

CEMS Symposium on Quantum Information and Spintronics 2024

◆Poster session 1 16:30-18:00, December 10 (Tuesday)

PQ1-1～PQ1-9, PS1-1～PS1-6, PT1-1～PT1-5

No	Poster No.	Name	Affiliation	Title	Co-author name	Co-author Affiliation
A000013	PQ1-1	Tsuyoshi Yamamoto	Institute of Pure and Applied Sciences, University of Tsukuba	Quantum heat flow between a dissipative qubit and a continuous monitor	Yasuhiro Tokura	Institute of Pure and Applied Sciences, University of Tsukuba
A000020	PQ1-2	Juan Rojas-Arias	RIKEN	Decoupling a singlet-triplet qubit from charge noise	Leon Camenzind ² , Yi-Hsien Wu ² , Peter Stano ² , Seigo Tarucha ^{1,2} , Daniel Loss ^{1,2,3}	¹ RIKEN Center for Quantum Computing (RQC) ² RIKEN Center for Emergent Matter Science (CEMS) ³ Department of Physics, University of Basel
A000040	PQ1-3	Takashi Kobayashi	RIKEN	Charge-Induced Energy Shift of a Single Spin Qubit under a Magnetic-Field Gradient	Akito Noiri ² , Takashi Nakajima ² , Kenta Takeda ² , Leon C. Camenzind ² , Ik Kyeong Jin ² , Giordano Scappucci ^{3,4} , Seigo Tarucha ^{1,2}	¹ RIKEN Center for Quantum Computing ² RIKEN Center for Emergent Condensed Matter Science ³ QuTech, Delft University of Technology ⁴ Kavli Institute of Nanoscience, Delft University of Technology
A000046	PQ1-4	Akito Noiri	RIKEN	Benchmarking single-qubit gate with 99.99% fidelity via pulse shaping in silicon spin qubits	Yi-Hsien Wu ¹ , Leon Camenzind ¹ , Patrick Bütler ¹ , Kenta Takeda ¹ , Takashi Nakajima ¹ , Takashi Kobayashi ² , Ik Kyeong Jin ¹ , Giordano Scappucci ³ , Seigo Tarucha ^{1,2}	¹ RIKEN Center for Emergent Matter Science ² RIKEN Center for Quantum Computing ³ QuTech and Kavli Institute of Nanoscience, Delft University of Technology
A000049	PQ1-5	Sayyid Irsyadul Ibad	Institute of Science Tokyo	Interplay of Electric Dipole Spin Resonance and Landau-Zener Interference on Hole Spin Resonance	Yusaku Suzuki ¹ , Masahiro Tadokoro ¹ , Tokio Futaya ¹ , Shimpei Nishiyama ^{1,2} , Kimihiko Kato ² , Shigenori Murakami ² , Takahiro Mori ² , Raisei Mizokuchi ¹ , Jun Yoneda ^{3,4} , Tetsuo Kodera ¹	¹ Department of Electrical and Electronic Engineering, Institute of Science Tokyo ² National Institute of Advanced Industrial Science and Technology (AIST) ³ Academy of Super Smart Society, Institute of Science Tokyo ⁴ Department of Advanced Materials Science, University of Tokyo
A000051	PQ1-6	Chutian Wen	Institute of Science Tokyo	Fabrication of Ge quantum devices possessing stable characteristics	Ryutaro Matsuoka ¹ , Yuto Arakawa ¹ , Raisei Mizokuchi ¹ , Jun Yoneda ² , Tetsuo Kodera ¹	¹ Institute of Science Tokyo ² University of Tokyo
A000058	PQ1-7	Kai Li	RIKEN	Non-Hermitian Absorption Spectroscopy	Yong Xu ^{1,2}	¹ Center for Quantum Information ² Shanghai Qi Zhi Institute
A000034	PQ1-8	Kazuki Nakazawa	RIKEN	Interband effect to nonlinear charge response in semiconductor nanostructures	Henry F. Legg ^B , Jelena Klinovaja ^B , Daniel Loss ^{A,B}	^A RIKEN Center for Emergent Matter Science ^B Department of Physics, University of Basel
A000067	PQ1-9	Ngoc Han Tu	RIKEN	Tunable Kondo Screening Cloud in A Quantum Box	Donghoon Kim ^{1,2} , Minsoo L. Kim ² , Jeongmin Shim ² , Ryo Ito ^{1,3} , David Pomaranski ⁴ , Ivan V. Borzenets ⁵ , Arne Ludwig ⁶ , Andreas D. Wieck ⁶ , Heung-Sun Sim ² , Michihisa Yamamoto ^{1,4}	¹ Center for Emergent Matter Science (CEMS), RIKEN ² Department of Physics, Korea Advanced Institute of Science and Technology (KAIST) ³ National Metrology Institute of Japan (NMIJ), National Institute of Advanced Industrial Science and Technology (AIST) ⁴ Quantum-Phase Electronics Center and Department of Applied Physics, The University of Tokyo ⁵ Physics & Astronomy Department, Texas A&M University ⁶ Faculty of Physics and Astronomy, Ruhr-University Bochum,
A000008	PS1-1	Yu-Chi Huang	Institute of Science Tokyo	True chirality and angular momentum of phonons in α -Quartz	Gakuto Kusuno ¹ , Hiroaki Kusunose ^{2,3} , Takuya Satoh ^{1,3}	¹ Department of Physics, Institute of Science Tokyo ² Department of Physics, Meiji University ³ Quantum Research Center for Chirality, Institute for Molecular Science
A000012	PS1-2	Laura Thevenard	Sorbonne Université - CNRS	Low-field microwave absorption in polycrystalline FeRh films grown on GaAs using a graded composition technique	D. Nguyen ¹ , G. Olivetti ¹ , I. Boventer-Rahel ² , F. Vidal ¹ , Y. Zheng ¹ , M. Marangolo ¹ , C. Gourdon ¹	¹ Sorbonne Université, Institut des Nanosciences de Paris ² Laboratoire Albert Fert CNRS Thalès, Université Paris Saclay, Palaiseau
A000052	PS1-3	Geil Emdi	RIKEN	Tunable sigmoid behavior of a magnon-based parametron using a $Y_3F_{e5}O_{12}$ /Pt bilayer disk	Tomosato Hioki ^{1,2,3} , Takahiko Makiuchi ^{1,2} , and Eiji Saitoh ^{1,2,3,4}	¹ RIKEN Center for Emergent Matter Science ² Department of Applied Physics, The University of Tokyo ³ Advanced Institute for Materials Research, Tohoku University ⁴ Institute for AI and Beyond, The University of Tokyo

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No	Poster No.	Name	Affiliation	Title	Co-author name	Co-author Affiliation
A000055	PS1-4	Sohei Horibe	The University of Tokyo	Observation of magnetization fluctuation nonlinearly excited by an electric field in a nanoscale magnetic tunnel junction	Hiroki Shimizu ^A , Takahiko Makiuchi ^{A,B} , Tomosato Hioki ^{A,B} , Tatsuya Yamamoto ^C , Takayuki Nozaki ^C , Yoshishige Suzuki ^{C,D} , Shinji Yuasa ^C , Eiji Saitoh ^{A,B,E,F}	^A Dept. of Applied Physics, the University of Tokyo ^B RIKEN Center for Emergent Matter Science ^C AIST Research Center for Emerging Computing Technologies ^D Dept. of Materials Engineering Science, Osaka University ^E Advanced Institute for Materials Research, Tohoku University ^F Institute for AI and Beyond, the University of Tokyo
A000062	PS1-5	Keiko Takase	Tokyo University of Agriculture and Technology	Strain-enhanced Rashba spin-orbit interaction in core-shell nanowires	Samuel D. Escrivano ³ , Dino Ibrahimagic ² , Kouta Tateno ² , Alfredo Levy Yeyati ⁴ , Elsa Pradada ⁵ , Satoshi Sasaki ²	¹ Tokyo University of Agriculture and Technology ² NTT Basic Research Laboratory, NTT Corporation ³ Weizmann Institute of Science ⁴ Instituto Nicolás Cabrera and Condensed Matter Physics Center (IFIMAC) Universidad Autónoma de Madrid ⁵ Instituto de Ciencia de Materiales de Madrid (ICMM), Consejo Superior de Investigaciones Científicas (CSIC)
A000027	PS1-6	Wataru Izumida	Tohoku University	Spin-driven Nanomotor	-	-
A000001	PT1-1	Hiroki Yoshida	Department of Physics, Institute of Science Tokyo, Japan	Quantization of spin circular photogalvanic effect in altermagnetic Weyl semimetals	Shuichi Murakami	International Institute for Sustainability with Knotted Chiral Meta Matter (WPI-SKCM2)
A000041	PT1-2	Shun Muto	Nagoya University	Ferromagnetic Resonance modulation for bulk-surface coexisting states of topological materials	Ai Yamakage	Nagoya University
A000059	PT1-3	Shun Okumura	The University of Tokyo	Longitudinal current-induced instability of magnetic skyrmion strings	Volodymyr P. Kravchuk ^{2,3} , and Markus Garst ⁴	¹ Department of Applied Physics, The University of Tokyo ² Leibniz Institute for Solid State and Material Research, IFW Dresden ³ Bogolyubov Institute for Theoretical Physics of the National Academy of Sciences of Ukraine ⁴ Institute of Theoretical Solid State Physics, Karlsruhe Institute of Technology
A000021	PT1-4	Pasquale Marra	The University of Tokyo	Topologically nontrivial stripes and Majorana modes in inhomogeneous superconductors	Daisuke Inotani ^A , Takeshi Mizushima ^B , Muneto Nitta ^{A,C}	^A Department of Physics, and Research and Education Center for Natural Sciences, Keio University ^B Department of Materials Engineering Science, Osaka University, ^C International Institute for Sustainability with Knotted Chiral Meta Matter (SKCM2), Hiroshima University
A000026	PT1-5	Ilya Belopolski	RIKEN	Synthesis of a semimetallic Weyl ferromagnet with point Fermi surface, $(\text{Cr},\text{Bi})_2\text{T}_{e3}$	Ryota Watanabe ² , Yuki Sato ¹ , Ryutaro Yoshimi ¹ , Minoru Kawamura ¹ , Soma Nagahama ² , Yilin Zhao ³ , Sen Shao ³ , Yuanjun Jin ³ , Yoshihiro Kato ² , Yoshihiro Okamura ² , Xiao-Xiao Zhang ^{4,1} , Yukako Fujishiro ^{1,5} , Youtarou Takahashi ^{2,1} , Max Hirschberger ^{1,2} , Atsushi Tsukazaki ⁶ , Kei S. Takahashi ¹ , Ching-Kai Chiu ⁷ , Guoqing Chang ³ , Masashi Kawasaki ^{1,2} , Naoto Nagaosa ^{8,1} and Yoshinori Tokura ^{1,2,9}	¹ RIKEN Center for Emergent Matter Science (CEMS) ² Department of Applied Physics and Quantum Phase Electronics Center (QPEC), University of Tokyo ³ Division of Physics and Applied Physics, School of Physical and Mathematical Sciences, Nanyang Technological University ⁴ Wuhan National High Magnetic Field Center and School of Physics, Huazhong University of Science and Technology ⁵ RIKEN Cluster for Pioneering Research (CPR) ⁶ Institute for Materials Research, Tohoku University ⁷ RIKEN Interdisciplinary Theoretical and Mathematical Sciences (iTHEMS) ⁸ Fundamental Quantum Science Program, TRIP Headquarters, RIKEN ⁹ Tokyo College, University of Tokyo

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◆Poster session 2 15:30-17:00, December 11 (Wednesday)

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No	Poster No.	Name	Affiliation	Title	Co-author name	Co-author Affiliation
A000014	PQ2-1	Ik Kyeong Jin	RIKEN	Performance of Academic and Industrial Silicon Spin-Qubits	Leon C. Camenzind ¹ , Yi-Hsien Wu ^{1,2} , Akito Noiri ¹ , Kenta Takeda ¹ , Takashi Nakajima ¹ , Takashi Kobayashi ³ , Giordano Scappucci ⁴ , Seigo Tarucha ^{1,3}	¹ Center for Emergent Matter Science, RIKEN ² Department of Physics, National Taiwan University ³ Center for Quantum Computing, RIKEN ⁴ QuTech and Kavli Institute of Nanoscience, Delft University of Technology
A000025	PQ2-2	David Pomaranski	The University of Tokyo	Quantum Computing with Electronic Wave Packets in Semiconductors	Ryo Ito ^{1,3} , Ngoc Han Tu ² , Arne Ludwig ⁵ , Andreas D. Wieck ⁵ , Shintaro Takada ⁴ , Seddik Ouacel ⁶ , Christopher Bauerle ⁶ , Michihisa Yamamoto ^{1,2}	¹ University of Tokyo, Japan ² RIKEN ³ AIST ⁴ Osaka University ⁵ Ruhr-University Bochum ⁶ NEEL, CNR
A000045	PQ2-3	Keiji Ono	RIKEN	Pauli spin blockade at room temperature in S/Zn-codoped silicon tunnel field effect transistors	Yoshisuke Ban ¹ , Kimihiko Kato ² , Shota Izuka ² , Hiroshi Oka ² , Shigenori Murakami ² , Koji Ishibashi ^{1,3} , Satoshi Moriyama ⁴ , Takahiro Mori ²	¹ Advanced Device Laboratory, RIKEN ² Semiconductor Frontier Research Center (SFRC), National Institute of Advanced Industrial Science and Technology (AIST) ³ Center for Emergent Matter Science (CEMS), RIKEN ⁴ Department of Electrical and Electronic Engineering, Tokyo Denki University
A000047	PQ2-4	Peter Stano	RIKEN	Spatio-temporal recognition of charge noise sources with spin qubits	J. S. Rojas-Arias ¹ , A. Noiri ² , J. Yoneda ³ , T. Nakajima ² , K. Takeda ² , T. Kobayashi ¹ , A. Sammak ⁵ , G. Scappucci ⁶ , S. Tarucha ^{1,2} , D. Loss ^{1,2,7}	¹ RIKEN, Center for Quantum Computing (RQC) ² RIKEN, Center for Emergent Matter Science (CEMS) ³ Tokyo Institute of Technology, Tokyo Tech Academy for Super Smart Society ⁴ Slovak Academy of Sciences, Institute of Physics ⁵ QuTech and Netherlands Organisation for Applied Scientific Research (TNO) CK Delft, Netherlands ⁶ QuTech and Kavli Institute of Nanoscience, Delft University of Technology ⁷ Department of Physics, University of Basel
A000050	PQ2-5	Raisei Mizokuchi	Institute of Science Tokyo	RF reflectometry techniques for enhanced multiplexibility in silicon quantum dots	Shimpei Nishiyama ¹ , Ryo Matsuda ¹ , Jun Kamioka ² , Jun Yoneda ^{3,4} , Tetsuo Kodera ¹	¹ Department of Electrical and Electronic Engineering, Institute of Science Tokyo ² Information Technology R & D Center, Mitsubishi Electric Corporation ³ Academy of Super Smart Society, Institute of Science Tokyo ⁴ Department of Advanced Materials Science, University of Tokyo
A000054	PQ2-6	Gabriel Gulak Maia	Osaka University	Transport characterisation of Ge-SiGe heterostructures under illumination	James Bauer, Masayoshi Mori, Rio Fukai, Akira Oiwa, Kentarou Sawano ¹	SANKEN Osaka University ¹ Tokyo City University
A000029	PQ2-7	Leon C. Camenzind	RIKEN	Noise Correlations in a Silicon Five-Qubit Array	Yi-Hsien Wu ¹ , Juan Rojas-Arias ² , Akito Noiri ¹ , Kenta Takeda ¹ , Takashi Nakajima ¹ , Takashi Kobayashi ² , Ik Kyeong Jin ¹ , Peter Stano ¹ , Giordano Scappucci ³ , Daniel Loss ^{1,2,4} , Seigo Tarucha ^{1,2}	¹ RIKEN Center for Emergent Matter Science (CEMS) ² RIKEN Center for Quantum Computing (RQC) ³ QuTech and Kavli Institute of Nanoscience, Delft University of Technology ⁴ Department of Physics, University of Basel
A000066	PQ2-8	Yuya Shimazaki	The University of Tokyo	Electronic and excitonic properties of gate tunable homobilayer semiconductor moire system	-	-

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No	Poster No.	Name	Affiliation	Title	Co-author name	Co-author Affiliation
A000009	PS2-1	Lixuan Tai	University of California, Los Angeles	Giant Hall Switching by Surface-State-Mediated Spin-Orbit Torque in a Hard Ferromagnetic Topological Insulator	Haoran He, Su Kong Chong, Huairuo Zhang, Hanshen Huang, Gang Qiu, Yuxing Ren, Yaochen Li, Hung-Yu Yang, Ting-Hsun Yang, Xiang Dong, Bingqian Dai, Tao Qu, Qingyuan Shu, Quanjun Pan, Peng Zhang, Fei Xue, Jie Li, Albert V. Davydov, Kang L. Wang	Department of Electrical and Computer Engineering, University of California, Los Angeles
A000044	PS2-2	Takahiko Makiuchi	RIKEN	Persistent magnetic coherence in a magnet	T. Hioki ^{2,1} , H. Shimizu ² , K. Hoshi ^{2,3,1} , M. Elyasi ⁴ , K. Yamamoto ⁵ , N. Yokoi ^{2,3,1} , A. A. Serga ⁶ , B. Hillebrands ⁶ , G. E. W. Bauer ⁴ , and E. Saitoh ^{1,2,3,4,5}	¹ RIKEN Center for Emergent Matter Science ² Department of Applied Physics, The University of Tokyo ³ Institute for AI and Beyond, The University of Tokyo ⁴ Advanced Institute for Materials Research, Tohoku University ⁵ Advanced Science Research Center, Japan Atomic Energy Agency ⁶ Department of Physics and Research Center OPTIMAS, RPTU Kaiserslautern-Landau
A000053	PS2-3	Gakuto Kusuno	Institute of Science Tokyo	Circularly polarized Raman scattering in ferroaxial NiTiO ₃	Takeshi Hayashida ² , Takayuki Nagai ² , Hikaru Watanabe ³ , Tsuyoshi Kimura ² , Takuya Satoh ^{1,4}	¹ Department of Physics, Institute of Science Tokyo ² Department of Applied Physics, The University of Tokyo ³ Department of Physics, The University of Tokyo ⁴ Quantum Research Center for Chirality, Institute for Molecular Science
A000063	PS2-4	Suguru Okumura	Shizuoka University	Gate-Controlled Charge Rectification in Elemental Tellurium	Daichi Hirobe ¹ , Yoji Nabei ² , Hiroshi Yamamoto ²	¹ Shizuoka University, Shizuoka, Japan ² Institute for Molecular Science, Okazaki, Japan
A000032	PS2-5	Tomosato Hioki	The University of Tokyo	Magnon state tomography for two-mode squeezing	Mehrdad Elyasi ² , Kaito Tojo ¹ , Eiji Saitoh ^{1,2,3}	¹ The University of Tokyo ² AIMR, Tohoku University ³ RIKEN Center for Emergent Matter Science
A000068	PS2-6	Kazuki Yamada	Osaka University	Magnetotransport and spin-transport properties of chiral magnet CrTa ₃ S ₆ thin films	Nan Jiang ^{1,2,3} , Hiroki Shoji ⁴ , Yusuke Kousaka ⁴ , Yoshihiko Togawa ⁴ , and Yasuhiro Niimi ^{1,2,3}	¹ Department of Physics, Graduate School of Science, Osaka University ² Center for Spintronics Research Network, Osaka University ³ Institute for Open and Transdisciplinary Research Network, Osaka University ⁴ Department of Physics and Electronics, Osaka Metropolitan University
A000039	PT2-1	GUANXIONG QU	RIKEN	Circular Photon Drag Effect in Dirac electrons by Quantum Geometry	Daniel Loss	RIKEN
A000056	PT2-2	Manaal Resivi Ullerithodi	The University of Tokyo	Magnetic Imaging of an Anomalous Nernst Thermopile based on Atomic Force Microscopy	Hironari Isshiki ^{1,2} , Nico Budai ¹ , YoshiChika Otani ^{1,3}	¹ The Institute of Solid-State Physics, The University of Tokyo ² The Advanced Research Center, Japan Atomic Energy Agency ³ Center for Emergent Matter Science RIKEN
A000060	PT2-3	Akihiro Ozawa	Institute for Solid State Physics, The University of Tokyo	Chiral gauge field in spin-polarized Weyl semimetal Co ₃ Sn ₂ S ₂ with magnetic domain walls	Yasufumi Araki ² , Kentaro Nomura ³	¹ Institute for Solid State Physics, The Univ. of Tokyo ² Advanced Science Research Center, Japan Atomic Energy Agency ³ Department of Physics, Kyushu Univ.
A000017	PT2-4	Taekoo Oh	RIKEN	Phonon thermal Hall effect in Mott insulators via skew-scattering by the scalar spin chirality	Naoto Nagaosa ^{1,2}	¹ RIKEN CEMS ² Fundamental Quantum Science Program, RIKEN TRIP initiative