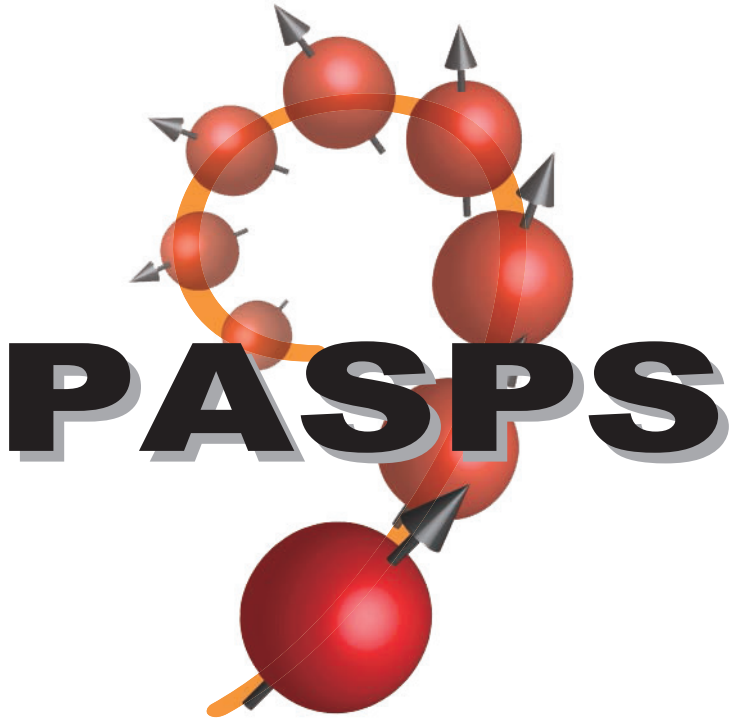

Conference Program

August 7 (Sunday)

17:00-18:00 **Registration**

18:00-20:00 **Reception**

August 8 (Monday)

08:00-18:00 **Registration**

08:45-09:00 **Opening remarks**

09:00-10:30 **Session 1 : Spintronics**

09:00-09:45 **<PL-1>** **Creating quantum technologies with spins in semiconductors *(plenary talk)***

°D. D. Awschalom[1], D. J. Christle[1], A. L. Falk[2], F. J. Heremans[1], P. V. Klimov[1], C. G. Yale[1], B. B. Zhou[1]
[1]Institute for Molecular Engineering, University of, Chicago, USA
[2]IBM T.J. Watson Research Center, Yorktown Heights, USA

09:45-10:00 **<O-1>** **Application of an advanced pump-probe Faraday rotation spectroscopy to electron spin dynamics in bulk GaAs and InGaAs quantum dots**

°E. Evers[1], V. V. Belykh[1], F. Fobbe[1], A. Greilich[1], D. R. Yakovlev[1,2], D. Reuter[3], A. D. Wieck[4], M. Bayer[1,2]
[1]Experimentelle Physik 2, Technische Universität Dortmund, Germany
[2]Ioffe Institute, Russian Academy of Sciences, Russia
[3]Department Physik, Universität Paderborn, Germany
[4]Angewandte Festkörperphysik, Ruhr-Universität Bochum, Germany

10:00-10:15 **<O-2>** **Femtosecond magnonics at nanometer wavelength in antiferromagnets**

°D. Bossini[1], S. Dal Conte[2,3], Y. Hashimoto[1], A. Secchi[1], R.V. Pisarev[4], Th. Rasing[1], G. Cerullo[2,3], A.V. Kimel[1]
[1]Institute for Molecules and Materials, Radboud University Nijmegen, The Netherlands
[2]Dipartimento di Fisica, Politecnico di Milano, Italy
[3]Instituto di Fotonica e Nanotecnologie, Consiglio Nazionale delle Ricerche, Italy
[4]Ioffe Physical-Technical Institute, Ferroics Laboratory, Russia

10:15-10:30 **<O-3>** **Kittel-like spin dynamics in a single-crystalline YIG microdisk using torque-mixing magnetic resonance spectroscopy**

°Fatemeh Fani Sani[1,2], Joe E. Losby[1,2], Miro Belov[2], Doug Vick[2], Mark R. Freeman[1,2]
[1]Department of Physics, University of Alberta, Canada
[2]National Institute for Nanotechnology, Canada

10:30-11:00 **Break**

11:00-12:30 **Session 2 : Topology in Solids**

11:00-11:30 **<INV-1>** **Fermi level dependent charge-to-spin current conversion by Dirac surface state of topological insulators *(invited talk)***

°K. Kondou[1], R. Yoshimi[1,2], S. Karube[1,3], Y. Fukuma[1,4], J. Matsuno[1], A. Tsukazaki[5], K.S. Takahashi[1], M. Kawasaki[1,2], Y. Tokura[1,2], Y. Otani[1,3]
[1]RIKEN Center for Emergent Matter Science (CEMS), Japan
[2]University of Tokyo, Japan
[3]Institute for Solid State Physics, University of Tokyo, Japan
[4]Kyushu Institute of Technology, Japan
[5]Institute for Materials Research, Tohoku University, Japan

11:30-11:45 **<O-4>** **Electric-Field-Induced Spin Resonance in Topological Magnetic Insulators**

°Takahiro Chiba[1], Akihiko Sekine[1]
[1]Institute for Materials Research, Tohoku University, Japan

11:45-12:00 **<O-5>** **2D optical control of ferromagnetism and chemical potential in a topological insulator**

°A. L. Yeats[1], P. J. Mintun[1], Y. Pan[2], A. Richardella[2], N. Samarth[2], D. D. Awschalom[1]
[1]Institute for Molecular Engineering, University of Chicago, USA
[2]Department of Physics, Penn. State University, USA

12:00-12:15 **<O-6>** **Observation of quantized Hall plateaus in a bulk antiferromagnet $EuMnBi_2$ with magnetically confined 2D Dirac fermions**

H. Masuda[1], °H. Sakai[2,1], M. Tokunaga[3], Y. Yamasaki[4,5], A. Miyake[3], J. Shiogai[6], S. Nakamura[6], S. Awaji[6], A. Tsukazaki[6], H. Nakao[7], Y. Murakami[7], T. Arima[5,8], Y. Tokura[1,5], S. Ishiwata[1,9]
[1]Dept. of Applied Physics, Univ. of Tokyo, Japan
[2]Dept. of Physics, Osaka University, Japan
[3]The Institute for Solid State Physics, Univ. of Tokyo, Japan
[4]Dept. of Applied Physics and QPEC, Univ. of Tokyo, Japan
[5]RIKEN Center for Emergent Matter Science (CEMS), Japan
[6]Institute for Materials Research, Tohoku University, Japan
[7]Condensed Matter Research Center (PF), IMSS, KEK, Japan
[8]Dept. of Advanced Materials Science, Univ. of Tokyo, Japan
[9]PRESTO, JST, Japan

12:15-12:30 **<O-7>** **Antiferromagnetic nuclear spin helix and topological superconductivity in ^{13}C nanotubes**

°Chen-Hsuan Hsu[1], Peter Stano[1,2], Jelena Klinovaja[3], Daniel Loss[1,3]
[1]RIKEN Center for Emergent Matter Science (CEMS)
[2]Institute of Physics, Slovak Academy of Sciences, Slovakia
[3]Department of Physics, University of Basel, Switzerland

12:30-14:00 **Lunch**

14:00-15:30 **Session 3 : Spin-Orbit Phenomena**

14:00-14:30 **<INV-2>** **Spin torques generated by spin textures in momentum space *(invited talk)***

°Hidekazu Kurebayashi[1]
[1]London Centre for Nanotechnology, UCL, UK

14:30-14:45 **<O-8>** **Direct determination of spin-orbit parameters from quantum transport measurements**

°P. J. Weigele[1], D.C. Marinescu[2], F. Dettwiler[1], J. Fu[3], S. Mack[4], D. D. Awschalom[5], J.C. Egues[3], D.M. Zumbühl[1]
[1]Department of Physics, University of Basel, Switzerland
[2]Department of Physics and Astronomy, Clemson University, USA
[3]Instituto de Física de São Carlos, Universidade de São Paulo, Brazil
[4]Electronics Science and Technology Division, Naval Research Laboratory, USA
[5]Institute for Molecular Engineering, University of Chicago, USA

14:45-15:00 **<O-9>** **Room-temperature characterization of spin-orbit fields in narrow-gap InGaAs quantum wells**

T. Henn[1], L. Czornomaz[1], °G. Salis[1]
[1]IBM Research - Zurich, Switzerland

15:00-15:15 **<O-10>** **Long-lived electron spin relaxation and spin coherence in monolayer transition-metal dichalcogenide semiconductors**

°Luyi Yang[1], Nikolai A. Sinitsyn[2], Weibing Chen[3], Jiangtan Yuan[3], Jing Zhang[3], Jun Lou[3], Kathleen M. McCreary[4], Berend T. Jonker[4], Scott A. Crooker[1]
[1]National High Magnetic Field Laborator, Los Alamos, USA
[2]Theoretical Division, Los Alamos National Laboratory, USA
[3]Department of Materials Science & NanoEngineering, Rice University, USA
[4]Naval Research Laboratory, USA

15:15-15:30 **<O-11>** **Tuning the spin Hall effect of Pt from the moderately dirty to the superclean regime**

°Y. Omori[1], E. Sagasta[2], M. Isasa[2], M. Gradhand[3], L. Hueso[2,4], Y. Niimi[1,5], F. Casanova[2,4], Y. Otani[1,6]
[1]Institute for Solid State Physics, University of Tokyo, Japan
[2]CIC nanoGUNE, Spain
[3]H. H. Wills Physics Laboratory, University of Bristol, UK
[4]IKERBASQUE, Basque Foundation for Science, Spain
[5]Department of Physics, Osaka University, Japan
[6]RIKEN-CEMS, Japan

15:30-16:00 **Break**

16:00-18:00 **Poster Session 1** * : entrants for "PASPS 9 Young Researcher Best Poster Award"

<P1-1>* **Spontaneous spin-split band structure of n-type ferromagnetic semiconductor (In,Fe)As observed by tunneling spectroscopy**
°Le Duc Anh[1], Pham Nam Hai[2], Masaaki Tanaka[1]
[1]Department of Electrical Engineering & Information Systems, The University of Tokyo, Japan
[2]Department of Physical Electronics, Tokyo Institute of Technology, Japan

<P1-2> **Giant edge spin accumulation in a symmetric quantum well with two subbands**
°Alexander Khaetskii[1], J. Carlos Egues[2]
[1]Department of Physics, University at Buffalo, USA
[2]Instituto de Física de São Carlos, Universidade de São Paulo, Brazil

<P1-3> **Magnetic properties of dysprosium doped indium tin oxide nanoparticles by chemical thermolysis**
°A. Fujimoto[1], M. Nishioka[1], Y. Kashiwagi[2], M. Saitoh[2], M. Nakamoto[2], Y. K. Zhou[3], B. Liu[3], C. Xing-Heng[3], R. Oota[1], Y. Harada[1], T. Kamimura[1]
[1]Osaka Institute of Technology, Japan
[2]Osaka Municipal Technical Research Institute, Japan
[3]Shanghai Normal University, China

<P1-4> **Materials design of magnetic phase change materials**
°T. Fukushima[1], H. Katayama-Yoshida[2], K. Sato[3], H. Fujii[4], E. Rabel[5], R. Zeller[5], P. H. Dederichs[5], W. Zhang[6], R. Mazzarello[6]
[1]Institute for NanoScience Design, Osaka University, Japan
[2]Graduate School of Engineering Science, Osaka University, Japan
[3]Graduate School of Engineering, Osaka University, Japan
[4]Japan Synchrotron Radiation Research Institute, Japan
[5]Peter Gruenberg Institut and Institute for Advanced Simulation, Forschungszentrum Juelich, and JARA, Germany
[6]Institute for Theoretical Solid State Physics and JARA-Fundamentals of Future Information Technology, RWTH Aachen University, Germany

<P1-5> **Fabrication of (110)-oriented GaAs/AlGaAs quantum wells for spin-controlled light sources**
°Satoshi Iba[1], Hidekazu Saito[1], Ken Watanabe[2], Yuzo Ohno[2], Shinji Yuasa[1]
[1]Spintronics Research Center, National Institute of Advanced Industrial Science and Technology (AIST), Japan
[2]Graduate School of Pure and Applied Sciences, University of Tsukuba, Japan

<P1-6>* **Magnetic properties of (Sn,Mn)Te thin films grown by molecular beam epitaxy**
°R. Ishikawa[1], R. Sakurai[1], T. Yamaguchi[1], R. Akiyama[2], S. Kuroda[1], A. Kimura[3], Y. Takeda[4], Y. Saitoh[4]
[1]Inst. Mater. Sci., Univ. Tsukuba, Japan
[2]Dept. Phys., Univ. Tokyo, Japan
[3]Dept. Phys., Hiroshima University, Japan
[4]Japan Atomic Energy Agency, Japan

<P1-7> **STM/STS measurements of local electronic states on Mn impurities on GaAs(110) surface/subsurface**
°S. Kaku[1], M. Tsukui[1], M. Hiraoka[1], J. Yoshino[1]
[1]Tokyo Institute of Technology, Japan

<P1-8>* **Electronic structure and magnetic properties in rutile (Ti, Co)O_2**
°K. Kawahara[1], T. Fukushima[2,5], K. Sato[3], H. Katayama-Yoshida[1,5]
[1]Graduate School of Engineering Science, Osaka University, Japan
[2]Institute for NanoScience Design, Osaka University, Japan
[3]Graduate School of Engineering, Osaka University, Japan
[5]Center for Spintronics Research Network, Japan

<P1-9>* **Josephson effect in Nb/(In,Fe)As/Nb junctions**
°T. Nakamura[1], Y. Iwasaki[1], L. D. Anh[2], Y. Hashimoto[1], S. Ohya[2], M. Tanaka[2], S. Katsumoto[1]
[1]The Institute for Solid State Physics, The University of Tokyo, Japan
[2]Department of Electrical Engineering and Information Systems, The University of Tokyo, Japan

<P1-10>* **Tunneling magnetoresistance in trilayer structures composed of group-IV ferromagnetic semiconductor $Ge_{1-x}Fe_x$, MgO, and Fe**
°Kohei Okamoto[1], Yuki K. Wakabayashi[1], Wataru Ashihara[1], Yoshisuke Ban[1], Shoichi Sato[1], Masaaki Tanaka[1], Shinobu Ohya[1]
[1]Department of Electrical Engineering and Information Systems, The University of Tokyo, Japan

<P1-11>* **Electric-field control of the magnetic anisotropy in a vertical spin EDLT**
°H. Terada[1], L. D. Anh[1], S. Ohya[1], Y. Iwasa[2], M. Tanaka[1]
[1]Dept. of Electrical Engineering and Information Systems, The Univ. of Tokyo, Japan
[2]Dept. of Applied Physics, The Univ. of Tokyo, Japan

<P1-12> **Separated Impurity Band *vs* Merged Impurity Band in GaMnAs and InMnAs**
°V. A. Dinh[1], K. Sato[1], H. Katayama-Yoshida[2], T. Kakeshita[1]
[1]Graduate School of Engineering, Osaka University, Japan
[2]Graduate School of Engineering Science, Osaka University, Japan

<P1-13>* **1-D Fe-rich Konbu phase in InAs obtained by Fe ion implantation and pulsed laser melting**
°Y. Yuan[1], M. Sawicki[2], R. Hübner[1], K. Potzger[1], E. Weschke[3], T. Dietl[2], M. Helm[1], S. Zhou[1]
[1]Helmholtz-Zentrum Dresden Rossendorf, Germany
[2]Institute of Physics, Polish Academy of Sciences, Poland
[3]Berliner Elektronenspeicherring-Gesellschaft für Synchrotronstrahlung, Germany

<P1-14>* **Electrical spin injection and detection at room temperature in n-Ge based lateral spin valves with $Co_2FeSi_{0.5}Al_{0.5}$/n^+-Ge Schottky tunnel contacts**
°Y. Fujita[1], M. Yamada[1], S. Yamada[1], K. Sawano[2], T. Kanashima[1], K. Hamaya[1]
[1]Graduate School of Engineering Science, Osaka University, Japan
[2]Advanced Research Laboratories, Tokyo City University, Japan

<P1-15>* **Spin transport in nanoscale silicon channels**
°Duong Dinh Hiep[1], Masaaki Tanaka[2], Pham Nam Hai[1]
[1]Tokyo Institute of Technology, Japan
[2]The University of Tokyo, Japan

<P1-16>* **Epitaxial growth of Fe_3Si films on low-temperature-grown Ge layers**
°S. Sakai[1], M. Ikawa[1], M. Kawano[1], S. Yamada[1], T. Kanashima[1], K. Hamaya[1]
[1]Graduate School of Engineering Science, Osaka University, Japan

<P1-17>* **Spin-dependent transport in all-epitaxial Fe_3Si/Ge/Fe_3Si spin valves**
°K. Santo[1], M. Kawano[1], M. Ikawa[1], S. Yamada[1], T. Kanashima[1], K. Hamaya[1]
[1]Graduate School of Engineering Science, Osaka University, Japan

<P1-18> **High interfacial anisotropy and low Gilbert damping in MgO/Fe/Fe-V/Fe/MgO structure**
°M. Bersweiler[1], K. Watanabe[2], E. C. I. Enobio[2], H. Sato[1,3], S. Fukami[1,2,3], F. Matsukura[4,1], H. Ohno[1,2]
[1]Center for Spintronics Integrated Systems, Tohoku University, Japan
[2]Laboratory for Nanoelectronics and Spintronics, Research Institute of Electrical Communication, Tohoku University, Japan
[3]Center for Innovative Integrated Electronic Systems, Tohoku University, Japan
[4]WPI-Advanced Institute for Materials Research, Tohoku University, Japan

<P1-19>* **Equilibrium spin current noise at a normal metal-magnetic insulator (N|I) interface**
°Yan-Ting Chen[1], So Takei[2], Gen Tatara[1]
[1]RIKEN Center for Emergent Matter Science (CEMS), Japan
[2]Department of Physics, Queens College of the City University of New York, USA

<P1-20>* **Phase-field simulation of spinodal decomposition in magnetic alloy**
°D. Nishida[1], H. Katayama-Yoshida[1,2], T. Fukushima[2,3], K. Sato[3]
[1]Graduate School of Engineering Science, Osaka University, Japan
[2]Center for Spintronics Network Center, Japan
[3]Institute for NanoScience Design, Osaka University, Japan
[4]Graduate School of Engineering, Osaka University, Japan

<P1-21>* **Strong suppression of spin Hall Effect in spin-glass metal**
°H. Taniguchi[1], M. Maki[1], T. Arakawa[1], T. Taniguchi[1], Y. Niimi[1], K. Kobayashi[1]
[1]Graduate School of Science, Osaka University, Japan

<P1-22>* **Transport property of parallel double quantum dots formed in InAs double-nanowire junctions**

°S. Baba[1], H. Kamata[1], S. Matsuo[1], R.S.Deacon[2], A.Oiwa[3], K. Li[4], H.Q. Xu[4,5], S.Tarucha[1,6]
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[2]Chief Scientist Laboratories RIKEN, Japan
[3]The Institute of Scientific and Industrial Research, Osaka University, Japan
[4]Key Lab for the Physics and Chemistry of Nanodevices, Peking University, China
[5]Division of Solid State Physics, Lund University, Sweden
[6]Center for Emergent Materials Science, RIKEN

<P1-23>* **Weak (Anti-)Localization in Tubular Semiconductor Nanowires with Spin-Orbit Coupling**

°Michael Kammermeier[1], Paul Wenk[1], John Schliemann[1], Sebastian Heedt[2], Thomas Schäpers[2]
[1]Institute for Theoretical Physics, University of Regenburg, Germany
[2]Peter Grünberg Institut (PGI-9) and JARA-Fundamentals of Future Information Technology, Germany

<P1-24> **Subband transport and quantum Hall effect in InGaAs/InAlAs 2DEG bilayer with surface inversion layer**

°S. Yamada[1], Y. Soeda[2], M. Akabori[2], A. Fujimoto[1], Y. Imanaka[3], K. Takehana[3]
[1]Osaka Institute of Technology (OIT), Japan
[2]Japan Advanced Institute of Science and Technology (JAIST), Japan
[3]National Institute for Materials Science (NIMS), Japan

<P1-25>* **Strain induced coherent dynamics of coupled carriers and Mn spins in a quantum dot**

°A. Lafuente-Sampietro[1,2], H. Boukari[1,2], L. Besombes[1,2]
[1]Univ. Grenoble Alpes, Institut Néel, France
[2]CNRS, Institut Néel, France

<P1-26>* **Enhancement of thermal noise in a superconductor/carbon nanotube/superconductor junction**

°S.-H. Lee[1], M. Ferrier[1,2], T. Hata[1], T. Arakawa[1], K. Kobayashi[1]
[1]Department of Physics, Graduate school of Science, Osaka-University, Japan
[2]Laboratoire de Physique des Solides, CNRS, University Paris-sud, France

<P1-27>* **Anomalous reduction of plateau conductance with in-plane magnetic field in InAs quantum wires**

°S. Matsuo[1], H. Kamata[1], S. Baba[1], R.S. Deacon[2], J. Shabani[3], C. Palmstrom[3], S. Tarucha[1,4]
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[2]Advanced Device Laboratory, RIKEN, Japan
[3]California NanoSystems Institute, University of California, Santa Barbara, USA
[4]Center for Emergent Materials Science, RIKEN, Wako, Saitama, Japan

<P1-28> **Tunnel magnetoresistance effect in van der Waals junction built from layered material ferromagnets**

°R. Moriya[1], M. Arai[1], Y. Yamasaki[1], S. Masubuchi[1], K. Ueno[2], T. Machida[1,3,4]
[1]Institute of Industrial Science, University of Tokyo, Japan
[2]Department of Chemistry, Saitama University, Japan
[3]Institute for Nano Quantum Information Electronics, University of Tokyo, Japan
[4]CREST-JST, Japan

<P1-29>* **Single electron source for two-electron interference experiments**

°Shota Norimoto[1], Masahiko Yokoi[1], Tomonori Arakawa[1], Yasuhiro Niimi[1], Kensuke Kobayashi[1]
[1]Department of Physics, Graduate School of Sciences, Osaka University, Japan

<P1-30>* **Effective one-dimensional lattice model for single-wall carbon nanotubes with spin-orbit interaction and curvature effects**

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

<P1-31> **Effect of disorder on the magnetic susceptibility in a two-dimensional system with Rashba spin-orbit coupling**

°Hidekatsu Suzuura[1], Tsuneya Ando[2]
[1]Division of Applied Physics, Faculty of Engineering, Hokkaido University, Japan
[2]Department of Physics, Tokyo Institute of Technology, Japan

<P1-32> **Conductance quantization and shot noise in a tunnel-coupled double row quantum point contact**

°D. Terasawa[1], S. Norimoto[2], T. Arakawa[2], M. Ferrier[2,3], A. Fukuda[1], K. Kobayashi[2], Y. Hirayama[4]
[1]Hyogo College of Medicine, Japan
[2]Department of Physics, Osaka University, Japan
[3]Laboratoire de Physique des solides, CNRS, Universite Paris-Sud, France
[4]Department of Physics, Tohoku University, Japan

<P1-33> **Fabrication of CdTe dots containing a single Cr with and without strain**

°H. Utsumi[1], K. Sakamoto[1], S. Kuroda[1], A. Lafuente-Sampietro[1,2], H. Boukari[2], L. Besombes[2]
[1]Institute of Materials Science, University of Tsukuba, Japan
[2]CNRS, Institut Néel, France

<P1-34>* **Electron spin coherence time of NV center under an external electric field**

°S. Kobayashi[1,2], H. Morishita[2,3], Y. Matsuzaki[4], S. Miwa[1], Y. Suzuki[1], N. Mizuochi[2,3]
[1]Osaka University, Japan
[2]JST-CREST, Japan Science and Technology Agency, Japan
[3]Kyoto University, Japan
[4]NTT Basic Research Laboratories, NTT Corporation

<P1-35>* **Creation of Mn assemblies on a GaAs (110) surface by STM**

°D. F. Grossi[1], P. M. Koenraad[1]
[1]Department of Applied Physics, Eindhoven University of Technology, The Netherlands

<P1-36> **Dispersive singlet-triplet readout of two holes on coupled acceptors in a silicon transistor**

J. van der Heijden[1], °T. Kobayashi[1], M.G. House[1], J. Salfi[1], S. Barraud[2], R. Lavieville[2], M.Y. Simmons[1], S. Rogge[1]
[1]Centre of Excellence for Quantum Computation and Communication Technology, School of Physics, University of New South Wales, Australia
[2]University of Grenoble-Alpes and CEA, LETI, MINATEC, France

<P1-37>* **Magnetic field sensing using preferentially-oriented nitrogen-vacancy centers in diamond**

°S. Saijo[1], H. Watanabe[2], Y. Monnai[1], S. Kitazawa[1], R. Fujita[1], Y. Matsuzaki[3], K. M. Itoh[1], J. Ishi-Hayase[1]
[1]Shcool of Fundamental Science and technology, Keio University, Japan
[2]National Institute of Advanced Industrial Science and Technology (AIST), Japan
[3]NTT Basic Research Laboratories, NTT Corporation, Japan

<P1-38>* **Spin dependent recombination study of surface paramagnetic centers in silicon**

°H. Saito[1], S. Hayashi[1], Y. Kusano[1], M. P. Vlasenko[2], L. S. Vlasenko[2], K. M. Itoh[1]
[1]School of Fundamental Science and Technology and Spintronics Research Center, Keio University, Japan
[2]Ioffe Institute, Russian Academy of Sciences, Russia

<P1-39> **Improvement of magnetoelectric effect in room-temperature multiferroic, $BaSrCo_2Fe_{11}AlO_{22}$ Y-type hexaferrite**

°S. Hirose[1], T. Asaka[2], T. Kimura[3]
[1]Murata Manufacturing Co., Ltd. Japan
[2]Department of Materials Science and Engineering, Nagoya Institute of Technology, Japan
[3]Division of Materials Physics, Graduate School of Engineering Science, Osaka University, Japan

<P1-40> **Internal Energy in Cobalt Oxide Observed by THz-TDS**

°M. Tatematsu[1], T. Moriyasu[1], T. Kohmoto[1]
[1]Graduate School of Science, Kobe University, Japan

<P1-41> **Optically Induced Ultrafast Lattice Dynamics in Multiferroic Cupric Oxide**

°T. Moriyasu[1], Y. Sawada[1], X. Zheng[2], T. Kohmoto[1]
[1]Graduate School of Science, Kobe University, Japan
[2]Faculty of Science and Engineering, Saga University, Spain

<P1-42> **Exotic spin orders and their manipulation —the theory and mechanism**

°You-Quan Li[1]
[1]Department of Physics, Zhejiang University, China

<P1-43>* **Magnetic-field effect on the dielectric properties of the electron-doped manganite $Ca_{1-x}Sr_xMn_{1-y}Sb_yO_3$**

°H. Taniguchi[1], H. Takahashi[1], S. Kobayashi[1], M. Matsukawa[1], R. Suryanarayanan[2]
[1]Department of Physical Science and Materials Engineering, Faculty of Science and Engineering, Iwate University, Japan
[2]Laboratoire de Physico-Chimie de l'Etat Solide, CNRS, UMR8182, Université Paris-Sud, France

<P1-44>* **Two-particle hopping amplitude in cuprates superconductor**

°Shingo Teranishi[1], Satoaki Miyao[1], Koichi Kusakabe[1]
[1]Graduate school of engineering science, Osaka University, Japan

<P1-45> **Tuning quantum spin liquid in organic Mott insulator**

°Y. Shimizu[1], T. Hiramatsu[2], M. Maesato[3], A. Otsuka[4], H. Yamochi[4], A. Ono[1], M. Itoh[1], M. Yoshida[5], M. Takigawa[5], Y. Yoshida[2], G. Saito[2]
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[2]Faculty of Agriculture, Meijo University, Japan
[3]Division of Chemistry, Kyoto University, Japan
[4]Research Center for Low Temperature and Materials Sciences, Kyoto University
[5]Institute for Solid State Physics, University of Tokyo, Japan

<P1-46>* **Study of spin-polarized electronic states at the interface between topological insulator and ferrimagnetic insulator**

°Y. Kubota[1], K. Murata[2], J. Miyawaki[1], K. Ozawa[3], M. C. Onbasli[4], T. Shirasawa[1], B. Feng[1], Sh. Yamamoto[1], R.-Y. Liu[1], S. Yamamoto[1], S. K. Mahatha[5], P. Sheverdyaeva[5], P. Moras[5], C. A. Ross[4], S. Suga[6], Y. Harada[1], K. L. Wang[2], I. Matsuda[1]
[1]Institute for Solid State Physics, The University of Tokyo, Japan
[2]Department of Electrical Engineering, University of California, United States
[3]Department of Chemistry, Tokyo Institute of Technology, Japan
[4]Department of Materials Science and Engineering, Massachusetts Institute of Technology, United States
[5]Istituto di Struttura della Materia, Consiglio Nazionale delle Ricerche, Italy
[6]Institute of Scientific and Industrial Research, Osaka University, Japan

<P1-47>* **Electron quantum optics in 2d topological insulators**

°A. Spichtinger[1], S. Essert[1], V. Krückl[1], K. Richter[1]
[1]Institut für Theoretische Physik, Universität Regensburg, Germany

<P1-48>* **Growth and characterization of $Bi_{1-x}Sb_x$ thin films on GaAs(111) substrates**

°Yugo Ueda[1], Pham Nam Hai[1]
[1]Tokyo Institute of Technology, Japan

<P1-49>* **Microwave Attenuation in Surface Acoustic Wave Devices Using Spin-Rotation Coupling**

°D. Kobayashi[1], R. Takahashi[2,3,4], R. Iguchi[2,4], M. Matsuo[2,3], S. Maekawa[2,3], E. Saitoh[2,3,4,5], Y. Nozaki[1]
[1]Dept. of Phys., Keio University, Japan
[2]ERATO-SQR, Japan
[3]JAEA-ASRC, Japan
[4]Tohoku Univ.-IMR, Japan
[5]Tohoku Univ.-WPI-AIMR, Japan

<P1-50> **Hanle spin precession in a high mobility 2DEG**

°T. Kuczmik[1], M. Oltscher[1], A. Bayer[1], D. Schuh[1], D. Bougeard[1], M. Ciorga[1], D. Weiss[1]
[1]Institute for Experimental and Applied Physics, University of Regensburg, Germany

<P1-51>* **Pure spin current transport in a Kondo alloy Cu(Fe)**

T. Kurokawa[1], °S. Oki[1], S. Yamada[1], T. Kanashima[1], T. Taniyama[2], K. Hamaya[1]
[1]Graduate School of Engineering Science, Osaka University, Japan
[2]Materials and Structures Laboratory, Tokyo Institute of Technology, Japan

<P1-52>* **Damping constant modulation of Fe_3Si by a giant pure spin current**

°S. Oki[1], S. Yamada[1], T. Kanashima[1], Y. Nozaki[2], K. Hamaya[1]
[1]Graduate school of Engineering Science, Osaka University, Japan
[2]Department of Physics, Keio University, Japan

<P1-53> **Many-body Correlation, Spin Effects and Transport in Nano-systems**

V.Lopes[1], G. Gomez[1], R. Padilla[1], °E.V. Anda[1]
[1]Departamento de Física ,PUC-Rio, Brazil

<P1-54> **Electric field dependence and the switching of the Rashba spin-orbit interaction in an asymmetric quantum well**
°H. Akera[1], H. Suzuura[1], Y. Egami[1]
[1]Division of Applied Physics, Faculty of Engineering, Hokkaido University, Japan

<P1-55>* **Control and characterisation of nuclear spins in diamond nanocrystals**
°J. D. Beitner[1], H. S. Knowles[1], D. M. Kara[1], D. H. Jarausch[1], M. Atatüre[1]
[1]University of Cambridge, 19 JJ Thomson Avenue, Cambridge, UK

<P1-56>* **Laser-induced magnetization dynamics in Pt/CoFeB/MgO films**
Y. Sasaki[1,2], K. Nawaoka[3], A. Kamimaki[1,2], Y. Suzuki[3], S. Miwa[3], °S. Mizukami[2]
[1]Graduate School of Engineering, Tohoku University, Japan
[2]WPI Advanced Institute for Materials Research, Tohoku University, Japan
[3]Graduate School of Engineering Science, Osaka University, Japan

<P1-57>* **Observation of electron spin relaxation in GaAs/AlGaAs resonant tunneling biquantum-well structure**
°Y. Nakamura[1], T. Aritake[1], C. Jiang[1], K. Nakayama[1], S. Muto[2], A. Tackeuchi[1]
[1]Department of Applied Physics, Waseda University, Japan
[2]Department of Applied Physics, Hokkaido University, Japan

<P1-58>* **Strong excitation of spinwaves and associated magnetization reversal in NiFe strips**
°G. Okano[1], Y. Nozaki[1]
[1]Department of physics, Keio University, Japan

<P1-59>* **Quantum State of Skyrmion in Two-Dimensional Chiral Magnets**
°R. Takashima[1], H. Ishizuka[2], L. Balents[3]
[1]Department of Physics, Kyoto University, Japan
[2]Department of Applied Physics, The University of Tokyo, Japan
[3]Kavli Institute for Theoretical Physics, University of California, USA

<P1-60> **Surface spin states of bismuth thin films: a tight-binding analysis**
K. Saito[1], H. Sawahata[1], J. Nagai[1], Y. Sawada[1], T. Komine[1], °T. Aono[1]
[1]Faculty of Engineering, Ibaraki University, Japan

<P1-61> **Crystalline spin-orbit interaction and the Zeeman splitting in semimetals and semiconductors**
°Y. Fuseya[1], H. Hayasaka[1], Z. Zhu[2], B. Fauqué[2], W. Kang[3], B. Lenoir[4], K. Behnia[2]
[1]University of Electro-Communications, Japan
[2]Ecole Spérieure de Physique et Chimie Industrielles, France
[3]Ewha Womans University, Korea
[4]Ecole Nationale Supérieure des Mines de Nancy, France

<P1-62>* **Observation of Zitterbewegung as conductance fluctuation in an InAs quantum well**
°Y. Iwasaki[1], Y. Hashimoto[1], T. Nakamura[1], S. Katsumoto[1]
[1]The Institute for Solid State Physics, The University of Tokyo, Japan

<P1-63>* **Rashba spin-orbit interaction in 2D isotropic/anisotropic quantum dots**
°Tatsuki Tojo[1], Masshi Inui[1], Ryo Ooi[1], Kyozaburo Takeda[1], Yasuhiro Tokura[2]
[1]Waseda University, Japan
[2]University of Tsukuba, Japan

<P1-64>* **Resonant interstate transition by oscillating Rashba spin-orbit interaction in two-dimensional quantum dot**
°Masashi Inui[1], Tatsuki Tojo[1], Naoya Matsumoto[1], Kyozaburo Takeda[1]
[1]Waseda University, Japan

<P1-65> **Fluctuating charge and heat currents and the time dependent coefficient of performance for a nanoscale refrigerator**
°H. Okada[1], Y. Utsumi[1]
[1]Department of Physics Engineering, Mie-University, Japan

<P1-66>* **Anisotropic Pauli spin blockade in hole quantum dots**
°M. Brauns[1], J. Ridderbos[1], A. Li[2], E.P.A.M. Bakkers[2,3], W.G. van der Wiel[1], F.A. Zwanenburg[1]
[1]NanoElectronics Group, MESA+ Institute for Nanotechnology, University of Twente, The Netherlands
[2]Photonics & Semiconductor Nanophysics Group, Department of Applied Physics, TU, The Netherlands
[3]QuTech and Kavli Institute of Nanoscience, Delft University of Technology, The Netherlands

<P1-67>* **Spatially resolved measurement of ferromagnetic resonance in Co/Ni multilayers using magneto-optical Kerr effect**
°I. Kan[1], Y. Nozaki[1]
[1]Dept. of Phys., Keio University, Japan

<P1-68>* **Exchange bias unidirectionally defined by electric current**
°K. Oda[1], T. Moriyama[1], M. Kawaguchi[1], M. Kamiya[1], K. Tanaka[1], K.-J Kim[1], T. Ono[1]
[1]Institute for Chemical Research, Kyoto University, Japan

<P1-69> **Vortex annihilation dependence of chirality in asymmetric permalloy**
°Deng-Shiang Shiu[1], Kuo-Ming Wu[1], Chao-Hsien Huang[1], Kao-Fan Lai[1], Jong-Ching Wu[1], Lance Horng[1]
[1]Department of Physics, National Changhua University of Education, Taiwan

<P1-70>* **Exchange coupling induced by epitaxial *B*2-FeRh layers grown on ferromagnets**
°S. Yamada[1], T. Taniyama[2], K. Hamaya[1]
[1]Graduate School of Engineering Science, Osaka University, Japan
[2]Materials and Structures Laboratory, Tokyo Institute of Technology, Japan

<P1-71> **Single-electron charge sensing in InAs self-assembled quantum dots**
°H. Kiyama[1], T. Hirayama[1], R. Shikishima[1], S. Matsuo[2], S. Baba[2], N. Nagai[3], K. Hirakawa[3], S. Tarucha[2,4], A. Oiwa[1]
[1]The Institute of Scientific and Industrial Research, Osaka University, Japan
[2]Department of Applied Physics, The University of Tokyo, Japan
[3]Institute of Industrial Science, the University of Tokyo, Japan
[4]Center for Emergent Matter Science, RIKEN, Japan

<P1-72> **Computational nanomaterials design for circularly polarized luminescence on Eu-doped GaN**
°A. Masago[1,5], T. Fukushima[2,5], K. Sato[3], H. Katayama-Yoshida[1,5]
[1]Graduate School of Engineering Science, Osaka University, Japan
[2]Institute for NanoScience Design, Osaka University, Japan
[3]Graduate School of Engineering, Osaka University, Japan
[5]Center for Spintronics Research Center

<P1-73>* **Design of bull's eye structures on gate-defined lateral quantum dots**
°R. Fukai[1], T. Nakagawa[1], H. Kiyama[1], A. Oiwa[1]
[1]The Institute of Scientific and Industrial Research, Osaka University, Japan

August 9 (Tuesday)

08:00-12:30 **Registration**

09:00-10:30 **Session 4 : Nuclear Spin**

09:00-09:30 **<INV-3>** **4 NUCLEAR-SPIN STATES COHERENT MANIPULATION USING A SINGLE MOLECULAR MAGNET** ***(invited talk)***

C. Godfrin[1,2], S. Thiele[1,2], S. Klyatskaya[3], M. Ruben[3,4], W. Wernsdorfer[1,2,3], °F. Balestro[1,2,5]

[1]CNRS, Inst NEEL, France

[2]Univ. Grenoble Alpes, Inst NEEL, France

[3]Inst. of Nanotechnology (INT), Karlsruhe Institute of Technology (KIT), Germany

[4]Inst. de Physique et Chimie des Matériaux de Strasbourg, CNRS-Univ., France

[5]Inst. Univ. de France, France

09:30-09:45 **<O-12>** **Mechanically induced ac-Stark effect and sidebands in nuclear spins from an electromechanical resonator**

°Yuma Okazaki[1,2], Imran Mahboob[1], Koji Onomitsu[1], Satoshi Sasaki[1], Shuji Nakamura[2], Nobu-Hisa Kaneko[2], Hiroshi Yamaguchi[1]

[1]NTT Basic Research Laboratories, NTT Corporation, Japan

[2]National Metrology Institute of Japan (NMIJ), National Institute of Advanced Industrial Science and Technology (AIST), Japan

09:45-10:00 **<O-13>** **Current-driven dynamical nuclear spin polarization in a semiconductor quantum point contact**

°Minoru Kawamura[1], Keiji Ono[1], Peter Stano[1], Kimitoshi Kono[1], Tomosuke Aono[2]

[1]RIKEN Center for Emergent Matter Science, Japan

[2]Department of Electrical and Electronic Engineering, Ibaraki University, Japan

10:00-10:30 **<INV-4>** **Nuclear spintronics in silicon carbide** ***(invited talk)***

°A. L. Falk[1], P.V. Klimov[2], D. J. Christle[2], H. Seo[2], G. Galli[2], D. D. Awschalom[2]

[1]IBM T.J. Watson Research Center, USA

[2]Institute for Molecular Engineering, University of Chicago, USA

10:30-11:00 **Break**

11:00-12:30 **Session 5 : Metal Spintronics**

11:00-11:30 **<INV-5>** **Spin orbit fields at the Fe/GaAs(001) interface** ***(invited talk)***

Lin Chen[1], M. Decker[1], M. Buchner[1], M. Kronseder[1], R. Islinger[1], P. Högl[2], M. Gmitra[2], D. Schuh[1], D. Bougeard[1], J. Fabian[2], D. Weiss[1], °C. H. Back[1]

[1]Institute for Experimental Physics, Universitaetsstrasse 31, Germany

[2]Institute for Theoretical Physics, Universitaetsstrasse 31, Germany

11:30-11:45 **<O-14>** **Interaction effect on the field dependence of a carbon nanotube excitation spectrum**

°Tokuro Hata[1], Ryo Fujiwara[1], Tomonori Arakawa[1], Meydi Ferrier[1,2], Rui Sakano[3], Yoshimichi Teratani[4], Akira Oguri[4], Kensuke Kobayashi[1]

[1]Department of Physics, Osaka University, Japan

[2]LPS, Université Paris-Sud, CNRS, France

[3]Institute for Solid State Physics, the University of Tokyo, Japan

[4]Department of Physics, Osaka City University, Japan

11:45-12:00 **<O-15>** **Field-free switching of antiferromagnet/ferromagnet dots by spin-orbit torque**

°A. Kurenkov[1], C. Zhang[1], S. DuttaGupta[1], S. Fukami[1,2,3], H. Ohno[1,2,3,4]

[1]Laboratory for Nanoelectronics and Spintronics, RIEC, Tohoku University, Japan

[2]CSIS, Tohoku University Japan

[3]CIES, Tohoku University, Japan

[4]WPI-AIMR, Tohoku University, Japan

12:00-12:30 **<INV-6>** **Electric field effect on magnetism in Pt/Co system** ***(invited talk)***

°D. Chiba[1]

[1]Department of Applied Physics, The University of Tokyo, Japan

12:30-13:30 **Lunch**

13:30-19:00 **Excursion**

August 10 (Wednesday)

08:00-18:00 **Registration**

09:00-10:30 **Session 6 : Spin Injection**

09:00-09:45 **<PL-2>** **Ferromagnet/III-V Semiconductor Heterostructures: Progress and Prospects *(plenary talk)***
C. Liu[1], T. A. Peterson[1], S. J. Patel[2], C. C. Geppert[1], K. D. Christie[1], C. J. Palmstrøm[2], °P. A. Crowell[1]
[1]School of Physics and Astronomy, University of Minnesota, USA
[2]Departments of Electrical and Computer Engineering and Materials,University of California, USA

09:45-10:00 **<O-16>** **Spin transport in *p*-Ge up to 125 K using a Ge/Fe_3Si structure**
°M. Kawano[1], K. Santo[1], M. Ikawa[1], S. Yamada[1], T. Kanashima[1], K. Hamaya[1]
[1]Graduate School of Engineering Science, Osaka University, Japan

10:00-10:15 **<O-17>** **2D spin valve structure featuring large two-terminal spin signals**
°M. Oltscher[1], T. Kuczmik[1], A. Bayer[1], D. Schuh[1], D. Bougeard[1], M. Ciorga[1], D. Weiss[1]
[1]University of Regensburg, Germany

10:15-10:30 **<O-18>** **Giant spin-valve effect in (Ga,Fe)Sb/(In,Fe)As ferromagnetic p-n junctions**
°Tomohiro Otsuka[1], Yuto Arakawa[1], Masaaki Tanaka[2], Pham Nam Hai[1]
[1]Tokyo Institute of Technology, Japan
[2]University of Tokyo, Japan

10:30-11:00 **Break**

11:00-12:30 **Session 7 : Quantum Transport**

11:00-11:30 **<INV-7>** **The inverted phase of coupled InAs/GaSb quantum wells *(invited talk)***
M. Karalic[1], S. Mueller[1], C. Mittag[1], T. Ihn[1], T. Tschirky[1], W. Wegscheider[1], °K. Ensslin[1]
[1]Physics Department, ETH Zurich, Switzerland

11:30-11:45 **<O-19>** **Coherent spin transfer through a quantum dot array**
°T. Fujita[1], T. A. Baart[1], C. Reichl[2], W. Wegscheider[2], L. M. K. Vandersypen[1]
[1]QuTech and Kavli Institute of Nanoscience, Delft University of Technology, Netherlands
[2]Solid State Physics Laboratory, ETH Zurich, Switzerland

11:45-12:00 **<O-20>** **Topological effects in spin interference**
°H. Saarikoski[1], J. E. Vázquez-Lozano[2,3], J. P. Baltanás[2], J. Nitta[4], D. Frustaglia[2]
[1]RIKEN Center for Emergent Matter Science (CEMS), Japan
[2]Departamento de Física Aplicada II, Universidad de Sevilla, Spain
[3]Nanophotonics Technology Center, Universitat Politècnica de València, Spain
[4]Department of Materials Science, Tohoku University, Japan

12:00-12:15 **<O-21>** **Spin current without charge transfer in quantum wires**
°Abolfazl Bayat[1], Sanjeev Kumar[2], Bobby Antonio[1], Sougato Bose[1], Michael Pepper[2]
[1]Department of Physics and Astronomy, University College London, UK
[2]London Centre for Nanotechnology, University College London, UK

12:15-12:30 **<O-22>** **Edge mixing dynamics in a quantum Hall pn junction of graphene**
°S. Matsuo[1,2], S. Takeshita[1], T. Tanaka[1], S. Nakaharai[3], K. Tsukagoshi[3], T. Moriyama[2], T. Ono[2], K. Kobayashi[1]
[1]Department of Physics, Osaka University, Japan
[2]Institute for Chemical Research, Kyoto University, Japan
[3]WPI-MANA, NIMS, Japan

12:30-14:00 **Lunch**

14:00-15:30 **Session 8 : Magnetic Semiconductor**

14:00-14:30 **<INV-8>** **Spin-orbitronics of III-nitride semiconductors *(invited talk)***
°Alberta Bonanni[1]
[1]Institute for Semiconductor and Solid State Physics, Johannes Kepler University, Austria

14:30-14:45 **<O-23>** **Hole localization in (III,Mn)V dilute magnetic semiconductors**
°H. Raebiger[1], S. Bae[1], T. Munehiro[1]
[1]Department of Physics, Yokohama National University, Japan

14:45-15:00 **<O-24>** **Interplay of localization and magnetism in (Ga,Mn)As and (In,Mn)As**
°Y. Yuan[1], M. Sawicki[2], T. Dietl[2,3,4], M. Helm[1], S. Zhou[1]
[1]Helmholtz-Zentrum Dresden Rossendorf, Germany
[2]Institute of Physics, Polish Academy of Sciences, Poland
[3]Institute of Theoretical Physics, University of Warsaw, Poland
[4]WPI-Advanced Institute for Materials Research, Tohoku University, Japan

15:00-15:15 **<O-25>** **High-Temperature Ferromagnetism in Heavily Fe-doped Ferromagnetic Semiconductor (Ga,Fe)Sb**
°Nguyen Thanh Tu[1], Pham Nam Hai[1,2], Le Duc Anh[1], Masaaki Tanaka[1]
[1]Department of Electrical Engineering & Information Systems, The University of Tokyo, Japan
[2]Department of Physical Electronics, Tokyo Institute of Technology, Japan

15:15-15:30 **<O-26>** **Ferromagnetism in $BiFe_{1-x}Co_xO_3$ epitaxial thin films and the correlation between ferroelectric and ferromagnetic domains**
°H. Hojo[1], R. Kawabe[1], H. Yamamoto[1], K. Mibu[2], M. Azuma[1]
[1]Tokyo Institute of Technology, Japan
[2]Nagoya Institute of Technology, Japan

15:30-16:00 **Break (conference photo will be taken in the Conference Hall before the break)**

16:00-18:00 **Poster Session 2** * : entrants for "PASPS 9 Young Researcher Best Poster Award"

<P2-1> **Hysteretic features at odd-filling factor quantum Hall breakdown in InGaAs/InP quantum well hetero-structure**
V. Yu[1,2], M. Hilke[1], P. Poole[2], S. Studenikin[2], °D. G. Austing[1,2]
[1]Department of Physics, McGill University, Canada
[2]National Research Council of Canada, Canada

<P2-2>* **Spin-valve effect and current modulation in a current-in-plane spin-valve electric-field-effect transistor**
°Toshiki Kanaki[1], Tomohiro Koyama[2], Daichi Chiba[2], Shinobu Ohya[1], Masaaki Tanaka[1]
[1]Department of Electrical Engineering and Information Systems, The University of Tokyo, Japan
[2]Department of Applied Physics, The University of Tokyo, Japan

<P2-3> **STM/STS study of impurity states induced by Cr atoms adsorbed on ZnTe(110) surface**
°Ken Kanazawa[1], Shoji Yoshida[1], Hidemi Shigekawa[1], Shinji Kuroda[1]
[1]Grad. School of Pure & Appl. Sci., Univ. of Tsukuba, Japan

<P2-4>* **Manganese doped $(CdSe)_{13}$ magic sized cluster**
°F. Muckel[1], J. Yang[2], R. Fainblat[1], S. Lorenz[1], T. Hyeon[2], G. Bacher[1]
[1]Werkstoffe der Elektrotechnik and CENIDE, Universität Duisburg-Essen, Germany
[2]School of Chemical and Biological Engineering & Department of Materials Science and Engineering, Seoul National University, Korea

<P2-5> **Magnetic Ground State of an Individual Fe^{2+} Ion in a Strained Semiconductor Nanostructure**
T. Smoleński[1], T. Kazimierczuk[1], J. Kobak[1], M. Goryca[1], A. Golnik[1], P. Kossacki[1],
°W. Pacuski[1]
[1]Faculty of Physics, University of Warsaw, Poland

<P2-6>* **Electronic structure of the ferromagnetic semiconductor $Ge_{1-x}Fe_x$ revealed by soft x-ray angle-resolved photoemission spectroscopy**
°S. Sakamoto[1], Y. K. Wakabayashi[2], Y. Takeda[3], S.-i. Fujimori[3], H. Suzuki[1], Y. Ban[2],
H. Yamagami[3,4], M. Tanaka[2], S. Ohya[2], A. Fujimori[1]
[1]Department of Physics, The University of Tokyo, Japan
[2]Department of Electrical Engineering and Information Systems, The University of Tokyo, Japan
[3]Materials Sciences Research Center, Japan Atomic Energy Agency, Japan
[4]Department of Physics, Kyoto Sangyo University, Japan

<P2-7>* **Magnetic exchange interaction in Ge based magnetic semiconductor**
°H. Shinya[1,2], A. Masago[1,2], T. Fukushima[3], K. Sato[4], H. Katayama-Yoshida[1,2]
[1]Graduate School of Engineering Science, Osaka University, Japan
[2]Center for Spintronics Research Network, Japan
[3]Institute for NanoScience Design, Osaka University, Japan
[4]Graduate School of Engineering, Osaka University, Japan

<P2-8> **Electron and hole spin dynamics in InAs/InAlGaAs self-assembled quantum dots emitting at telecom wavelengths**
°V. V. Belykh[1], D. R. Yakovlev[1,2], J. J. Schindler[1], A. Greilich[1], E. A. Zhukov[1], M. A. Semina[2], M. Yacob[3], J. P. Reithmaier[3], M. Benyoucef[3], M. Bayer[1,2]
[1]Experimentelle Physik 2, Technische Universität Dortmund, Germany
[2]Ioffe Institute, Russian Academy of Sciences, Russia
[3]Institute of Nanostructure Technologies and Analytics (INA), CINSaT, University of Kassel, Germany

<P2-9> **Effect of co-doping by Gd substitution and O deficiency on electronic structure and Curie temperature of EuO**
°Y. Tomita[1], V. A. Dinh[1,2], K. Sato[1], T. Kakeshita[1]
[1]Graduate School of Engineering, Osaka University, Japan
[2]Vietnam-Japan University, Vietnam National University of Hanoi, Vietnam

<P2-10> **Electronic structure of rare-earth doped GaN: Hybrid functional study with orbital polarization correction**
°V. A. Dinh[1,2], K. Sato[1], H. Katayama-Yoshida[3], T. Kakeshita[1]
[1]Graduate School of Engineering, Osaka University, Japan
[2]Vietnam-Japan University, Vietnam National University of Hanoi, Vietnam
[3]Graduate School of Engineering Science, Osaka University, Japan

<P2-11>* **Molecular beam epitaxy of Mn_2CoAl films on $MgAl_2O_4$ (100)**
°K. Yamasaki[1], K. Arima[1], S. Yamada[1], T. Kanashima[1], K. Hamaya[1]
[1]Graduate School of Engineering Science, Osaka University, Japan

<P2-12> **Ferromagnetic properties of five–period InGaMnAs/GaAs quantum well structure**
°Im Taek Yoon[1], Sejoon Lee[1]
[1]Quantum Functional Semiconductor Research Center, Dongguk University, Korea

<P2-13> **Measurement of resonant spin Hall effect in InGaAs 2DEG bilayer system**
°S. Yamada[1], H. Iwase[2], Y. Soeda[2], M. Akabori[2], A. Fujimoto[1]
[1]Osaka Institute of Technology (OIT), Japan
[2]Japan Advanced Institute of Science and Technology (JAIST), Japan

<P2-14>* **Electrical properties in $Co_2FeSi_{1-x}Al_x/n^+$-Ge contacts with phosphorous δ-doping and silicon-layer insertion**
°K. Arima[1], M. Yamada[1], Y. Fujita[1], K. Sawano[2], S. Yamada[1], T. Kanashima[1], K. Hamaya[1]
[1]Graduate school of engineering science, Osaka University, Japan
[2]Advanced Research Laboratories, Tokyo City University, Japan

<P2-15>* **Origin of the large positive magnetoresistance in $Ge_{1-x}Mn_x$ granular films**
°Yuki K. Wakabayashi[1], Ryota Akiyama[2], Yukiharu Takeda[3], Masafumi Horio[2], Goro Shibata[2], Shoya Sakamoto[2], Yoshisuke Ban[1], Yuji Saitoh[3], Hiroshi Yamagami[3,4], Atsushi Fujimori[2], Masaaki Tanaka[1], Shinobu Ohya[1]
[1]Department of Electrical Engineering and Information Systems, The University of Tokyo, Japan
[2]Department of Physics, The University of Tokyo
[3]Materials Sciences Research Center, JAEA, Japan
[4]Department of Physics, Kyoto Sangyo University, Japan

<P2-16>* **Laser-induced spin dynamics in (111)-Fe_3Si/Ge epitaxial films**
°Y. Sasaki[1,2], S. Yamada[3], K. Hamaya[3], S. Mizukami[2]
[1]Graduate School of Engineering, Tohoku University, Japan
[2]WPI Advanced Institute for Materials Research, Tohoku University, Japan
[3]Graduate School of Engineering Science, Osaka University, Japan

<P2-17> **Spin accumulation up to 10 meV in Si non-local devices with MgO/Fe tunnel contacts**
°A. Spiesser[1], H. Saito[1], Y. Fujita[2], S. Yamada[2], K. Hamaya[2], S. Yuasa[1], R. Jansen[1]
[1]National Institute of Advanced Industrial Science and Technology (AIST), Spintronics Research Center, Japan
[2]Graduate School of Engineering Science, Osaka University, Japan

<P2-18>* **Spin pumping due to spin wave modes in a magnetic vortex**
°N. Hasegawa[1], K. Kondou[2], Y. Otani[1,2]
[1]Institute for Solid State Physics, University of Tokyo, Japan
[2]CEMS, RIKEN, Japan

<P2-19>* **Effective Hamiltonian approach to nonreciprocal directional dichroism in magnetic Rashba conductor**
°Hideo Kawaguchi[1,2], Gen Tatara[2]
[1]Graduate School of Science and Engineering, Tokyo Metropolitan University, Japan
[2]Center for Emergent Matter Science, RIKEN, Japan

<P2-20>* **Growth of Co/Cu(001) superlattices**
°T. Konishi[1], A. Yoshida[1], S. Uegaki[1], N. Hosoito[1]
[1]Nara Institute of Science and Technology, Graduate School of Materials Science, Japan

<P2-21>* **Fabrication of $L1_0$-$Mn_{1-x}Co_xAl$ Thin Films for Magnetic Tunnel Junctions**
°K. Watanabe[1], M. Oogane[1], M. Kubota[1], Y. Ando[1]
[1]Graduate School of Engineering, Tohoku University, Japan

<P2-22>* **Observation of Photogalvanic Effect in Spin-splitting Surface States of Bi(111) and Bi/Ag(111)**
°R. Akiyama[1], H. Ishihara[1], D. Fan[1], R. Hobara[1], A. Takayama[1], S. Hasegawa[1]
[1]The University of Tokyo, Japan

<P2-23> **Gate voltage-controlled spin-charge conversion in single-layer graphene**
°S. Dushenko[1,2], H. Ago[3], K. Kawahara[3], T. Tsuda[4], S. Kuwabata[4], T. Takenobu[5], T. Shinjo[1], Y. Ando[1], M. Shiraishi[1]
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[2]Graduate School of Engineering Science, Osaka University, Japan
[3]Institute for Material Chemistry and Engineering, Kyushu University, Japan
[4]Graduate School of Engineering, Osaka University, Japan
[5]School of Advanced Science and Engineering, Waseda University, Japan

<P2-24> **Enhanced current fluctuation in cotunneling through carbon-nanotube quantum dot**
°Atsushi Iwasaki[1], Mikio Eto[1]
[1]Faculty of Science and Technology, Keio University, Japan

<P2-25>* **Optical probing and dynamics of a Cr spin in a semiconductor quantum dot**
°A. Lafuente-Sampietro[1,2,3], H. Utsumi[1], H. Boukari[2,3], S. Kuroda[1], L. Besombes[2,3]
[1]Institute of Materials Science, University of Tsukuba, Japan
[2]Univ. Grenoble Alpes, Institut Néel, France
[3]CNRS, Institut Néel, France

<P2-26>* **Investigation of the inverse Rashba-Edelstein effect in Bi/Ag/YIG and Ag/Bi/YIG**
°M. Matsushima[1], S. Dushenko[1], R. Ohshima[1], Y. Ando[1], T. Shinjo[1], M. Shiraishi[1]
[1]Kyoto University, Japan

<P2-27> **Spin injection into multilayer graphene from Co_2FeSi Heusler alloy**
T. Yamaguchi[1], °R. Moriya[1], S. Oki[2], S. Yamada[2], S. Masubuchi[1], K. Hamaya[2], T. Machida[1,3,4]
[1]Institute of Industrial Science, University of Tokyo, Japan
[2]Graduate School of Engineering Science, Osaka University, Japan
[3]Institute for Nano Quantum Information Electronics, University of Tokyo, Japan
[4]CREST-JST

<P2-28>* **Transport and optical properties of (110) GaAs quantum wells for photon-spin quantum state transfer using heavy hole states**
°T. Nakagawa[1], R. Fukai[1], H. Kiyama[1], J. Ritzmann[2], A. Ludwig[2], A. D. Wieck[2], A. Oiwa[1]
[1]The Institute of Scientific and Industrial Research, Osaka University, Japan
[2]Lehrstuhl für Angewandte Festkörperphysik Ruhr-Univ., Germany

<P2-29>* **Synchrotron x-ray diffraction study on excitonic insulator candidate compound Ta_2NiSe_5**
°A.Nakano[1], S.Kito[1], K.Sugawara[1], T.Higuchi[1], N.Katayama[1], H.Sagayama[2], R.Kumai[2], K.Matsubayashi[3], T.Okada[4], Y.Uwatoko[4], K.Munakata[5], A.Nakao[5], H.Takagi[6], H.Sawa[1]
[1]Nagoya University, Japan
[2]IMSS, KEK, Japan
[3]Univ. of Electro-Comm, Japan
[4]ISSP, Japan
[5]CROSS, Japan
[6]Univ. of Tokyo, Japan

<P2-30> **Spin splitting in lattice-mismatched (110)-oriented quantum wells**
°M.O. Nestoklon[1], S.A. Tarasenko[1], R. Benchamekh[2], P. Voisin[3]
[1]Ioffe Physical-Technical Institute, Russia
[2]Tyndall National Institute, Lee Maltings, Ireland
[3]CNRS-Laboratoire de Photonique et de Nanostructures, France

<P2-31> **Conserved spin quantity in strained hole systems with Rashba and Dresselhaus spin-orbit coupling**
°P. Wenk[1], M. Kammermeier[1], J. Schliemann[1]
[1]Institut für Theoretische Physik, Universität Regensburg, Germany

<P2-32>* **Conducting property of quantum point contact exposed to surface acoustic wave**
°M. Yokoi[1], T. Arakawa[1], H. Watanabe[1], S. Norimoto[1], Y. Niimi[1], K. Kobayashi[1]
[1]Department of Physics, Graduate School of Science, Osaka University, Japan

<P2-33>* **Preferentially-oriented nitrogen-vacancy centers in diamond created using chemical vapor deposition on a micropatterned (001) substrate**
°R. Fujita[1], S. Saijo[1], I. Hanano[1], H. Watanabe[2], K. Akahane[3], Y. Monnai[1], K. M. Itoh[1], J. Ishi-Hayase[1]
[1]School of Fundamental Science and Technology, Keio University, Japan
[2]National Institute of Advanced Industrial Science and Technology, Japan
[3]National Institute of Information and Communications Technology, Japan

<P2-34>* **Geometrical stabilization of degenerate logical spin in diamond**
°Yusuke Komura[1], Yuhei Sekiguchi[1], Shota Mishima[1], Touta Tanaka[1], Naeko Niikura[1], Hideo Kosaka[1]
[1]Yokohama National University, Japan

<P2-35>* **Control of charge states of NV center in diamond by nin junction**
°T. Murai[1], T. Makino[2,3], H. Kato[2,3], Y. Doi[1], Y. Suzuki[1], M. Hatano[3,4], S. Yamazaki[2,3], M. Shimizu[3,5], H. Morishita[3,6], M. Fujiwara[3,6], N. Mizuochi[3,6]
[1]Graduate School of Engineering Science, Osaka University, Japan
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[3]CREST, Japan Science and Technology Agency
[4]Tokyo Institute of Technology, Japan
[5]Tokyo University of Science, Japan
[6]Kyoto University, Japan

<P2-36>* **Wide-field orientation imaging of nitrogen-vacancy centers in diamond**
°M. Okazaki[1], R. Fujita[1], I. Hanano[1], H. Watanabe[2], K. Akahane[3], Y. Monnnai[1], K. M. Itoh[1], J. Ishi-Hayase[1]
[1]School of Fundamental Science and Technology, Keio University, Japan
[2]National Institute of Advanced Industrial Science and Technology, Japan
[3]National Institute of Information and Communications Technology, Japan

<P2-37>* **Magnetic-field sensitivity and spin properties of high density ensemble of nitrogen-vacancy centers with a narrow resonance linewidth**
°K. Sasaki[1], E. E. Kleinsasser[2], M. E. Stanfield[2], J. K. Q. Banks[2], Z. Zhu[3,4], W.-D. Li[3,4], V. M. Acosta[5], H. Watanabe[6], K.-M. C. Fu[2], K. M. Itoh[1], E. Abe[1]
[1]Keio University, Japan
[2]University of Washington, USA
[3]HKU-SIRI, China
[4]Univeristy of Hong Kong, China
[5]University of New Mexico, USA
[6]AIST, Japan

<P2-38> **Dynamics of the Electric-Field Induced Magnetization in Antiferromagnetic Chromium Oxide Measured by Faraday Rotation**
°T. Shinkai[1], T. Moriyasu[1], T. Kohmoto[1]
[1]Graduate School of Science, Kobe University, Japan

<P2-39>* **High temperature and intrinsic single-phase bismuth layer-structured multiferroics**

°Jianlin Wang[1,2], Haoliang Huang[2], Zhengping Fu[3], Yalin Lu[1,2,3,4]
[1]National Synchrotron Radiation Laboratory, University of Science and Technology of China, P.R. China
[2]Synergetic Innovation Center of Quantum Information & Quantum Physics, University of Science and Technology of China, P. R. China
[3]Hefei National Laboratory for Physical Sciences at the Microscale, University of Science and Technology of China, P.R. China
[4]Laser and Optics Research Center, Department of Physics, United States Air Force Academy, USA

<P2-40>* **Tight-binding model analysis on surface spin states of bismuth-antimony alloy thin films**

°J. Nagai[1], °Y. Sawada[1], T. Komine[1], T. Aono[1]
[1]Faculty of Engineering, Ibaraki University, Japan

<P2-41>* **Dimensional crossover of spin transport in topological insulator nanofilms**

°K. Kobayashi[1], M. Wada[2], Y. Yoshimura[3], T. Ohtsuki[2], K.-I. Imura[3,4]
[1]IMR, Tohoku University, Japan
[2]Sophia University, Japan
[3]AdSM, Hiroshima University, Japan
[4]KITP, University of California, Santa Barbara, USA

<P2-42>* **Voltage-driven magnetization switching and spin pumping in Weyl semimetals**

°D. Kurebayashi[1], K. Nomura[1]
[1]Institute for Materials Research, Tohoku University, Japan

<P2-43>* **Topologically protected gap and singularity in the Andreev spectrum in multi-terminal Josephson junction**

°T. Yokoyama[1,2], J. Reutlinger[3], W. Belzig[3], Yu. V. Nazarov[1]
[1]Kavli Institute of Nanoscience, Delft University of Technology, Lorentzweg, The Netherlands
[2]The Institute for Solid State Physics, The University of Tokyo, Japan
[3]Fachbereich Physik, Universität Konstanz, Germany

<P2-44>* **Rotation of an Alkali Metal Vapor Cell by Spin Relaxation at the Surface**

°Y. Goto[1], T. Kuroda[1], Y. Nagata[1], A. Hatakeyama[1]
[1]Tokyo University of Agriculture and Technology, Japan

<P2-45>* **Fabrication of $NbSe_2$ narrow wire aiming for spin injection**

°T. Kawamura[1], M. Maeda[1], K. Hino[1], P. Noël[1], S. Takeshita[1], T. Arakawa1, Y. Niimi[1], K. Kobayashi[1]
[1]Graduate School of Science, Osaka University, Japan

<P2-46>* **Enhancement of room-temperature spin signals in n^+-Si-based lateral spin devices**

°T. Oka[1], M. Ishikawa[2], Y. Fujita[1], S. Yamada[1], T. Kanashima[1], Y. Saito[2], K. Hamaya[1]
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[2]RDC, Toshiba Corporation, Japan

<P2-47> **Appearance of spin injection signals in three-terminal devices with Fe/Mg/MgO/Si junctions: Effect of Mg insertion layer**

°S. Sato[1], R. Nakane[1], T. Hada[1], M. Tanaka[1]
[1]Dept. of Electrical Engineering and Information Systems, The University of Tokyo, Japan

<P2-48>* **Conductance quantisation in $In_{0.75}Ga_{0.25}As$ at 50 nm Length Scale**

°Yilmaz Gul[1], G. L. Creeth[1], S.N. Holmes[2], D. English[1], K. J. Thomas[1], I. Farrer[3], D. J. Ellis[2], D. Ritchie[4], M. Pepper[1]
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[2]Toshiba Research Europe Ltd, Cambridge Research Laboratory, UK
[3]Department of Physics. University of Sheffield, UK
[4]Cavendish Laboratory, University of Cambridge, UK

<P2-49>* **Spin transport in superconducting Bi/Ni bilayers**

°N. Kabeya[1], M. Maeda[1], T. Kawamura[1], H. Taniguchi[1], T. Arakawa[1], Y. Niimi[1], K. Kobayashi[1], X. Gong[2], D. Yue[2], X.-F. Jin[2]
[1]Department of Physics, Osaka University, Japan
[2]Department of Physics, Fudan University, China

<P2-50> **Voltage induced changes of magneto-static spin wave modes in CoFeB nano-magnet with tunnel junction**
°Jaehun Cho[1], Shinji Miwa[1], Kay Yakushiji[2], Shingo Tamaru[2], Hitoshi Kubota[2], Akio Fukushima[2], Shinji Yuasa[2], Yoshishige Suzuki[1]
[1]Graduate School of Engineering Science, Osaka University, Japan
[2]AIST, Spintronics Research Center, Japan

<P2-51> **Thickness Dependence of Spin-Wave Propagation Induced by a Pulse Laser in NiFe Films**
°A. Kamimaki[1], Y. Sasaki[1], S. Iihama[1], Y. Ando[1], S. Mizukami[2]
[1]Dept. Appl. Phys., Tohoku University, Japan
[2]WPI-AIMR, Tohoku University, Japan

<P2-52> **Electron spin g-factor in $In_{0.53}Ga_{0.47}As/In_{0.53}Al_{0.47}As$ multiple quantum wells measured by time-resolved Faraday rotation**
°K. Morita[1], A. Okumura[1], T. Oda[2], Y. Ishitani[1], T. Kitada[2], T. Isu[2]
[1]Graduate School of Electrical Electronic Engineering, Chiba University, Japan
[2]Center for Frontier Research of Engineering, The University of Tokushima, Japan

<P2-53> **Quantum-dot transport and spin effects in silicon-based tunnel field-effect transistors (TFETs)**
°Satoshi Moriyama[1], Takahiro Mori[2], Keiji Ono[3]
[1]International Center for Materials Nanoarchitectonics (WPI-MANA), National Institute for Materials Science (NIMS), Japan
[2]Nanoelectronics Research Institute, National Institute of Advanced Industrial Science and Technology (AIST), Japan
[3]Center for Emergent Matter Science, RIKEN, Japan

<P2-54> **Spin relaxation in GaAs/AlGaAs/AlAs type-II tunneling biquantum well**
°K. Nakayama[1], T. Aritake[1], H. Wu[1], C. Jiang[1], Y. Nakamura[1], S. Muto[2], A. Tackeuchi[1]
[1]Department of Applied Physics, Waseda University, Japan
[2]Department of Applied Physics, Hokkaido University, Japan

<P2-55>* **Damping constant of free layer in nanoscale magnetic tunnel junction**
°M. Shinozaki[1], E. Hirayama[1], S. Kanai[1,2], H. Sato[2,3], F. Matsukura[4,1,2], H. Ohno[1,2,3,4]
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[3]Center for Innovative Integrated Electronic Systems, Tohoku University, Japan
[4]WPI-Advanced Institute for Materials Research, Tohoku University, Japan

<P2-56>* **B2 ordering dependence of spin-wave frequency in ferromagnetic FeRh thin films**
°Takamasa Usami[1], Ippei Suzuki[1], Mitsuru Itoh[1], Tomoyasu Taniyama[1]
[1]Laboratory for Materials and Structures, Tokyo Institute of Technology, Japan

<P2-57> **Electron spin dynamics of Ce^{3+} ions in YAG crystals**
V. V. Belykh[1], F. Fobbe[1], °E. Evers[1], D. H. Feng[1], D. R. Yakovlev[1,2], M. Bayer[1,2]
[1]Experimentelle Physik 2, Technische Universität Dortmund, Germany
[2]Ioffe Institute, Russian Academy of Sciences, Russia

<P2-58>* **Distinct Spin Relaxation Mechanisms in α-Ta and β-Ta Thin Films**
°Hiromu Gamou[1], Jeong Chun Ryu[1], Makoto Kohda[1], Junsaku Nitta[1]
[1]Department of Materials Science, Graduate School of Engineering, Tohoku University, Japan

<P2-59> **Observation of exciton spin relaxation in $CuInSe_2$ thin film**
°C. Jiang[1], T. Sathiabama[2], Y. Nakamura[1], K. Nakayama[1], Y. Horikoshi[3], A. Tackeuchi[1]
[1]Department of Applied Physics, Waseda University, Japan
[2]Engineering Department, UTM Razak School, Malaysia
[3]Department of Electrical Engineering and Bioscience, Waseda University, Japan

<P2-60> **Doppler shift picture of the Dzyaloshinskii-Moriya interaction**
°T. Kikuchi[1], T. Koretsune[1,2], R. Arita[1], G. Tatara[1]
[1]RIKEN Center for Emergent Matter Science (CEMS), Japan
[2]JST, PRESTO, Japan

<P2-61>* **NMR of Rashba type layered polar semiconductor BiTeI**
°Yuya Nagai[1], Yasuhiro Shimizu[1], Masayuki Itoh[1]
[1]Nagoya University, Japan

<P2-62>* **Photovoltaic chiral magnetic effect in a Weyl semimetal**
°K. Taguchi[1], T. Imaeda[1], M. Sato[2], Y. Tanaka[1]
[1]Department of Applied Physics, Nagoya University, Japan
[2]Yukawa Institute for Theoritical Physics, Kyoto University, Japan

<P2-63> **Theoretical study of Rashba spin-orbit interaction coupled with an external magnetic field in two-dimensional quantum dot**
°Kyozaburo Takeda[1], Tatsuki Tojo[1], Masashi Inui[1]
[1]Waseda University, Japan

<P2-64>* **Observation of quantum state transfer from single polarized photons to single electron spins using optical Pauli blockade effect**
M. Larsson[1], °K. Kuroyama[1], S. Matsuo[1], T. Fujita[1], S. R. Valentin[2], A. Ludwig[2], A. D. Wieck[2], A. Oiwa[3], S. Tarucha[1,4]
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[4]Center for Emergent Matter Science (CEMS), RIKEN, Japan

<P2-65>* **Electric-field modulation of stiffness constant in MgO/CoFeB/Ta observed through domain structures**
°T. Dohi[1], S. Kanai[1,2], A. Okada[1], F. Matsukura[3,1,2], H. Ohno[1,2,3]
[1]Laboratory for Nanoelectronics and Spintronics, Research Institute of Electrical Communication, Tohoku University, Japan
[2]Center for Spintronics Integrated Systems, Tohoku University, Japan
[3]WPI-Advanced Institute for Materials Research, Tohoku University, Japan

<P2-66>* **Theoretical Approach on Co Impurity in Fe/MgO Interface: Enhancement of Electric Field Effect on Magnetic Anisotropy Energy**
°N. Ikhsan[1], M. Obata[1], T. Kanagawa[1], T. Oda[1,2]
[1]Graduate School of Natural Science and Technology, Kanazawa University, Japan
[2]Institue of Science and Engineering, Kanazawa University, Japan

<P2-67> **Anomalous and planar Hall effect measurements of freely suspended GaMnAs epilayer**
°Jae-Hyun Lee[1], Seondo Park[1], Sung Un Cho[1], Yun Daniel Park[1]
[1]Department of Physics & Astronomy, Seoul National University, Korea

<P2-68>* **Voltage excited magnetization dynamics: effect of excitation power on spin wave amplitude and damping**
°B. Rana[1], Y. Fukuma[1,2], K. Miura[3], H. Takahashi[3], Y. Otani[1,4]
[1]Center for Emergent Matter Science, RIKEN, Japan
[2]Frontier Research Academy for Young Researchers, Kyushu Institute of Technology, Japan
[3]Hitachi Ltd., Central Research Laboratory, Japan
[4]Institute for Solid State Physics, University of Tokyo, Japan

<P2-69> **Phase modulation of supercurrent in the multi-layer-based lateral Josephson junction**
°K. Ohnishi[1,2], Y. Ono[1], M. Ishitaki[1], T. Kimura[1,2]
[1]Dept. of Physics, Kyushu University, Japan
[2]Research Center for Quantum Nano-Spin Sciences, Japan

<P2-70> **Multi-reference DFT modeling of the Kondo system : $La_{1-x}Ce_xB_6$**
°K. Kusakabe[1]
[1]Graduate School of Engineering Science, Osaka University, Japan

<P2-71> **Semiconductor-based quantum spin systems for realizing quantum logic gates and atomic-scale spintronics**
°Bang-Gui Liu[1], Wen-Qi Fang[1], Jun Li[1]
[1]Institute of Physics, Chinese Academy of Sciences, China

<P2-72> **Spin transport in metallic antiferromagnetic textures: interplay of inter-sublattice mixing and *s-d* exchange interaction**
°J. Ieda[1,2], Y. Yamane[2], J. Sinova[2,3]
[1]Advanced Science Research Center, Japan Atomic Energy Agency, Japan
[2]Institut für Physik, Johannes Gutenberg Universität Mainz, Germany
[3]Institute of Physics ASCR, Czech Republic

<P2-73>* **Three single spin qubits in a triple quantum dot**

°A. Noiri[1], T. Nakajima[1,2], J. Yoneda[1,2], M. R. Delbecq[1,2], T. Otsuka[1,2], K. Takeda[1,2], G. Allison[2], S. Amaha[2], A. Ludwig[3], A. D. Wieck[3], S. Tarucha[1,2]
[1]Department of Applied Physics, University of Tokyo, Japan
[2]Center for Emergent Matter Science, RIKEN, Japan
[3]Lehrstuhl für Angewandte Festkörperphysik, Ruhr-Universität, Germany

<P2-74> **Spin polarization in Aharonov-Casher ring with embedded quantum dot in Kondo regime**

°Taku Matsunaga[1], Mikio Eto[1]
[1]Faculty of Science and Technology, Keio University, Japan

19:00-21:00 **Banquet**

August 11 (Thursday)

08:00-12:00 **Registration**

09:00-10:30 **Session 9 : Novel Materials**

09:00-09:30 **<INV-9>** **Spin dependent transport and tunneling spectroscopy in $SrTiO_3$ heterostructures** ***(invited talk)***

A. G. Swartz[1,2], H. Inoue[1,2], N. J. Harmon[3], T. Tachikawa[2], Y. Hikita[2], M. E. Flatte[3], °H. Y. Hwang[1,2]
[1]Department of Applied Physics, Geballe Laboratory for Advanced Materials, Stanford University, USA
[2]Stanford Institute for Materials and Energy Sciences, SLAC National Accelerator Laboratory, USA
[3]Department of Physics and Astronomy and Optical Science and Technology Center,University of Iowa, USA

09:30-09:45 **<O-27>** **Quantum adiabatic spin pump in Rashba-Aharonov-Bohm interferometer**

°Yasuhiro Tokura[1,2]
[1]Faculty of Pure and Applied Sciences, University of Tsukuba, Japan
[2]NTT Basic Research Laboratories, NTT Corporation, Japan

09:45-10:00 **<O-28>** **Bulk Rashba interaction and signatures of magnetism in a graphene-boron nitride heterostructure by intercalation with Au**

°E. O'Farrell[1], J.Y. Tan[1], Y. Yeo[1], G.K.W. Koon[1], K. Watanabe[2], T. Taniguchi[2], B. Özyilmaz[1]
[1]Centre for Advanced 2D Materials, National University of Singapore, Singapore
[2]National Institute for Materials Science, Japan

10:00-10:30 **<INV-10>** **Anomalous Hall Effects in high electron mobility MgZnO/ZnO heterostructures** ***(invited talk)***

°D. Maryenko[1], A. S. Mishchenko[1], M. S. Bahramy[1,2], J. Falson[2], Y. Kozuka[2], A. Tsukazaki[3], M. Kawasaki[1,2]
[1]RIKEN Center for Emergent Matter Science (CEMS), Japan
[2]Department of Applied Physics and Quantum Phase Electronics Center (QPEC), The University of Tokyo, Japan
[3]Institute for Materials Research, Tohoku University, Japan

10:30-11:00 **Break**

11:00-12:30 **Session 10 : Single-Spin Control**

11:00-11:15 **<O-29>** **Spin-orbit coupling on the level of single electrons**

°Andrea Hofmann[1], Ville F. Maisi[1], Marc Röösli[1], Tobias Krähenmann[1], Christian Reichl[1], Werner Wegscheider[1], Klaus Ensslin[1], Thomas Ihn[1]
[1]Solid state physics laboratory, ETH Zürich, Switzerland

11:15-11:30 **<O-30>** **Photon-spin Quantum Media Conversion via Teleportation in diamond**

°Ryota Kuroiwa[1], Yuhei Sekiguchi[1], Naeko Niikura[1], Joerg Wrachtrup[2], Hideo Kosaka[1]
[1]Yokohama National University, Japan
[2]Physikalisches Institut, Research Center SCOPE, and MPI for Solid State Research, University of Stuttgart, Germany

11:30-11:45 **<O-31>** **Polarisation and localisation of a cluster of electronic spins in diamond**

°H. S. Knowles[1], D. M. Kara[1], M. Atatüre[1]
[1]Cavendish Laboratory, University of Cambridge, UK

11:45-12:30 **<PL-3>** **One spin to sense them all** ***(plenary talk)***

°Jörg Wrachtrup[1]
[1]3rd Institute of Physics and IQST, Unversity of Stuttgart, Germany

12:30 **Closing remarks**