], and W. J. Munro[1]
[1]NTT Basic Research Laboratories, NTT Corporation, [2]Department of Physics, University of Illinois at Urbana-Champaign

P5

Observation of singlet-triplet oscillation of nuclear spins of ultracold neutral atoms in an optical super-lattice

H. Ozawa, S. Taie, H. Shiotsu, T. Yagami, Y. Fukushima, Y. Takasu, Y. Takahashi
Graduate School of Science, Kyoto University

P6

Superconducting flux qubits in a 3D cavity

S. Saito[1], I. Mahboob[1], H. Toida[1], Y. Matsuzaki[1], K. Kakuyanagi[1], W. J. Munro[1], Y. Nakamura[2,3], and H. Yamaguchi[1]
[1]NTT BRL, [2]RCAST-UTokyo, [3]CEMS-RIKEN

P7

Electronic states in quantum point contacts with flat potential barriers

T. Aono
Faculty of Engineering, Ibaraki University

P8

Dynamical mechanisms and role of the edge states on the nuclear spin polarization in the ν = 2/3 quantum Hall states

A. Fukuda,[1] D. Terasawa,[1] Y. Sasaki,[2] Y. Hashimoto,[3] and S. Katsumoto[3]
[1]Physics Department, Hyogo College of Medicine, [2]Graduate School of Science, Kyoto University, [3]Institute for Solid State Physics, The University of Tokyo

P9

Characterization and control of hole spin states in Ge/Si core/shell nanowires

R. Wang,[1] R. S. Deacon,[1,2] J. Yao,[3] C. M. Lieber[3,4] and K. Ishibashi[1,2]
[1]Advanced Device Lab., RIKEN, [2]CEMS, RIKEN, [3]Department of Chemistry and Chemical Biology, Harvard University, [4]School of Engineering and Applied Sciences, Harvard University

P10

Assessment of InGaAs/InAlAs double quantum wells as an enhancing module for the Edelstein effect

K. Okamoto,[1] J. C. Egues,[2] and T. Koga[1]
[1]Graduate School of Information Science and Technology, Hokkaido University, [2]Instituto de Física de São Carlos, Universidade de São Paulo

P11

Modeling of weak localization-antilocalization in quasi-two-dimensional electron system using predetermined return trajectories

A. Sawada, K. Okamoto and T. Koga
Graduate School of Information Science and Technology, Hokkaido University

P12

Prediction of the enhanced Edelstein effect in InGaAs/InAlAs double quantum well by the Boltzmann equation approach

K. Okamoto[1], J. C. Egues,[2] and T. Koga[1]
[1]Graduate School of Information Science and Technology, Hokkaido University, [2]Instituto de Física de São Carlos, Universidade de São Paulo

P13

Optical currents induced by surface plasmon fields nearby a metallic nano-complex

N. Yokoshi,[1] M. Hoshina,[1] and H. Ishihara[1,2]
[1]Department of Physics and Electronics, Osaka Prefecture University, [2]Department of Materials Engineering Science, Osaka University

P14

Amplification of photon echo signal from quantum dots using optical resonator

R. Ide,[1] K. Akahane,[2] and J. Ishi-Hayase[1]
[1]School of Fundamental Science and Technology, Keio University, [2]National Institute of Information and Communications Technology (NICT)

P15

Superfluorescence from emitters on a fiber

H. Hisamune,[1] N. Yokoshi,[1] and H. Ishihara[1,2]
[1]Department of Physics and Electronics, Osaka Prefecture University, [2]Department of Materials Engineering Science, Osaka University

P16

Nanocavity laser and photonic waveguides integrated in three-dimensional photonic crystals

T. Tajiri[1], S. Takahashi[2,3], Y. Ota[3], K. Watanabe[3], S. Iwamoto,[1,3] and Y. Arakawa[1,3]
[1]Institute of Industrial Science, University of Tokyo, [2]Kyoto Institute of Technology, [3]Institute of Nano Quantum Information Electronics, University of Tokyo

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A numerical investigation on the directional emission from a quantum dot ensemble embedded in an asymmetric optical waveguide

W. Lin,[1] Y. Ota,[2] S. Iwamoto,[1,2] and Y. Arakawa[1,2]
[1]Institute of Industrial Science, the University of Tokyo, [2]Institute for Nano Quantum Information Electronics (NanoQuine), the University of Tokyo

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AC magnetic field sensing using continuous-wave optically detected magnetic resonance of NV centers in diamond

S. Saijo[1], Y. Matsuzaki[2], S. Saito[2], H. Watanabe[3], N. Mizuochi[4], and J. Ishi-Hayase[1]
[1]Keio University, [2]NTT Basic Research Laboratories, [3]AIST, [4]Kyoto University

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Electrical detection of nitrogen nuclear spins in NV centers in diamond

H. Morishita[1,2], S. Kobayashi[1,2], M. Fujiwara[1,2], H. Kato[2,3], T. Makino[2,3], S. Yamasaki[2,3], N. Mizuochi[1,2]

[1]Institute for Chemical Research, Kyoto University, Japan. [2]JST-CREST, Japan Science and Technology Agency, Japan. [3]Energy Technology Research Institute, National Institute of Advanced Industrial Science and Technology (AIST), Japan

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Temperature sensing with an ensemble of nitrogen vacancy centers

K. Hayashi[1,2,3], Y. Matsuzaki[3], T. Shimo-Oka[1], I. Nakamura[2†], H. Morishita[1], M. Fujiwara[1], S. Saito,[3] and N. Mizuochi[1]

[1]Institute for Chemical Research, Kyoto University, [2]Graduate School of Engineering Science, Osaka University, [3]NTT Basic Research Laboratories, NTT Corporation, †Present address: Center for Emergent Matter Science, RIKEN

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Teleportation-based quantum media conversion from a photon to a nucleon in diamond

H. Kano, R. Kuroiwa, Y. Sekiguchi, and H. Kosaka

Yokohama National University

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Deterministic measurement of a nuclear spin in diamond under a zero field

R. Enyo, T. Nakamura, T. Ishizaka, Y. Sekiguchi, and H. Kosaka

Yokohama National University

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A focusing resonator for surface acoustic waves on GaAs

Y. Sato, R. Takasu, and T. Fujisawa

Department of Physics, Tokyo Institute of Technology

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Hexagonal $^{12}C/^{13}C$ graphene phononic crystal

Y. Notani, Y. Anno, K. Takei, S. Akita, and T. Arie

Department of Physics and Electronics, Osaka Prefecture University

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Effects of boundary condition on phonon transport in two-dimensional harmonic lattice

A. Ueno and N. Mori

Graduate School of Engineering, Osaka University

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Coupled electron-phonon transport simulation of 1D nanostructures

Y. Kajiwara and N. Mori

Graduate School of Engineering, Osaka University

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Enhanced sensitivity of MEMS bolometers by introducing two-dimensional phononic crystal structures

Y. Zhang[1], B. Qiu[1], N. Nagai[1], M. Nomura[1,2], and K. Hirakawa[1,2]

[1]Institute of Industrial Science, University of Tokyo, [2]INQIE, University of Tokyo

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Topologically protected elastic waves in one-dimensional periodic structure

I. Kim[1], S. Iwamoto,[1,2] and Y. Arakawa[1,2]

[1]IIS, University of Tokyo, [2]NanoQuine, University of Tokyo

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Growth of CeO_2 on Si (111) substrates as a magnetically purified host crystal for Er^{3+} dopants

T. Inaba[1], T. Tawara[1,2], H. Omi[1,2], H. Yamamoto[1], and H. Gotoh[1]

[1]NTT Basic Research Laboratories, [2]NTT Nanophotonics Center

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Effect of radical initiator or polymerization inhibitor in fabrication of single layer graphene nanoribbon by unzipping of single- or double-walled carbon nanotubes

M. Fukumori[1], T. Ogawa[1], and H. Tanaka[1]

[1]Department of Chemistry, Graduate School of Science, Osaka University, [2]Department of Human Intelligence Systems, Graduate School of Life Science and Systems Engineering, Kyushu Institute of Technology

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Phonon engineering of graphene by induced strain

Y. Imakita, Y. Anno, H. Kawata, K. Takei, S. Akita, and T. Arie

Department of Physics and Electronics, Osaka Prefecture University

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Superconducting transition of thin layered superconductor $NbSe_2$: influence of device structures

D. Yabe,[1] K. Yarimizu,[1] H. Sonoda,[1] H. Tomori,[1,2] K. Watanabe,[3] T. Taniguchi,[3] A. Kanda[1]

[1]Division of Physics and TIMS, University of Tsukuba, [2]PRESTO, Japan Science and Technology Agency, [3]NIMS, National Institute for Materials Science

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Simplified estimation of crystallographic orientation of strained graphene by micro-Raman spectroscopy

K. Nakamura,[1] H. Tomori,[1,2] and A. Kanda[1]

[1]Division of Physics and TIMS, University of Tsukuba, [2]PRESTO, Japan Science and Technology Agency

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Fabrication of tunnel barriers in multi-wall carbon nanotube by Ga focused ion beam irradiation

N. M. Ghazali[1,2], H. Tomizawa[1], N. Hagiwara[1], K. Suzuki[1], A. M. Hashim[1,2], T. Yamaguchi[1], S. Akita[3], K. Ishibashi[1,4]

[1]Advanced Device Laboratory, RIKEN, [2]Malaysia-Japan International Institute of Technology, Universiti Teknologi Malaysia, [3]Osaka Prefecture University, Osaka, [4]RIKEN Center for Emergent Matter Science (CEMS)

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Layer-by-layer assembly of graphene heterostructures using direct growth method

K. Okuyama, Y. Anno, Y. Mochizuki, K. Takei, S. Akita, and T. Arie

Department of Physics and Electronics, Osaka Prefecture University

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Polarizability of Raman spectra from suspended single-walled carbon nanotubes

Y. Tanaka,[1] T. Kato,[1] K. Yoshino,[1] S. Chiashi,[2] and Y. Homma[1]

[1]Department of Physics, Tokyo University of Science, [2]Department of Mechanical Engineering, The University of Tokyo

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Ballistic electron transport in coupled graphene nanoribbons

F. Hashimoto and N. Mori

Osaka University

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Raman analysis on nanocarbon materials formation by isotope labelling toward ^{13}C position control in graphitic lattice

A. Ohata, X. Xizhao, T. Ishida, and Y. Kobayashi

Department of Applied Physics, Osaka University

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Synthesis of turbostratic multilayer graphene film from graphene oxides by ultrahigh temperature process

S. Nakamura[1], T. Ishida[1], Y. Nishina[2] and Y. Kobayashi[1]
[1]Department of Applied Physics, Osaka University, [2]Research Core for Interdisciplinary Sciences, Okayama University

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Localization length analysis of quantum anomalous Hall state in a ferromagnetic topological insulator

M. Kawamura[1], R. Yoshimi[1], A. Tsukazaki[2], K. S. Takahashi[1], M. Kawasaki[1,3], and Y. Tokura[1,3]
[1]RIKEN Center for Emergent Matter Science, [2]Tohoku University, [3]Uinversity of Tokyo

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Observation of surface state of topological crystalline insulator (Pb,Sn)Te thin films

Y. Otaki[1], T. Yamaguchi[1], H. Itoh[1], R. Ishikawa[1], S. Kuroda[1], R. Nakanishi[2], D. Fan[2], R. Akiyama[2], S. Hasegawa[2], K. Miyamoto[3], H. Sato[3], A. Kimura[4]
[1]Institute of Materials Science, University of Tsukuba, [2]Department of Physics, University of Tokyo, [3]Hiroshima Synchrotron Radiation Center (HiSOR), Hiroshima University, [4]Graduate School of Science, Hiroshima University

Late News Posters

LN1

Terahertz spectroscopy of carbon nanotube quantum dots performed by detecting THz-induced photocurrent in the single electron transistor geometry

T. Tsurugaya[1], K. Yoshida[1], F. Yajima[2], M. Shimizu[2], Y. Homma[2], S. Q. Du[1], Y. Zhang[1], and K. Hirakawa[1]

[1]Institute of Industrial Science, University of Tokyo, [2]Department of Physics, Tokyo University of Science

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What limits the observability of resistively detected-NMR (RD-NMR) in quantum point contact (QPC)?

A. Noorhidayati,[1] M. H. Fauzi,[2] M. F. Sahdan,[1] S. Maeda,[1] K. Sato,[1] K. Nagase,[1] and Y. Hirayama[1,2]

[1]Department of Physics, Tohoku University, [2]CSRN, Tohoku University

LN3

Practical requirements of quantum information processing with the silicon-vacancy center in diamond

M. Hanks[1,2], K. Nemoto[2,1] and W. J. Munro[3,4]

[1]Department of Informatics, School of Multidisciplinary Sciences, Sokendai (The Graduate University for Advanced Studies), [2]National Institute of Informatics, [3]NTT Basic Research Laboratories, [4]NTT Research Center for Theoretical Quantum Physics

Abstracts