

Plenary Sessions | Joint Session | Plenary Sessions

OP_PL-1

Session Chair: Mikito Koshino (Osaka Univ.)

Mon. Nov 1, 2021 9:00 AM - 10:00 AM Joint (Joint)

9:00 AM - 9:15 AM (Mon. Nov 1, 2021 9:00 AM - 10:00 AM Joint)

[OP] Opening

9:15 AM - 10:00 AM (Mon. Nov 1, 2021 9:00 AM - 10:00 AM Joint)

[OP_PL-1-01] The magic of moiré quantum matter

*Pablo Jarillo-Herrero¹ (1. MIT (United States of America))

Oral Sessions | EP2DS-24 | Oral Sessions

E-1

Session Chair: Xi Dai (HKUST)

Mon. Nov 1, 2021 10:15 AM - 11:15 AM EP2DS (EP2DS)

10:15 AM - 10:45 AM (Mon. Nov 1, 2021 10:15 AM - 11:15 AM EP2DS)

[E-1-01] Inter-valley coherent order and isospin fluctuation mediated superconductivity in rhombohedral trilayer graphene

*Michael Zaletel¹ (1. UC Berkeley (United States of America))

10:45 AM - 11:15 AM (Mon. Nov 1, 2021 10:15 AM - 11:15 AM EP2DS)

[E-1-02] Correlated electrons probed with exciton spectroscopy in a 2D semiconductor moiré superlattice

*Yuya Shimazaki¹ (1. RIKEN (Japan))

M-1

Session Chair: Scott Crooker (MagLab)

Mon. Nov 1, 2021 10:15 AM - 11:45 AM MSS (MSS)

10:15 AM - 10:45 AM (Mon. Nov 1, 2021 10:15 AM - 11:45 AM MSS)

[M-1-01] Spin orbit torque devices using quantum topological materials

*Hyunsoo Yang¹ (1. NUS (Singapore))

10:45 AM - 11:00 AM (Mon. Nov 1, 2021 10:15 AM - 11:45 AM MSS)

[M-1-02] Room-temperature spin injection and spin-to-charge conversion in a ferromagnetic semiconductor / topological insulator heterostructure

*Shobhit Goel^{1,2}, Nguyen Huynh Duy Khang³, Le Duc Anh^{1,4}, Pham Nam Hai^{2,3,5}, Masaaki Tanaka^{1,2,5} (1. Univ. of Tokyo (Japan), 2. CREST, JST (Japan), 3. Tokyo Tech. (Japan), 4. PRESTO, JST (Japan), 5. CSRN, Univ. of Tokyo (Japan))

11:00 AM - 11:15 AM (Mon. Nov 1, 2021 10:15 AM - 11:45 AM MSS)

[M-1-03] Gate-controlled giant proximity magnetoresistance and odd-parity magnetoresistance in semiconductor-based nonmagnetic (InAs) / ferromagnetic (GaFeSb) heterostructures

*Kosuke Takiguchi¹, Le Duc Anh^{1,2,3}, Takahiro Chiba⁴, Kyosuke Okamura¹, Harunori Shiratani¹, Ryota Fukuzawa^{1,5}, Takuji Takahashi^{5,6}, Masaaki Tanaka^{1,6,7} (1. EEIS, Univ. of Tokyo (Japan), 2. IEI, Univ. of Tokyo (Japan), 3. PRESTO, JST (Japan), 4. NIT, Fukushima College (Japan), 5. IIS, Univ. of Tokyo (Japan), 6. NanoQuine, Univ. of Tokyo (Japan), 7. CSRN, Univ. of Tokyo (Japan))

11:15 AM - 11:30 AM (Mon. Nov 1, 2021 10:15 AM - 11:45 AM MSS)

[M-1-04] Spin-orbit interaction engineering in gate-all-around core-shell nanowire

*Keiko Takase¹, Kouta Tateno¹, Satoshi Sasaki¹ (1. NTT Basic Research Laboratories, NTT Corporation (Japan))

11:30 AM - 11:45 AM (Mon. Nov 1, 2021 10:15 AM - 11:45 AM MSS)

[M-1-05] Persistent spin helix symmetry controlled by in-plane electric field

*Yoji Kunihashi¹, Yusuke Tanaka¹, Haruki Sanada¹, Koji Onomitsu¹, Katsuya Oguri¹, Makoto Kohda², Junsaku Nitta², Hideki Gotoh¹ (1. NTT basic research laboratories (Japan), 2. Tohoku University (Japan))

E-2

Session Chair: Junsaku Nitta (Tohoku Univ.)

Mon. Nov 1, 2021 11:30 AM - 12:30 PM EP2DS (EP2DS)

11:30 AM - 12:00 PM (Mon. Nov 1, 2021 11:30 AM - 12:30 PM EP2DS)

[E-2-01] Steady Floquet-Andreev States Probed by Tunnelling Spectroscopy

*Gil-Ho Lee¹ (1. POSTECH (Korea))

12:00 PM - 12:15 PM (Mon. Nov 1, 2021 11:30 AM - 12:30 PM EP2DS)

[E-2-02] Time, momentum, and energy resolved pump-probe tunneling spectroscopy of the nonequilibrium states in a Landau level

*Heun Mo Yoo¹, Kirk Baldwin², Ken West², Loren Pfeiffer², Raymond Ashoori¹ (1. Massachusetts Institute of Tech. (United States of America), 2. Princeton University (United States of America))

12:15 PM - 12:30 PM (Mon. Nov 1, 2021 11:30 AM - 12:30 PM EP2DS)

[E-2-03] Imaging Quasiadiabatic Hot Electron Transport Induced by Hot-phonon Bottleneck

*Qianchun Weng^{1,2,3}, Le Yang⁴, Zhenghua An⁴, Pingping Chen³, Alexander Tzalenchuk², Wei Lu³, Susumu Komiyama⁵ (1. Inst. Indus. Sci., Univ. Tokyo (Japan), 2. National Physical Lab. (UK), 3. Shanghai Inst. Tech. Physics (China), 4. Fudan Univ. (China), 5. National Inst. Info. and Communications Tech. (Japan))

E-3

Session Chair: Kensuke Kobayashi (Univ. Tokyo)

Mon. Nov 1, 2021 5:00 PM - 6:15 PM EP2DS (EP2DS)

5:00 PM - 5:15 PM (Mon. Nov 1, 2021 5:00 PM - 6:15 PM EP2DS)

[E-3-01] Imaging Spin and Charge Phases in One-Dimensional Electrons

*Harry Aaron Zammit Smith¹, Patrick See², Ian Farrer³, David Ritchie⁴, Michael Pepper¹, Sanjeev Kumar¹ (1. Univ. College London (UK), 2. National Physical Laboratory (UK), 3. Univ. of Sheffield (UK), 4. Cavendish Lab. (UK))

5:15 PM - 5:30 PM (Mon. Nov 1, 2021 5:00 PM - 6:15 PM EP2DS)

[E-3-02] Observing Separate Spin and Charge Fermi Seas in a Strongly Correlated One-dimensional Conductor

*Pedro Vianez¹, Yiqing Jin¹, María Moreno², Ankita Anirban¹, Anne Anthore³, Wooi Kiat Tan¹, Jonathan Griffiths¹, Ian Farrer⁴, David Ritchie¹, Andrew Schofield⁵, Oleksandr Tsypliyatyev⁶, Christopher Ford¹ (1. Univ. of Cambridge (UK), 2. Univ. of Salamanca (Spain), 3. Univ. of Paris (France), 4. Univ. of Sheffield (UK), 5. Lancaster University (UK), 6. Univ. of Frankfurt (Germany))

5:30 PM - 5:45 PM (Mon. Nov 1, 2021 5:00 PM - 6:15 PM EP2DS)

[E-3-03] Detection of correlated noise in quantum rings

Christian Riha¹, Sven S. Buchholz¹, Olivio Chiatti¹, Andreas D. Wieck², Dirk Reuter³, *Saskia F. Fischer¹ (1. Humboldt-Universität zu Berlin (Germany), 2. Ruhr-Universität Bochum (Germany), 3. Universität Paderborn (Germany))

5:45 PM - 6:15 PM (Mon. Nov 1, 2021 5:00 PM - 6:15 PM EP2DS)

[E-3-04] 2-particle Hong Ou Mandel time-domain interference in the Fractional Quantum Hall regime

*Christian D. GLATTLI¹, Imen Taktak¹, Maelle Kapfer², Ian Farrer³, Dave Ritchie⁴ (1. CEA-Saclay (France), 2. Columbia Univ. (United States of America), 3. University of Sheffield (UK), 4. Cavendish Lab. (UK))

M-2

Session Chair: Tomasz Wojtowicz (Polish Academy of Sci.)

Mon. Nov 1, 2021 5:00 PM - 6:15 PM MSS (MSS)

5:00 PM - 5:30 PM (Mon. Nov 1, 2021 5:00 PM - 6:15 PM MSS)

[M-2-01] Broad diversity of near-infrared single-photon emitters in silicon

*Anais Dréau¹ (1. CNRS and Univ. of Montpellier) (France))

5:30 PM - 5:45 PM (Mon. Nov 1, 2021 5:00 PM - 6:15 PM MSS)

[M-2-02] Highly Efficient and Pure Single Photon Streams at Room-Temperature by Deterministic Nano Positioning of Quantum Emitters

*Hamza Abudayyeh¹, Anastasia Blake², Annika Bräuer³, Somak Majumder², Monika Fleischer³, Jennifer Hollingsworth², Ronen Rapaport¹ (1. Hebrew University of Jerusalem (Israel), 2. Los Alamos National Lab (United States of America), 3. University of Tübingen (Germany))

5:45 PM - 6:00 PM (Mon. Nov 1, 2021 5:00 PM - 6:15 PM MSS)

[M-2-03] Internal Photo Effect from a Single Quantum Emitter

Pia Lochner¹, Jens Kerski¹, Annika Kurzman², *Hendrik Mannel¹, Andreas Wieck³, Arne Ludwig³, Martin Paul Geller¹, Axel Lorke¹ (1. Univ. Duisburg-Essen (Germany), 2. RWTH Aachen (Germany), 3. Ruhr-Univ. Bochum (Germany))

6:00 PM - 6:15 PM (Mon. Nov 1, 2021 5:00 PM - 6:15 PM MSS)

[M-2-04] Microwave-Optical Transduction Mediated by a Single Quantum-Dot Molecule

*Yuta Tsuchimoto¹, Zhe Sun², Emre Togan¹, Patrick Knüppel¹, Aymeric Delteil³, Stefan Fält¹, Martin Kroner¹, Andreas Wallraff¹, Klaus Ensslin¹, Werner Wegscheider¹, Ataç Imamoglu¹ (1. ETH Zurich (Switzerland), 2. EPFL (Switzerland), 3. UVSQ (France))

E-4

Session Chair: Rolf Haug (Leibniz Univ. Hannover)

Mon. Nov 1, 2021 6:30 PM - 7:30 PM EP2DS (EP2DS)

6:30 PM - 6:45 PM (Mon. Nov 1, 2021 6:30 PM - 7:30 PM EP2DS)

[E-4-01] In-Flight Manipulation of a Single Electron Shuttled by Sound

*Junliang Wang¹, Hermann Edlbauer¹, Aymeric Richard¹, Shunsuke Ota^{2,3}, Baptiste Jadot¹, Pierre-Andre Mortemousque^{1,4}, Arne Ludwig⁵, Andreas D. Wieck⁵, Matias Urdampilleta¹, Tristan Meunier¹, Tetsuo Kodera², Nobu-Hisa Kaneko³, Shintaro Takada³, Christopher Bauerle¹ (1. Univ. Grenoble Alpes, CNRS, Institut Neel (France), 2. Department of Electrical and Electronic Engineering, Tokyo Institute of Technology (Japan), 3. National Institute of Advanced Industrial Science and Technology (AIST), National Metrology Institute of Japan(NMIJ) (Japan), 4. Univ. Grenoble Alpes, CEA, Leti (France), 5. Lehrstuhl für Angewandte Festkörperphysik, Ruhr-Universität Bochum (Germany))

6:45 PM - 7:00 PM (Mon. Nov 1, 2021 6:30 PM - 7:30 PM EP2DS)

[E-4-02] Tomography of a Hot Electron Emitted by a Tunable-Barrier Electron Pump

Jonathan D Fletcher¹, Nathan Johnson^{1,2}, Elina Locane³, Patrick See¹, Jonathan P. Griffiths⁴, Ian Farrer⁴, David A. Ritchie⁴, Piet W. Brouwer³, Vyacheslavs Kashcheyevs⁵, *Masaya Kataoka¹ (1. National Physical Laboratory (UK), 2. University College London (UK), 3. Freie Universität Berlin (Germany), 4. University of Cambridge (UK), 5. University of Latvia (Latvia))

7:00 PM - 7:30 PM (Mon. Nov 1, 2021 6:30 PM - 7:30 PM EP2DS)

[E-4-03] Fractional statistics in anyon collisions

*Gwendal Fève¹ (1. Sorbonne Univ. (France))

M-3

Session Chair: Luis Vina (Univ. Autonoma de Madrid)

Mon. Nov 1, 2021 6:30 PM - 7:30 PM MSS (MSS)

6:30 PM - 7:00 PM (Mon. Nov 1, 2021 6:30 PM - 7:30 PM MSS)

[M-3-01] Landau levels and artificial magnetism in polaritons lattices

*Alberto Amo¹ (1. Univ. de Lille (France))

7:00 PM - 7:15 PM (Mon. Nov 1, 2021 6:30 PM - 7:30 PM MSS)

[M-3-02] Observation of Photonic Zitterbewegung Effect in a Hexagonal Lattice Microcavity.

*Seth Lovett¹, Charles Whittaker¹, Aleksey Osipov², Alexey Yulin², Ivan Shelykh^{2,3}, Maurice Skolnick^{1,2}, Dmitry Krizhanovskii^{1,2} (1. Department of Physics and Astronomy, University of Sheffield (UK), 2. ITMO University (Russia), 3. Science Institute, University of Iceland (Iceland))

7:15 PM - 7:30 PM (Mon. Nov 1, 2021 6:30 PM - 7:30 PM MSS)

[M-3-03] Quantum Confined Excitons In Crossed Electric And Magnetic Fields

*Deepankur Thureja^{1,2}, Atac Imamoglu¹, Tomasz Smolenski¹, Alexander Popert¹, Thibault Chervy¹, Xiaobo Lu¹, Song Liu³, Katayun Barmak⁴, Kenji Watanabe⁵, Takashi Taniguchi⁵, David Norris², Martin Kroner¹, Puneet Anantha Murthy¹ (1. Inst. for Quantum Electronics, ETH Zurich, Zurich (Switzerland), 2. Optical Materials Engineering Lab., Department of Mechanical and Process Engineering, ETH Zurich, Zurich (Switzerland), 3. Department of Mechanical Engineering, Columbia University, New York, NY (United States of America), 4. Department of Applied Physics and Applied Mathematics, Columbia University, New York, NY (United States of America), 5. National Inst. for Materials Science, Tsukuba, Ibaraki (Japan))

Plenary Sessions | Joint Session | Plenary Sessions

PL-2

Session Chair: Jelena Klinovaja (Univ. Basel)

Mon. Nov 1, 2021 7:45 PM - 8:30 PM Joint (Joint)

7:45 PM - 8:30 PM (Mon. Nov 1, 2021 7:45 PM - 8:30 PM Joint)

[PL-2-01] Hybrid epitaxial materials for condensed matter physics

*Charles Marcus¹ (1. Niels Bohr Inst./Microsoft Quantum (Denmark))

Special Sessions | Joint Session | Special Sessions

SS-1 (2D materials)

Session Chair: Jun Zhu (Penn State Univ.)

Tue. Nov 2, 2021 9:00 AM - 10:10 AM Joint (Joint)

9:00 AM - 9:35 AM (Tue. Nov 2, 2021 9:00 AM - 10:10 AM Joint)

[SS-1-01] Correlations, topology, and unconventional superconductivity in magic angle twisted bilayer graphene

*Ali Yazdani¹ (1. Princeton Univ. (United States of America))

9:35 AM - 10:10 AM (Tue. Nov 2, 2021 9:00 AM - 10:10 AM Joint)

[SS-1-02] Superconductivity at magnetic phase transitions in crystalline graphene allotropes

*Andrea Young¹ (1. UC Santa Barbara (United States of America))

Special Sessions | Joint Session | Special Sessions

SS-2 (2D materials)

Session Chair: Tomoki Machida (Univ. Tokyo)

Tue. Nov 2, 2021 10:25 AM - 11:35 AM Joint (Joint)

10:25 AM - 11:00 AM (Tue. Nov 2, 2021 10:25 AM - 11:35 AM Joint)

[SS-2-01] Quantum anomalous Hall effect in intrinsic magnetic topological insulator MnBi₂Te₄

*Yuanbo Zhang¹ (1. Fudan Univ. (China))

11:00 AM - 11:35 AM (Tue. Nov 2, 2021 10:25 AM - 11:35 AM Joint)

[SS-2-02] Symmetry-engineered van der Waals interface with in-plane polarization and bulk photovoltaic effect

*Toshiya Ideue¹ (1. Univ. of Tokyo (Japan))

Oral Sessions | EP2DS-24 | Oral Sessions

E-5

Session Chair: Mikito Koshino (Osaka Univ.)

Tue. Nov 2, 2021 11:50 AM - 12:20 PM EP2DS (EP2DS)

11:50 AM - 12:05 PM (Tue. Nov 2, 2021 11:50 AM - 12:20 PM EP2DS)

[E-5-01] Adiabatic Heuristic Argument on a Torus: Topological Degeneracy and Many-body Chern Number

*Koji Kudo¹, Yoshihito Kuno¹, Yasuhiro Hatsugai¹ (1. Univ. of Tsukuba (Japan))

12:05 PM - 12:20 PM (Tue. Nov 2, 2021 11:50 AM - 12:20 PM EP2DS)

[E-5-02] Theories for The 3D Quantum Hall effects

*Haizhou Lu¹ (1. Southern University of Science and Technology (China))

E-6

Session Chair: Rebeca Ribeiro-Palau (C2N, CNRS)

Tue. Nov 2, 2021 5:00 PM - 6:00 PM EP2DS (EP2DS)

5:00 PM - 5:30 PM (Tue. Nov 2, 2021 5:00 PM - 6:00 PM EP2DS)

[E-6-01] Superconducting Devices in Magic-Angle Twisted Bilayer Graphene

*Folkert Kornelis de Vries¹, Elias Portoles¹, Giulia Zheng¹, Shuichi Iwakiri¹, Takashi Taniguchi², Kenji Watanabe³, Thomas Ihn¹, Klaus Ensslin¹, Peter Rickhaus¹ (1. Laboratory for Solid State Physics, ETH Zurich, Otto-Stern-Web 1, Zurich (Switzerland), 2. Research Center for Functional Materials, National Institute for Materials Science, 1-1 Namiki, Tsukuba 305-0044 (Japan), 3. International Center for Materials Nanoarchitectonics, National Institute for Materials Science, 1-1 Namiki, Tsukuba 305-0044 (Japan))

5:30 PM - 6:00 PM (Tue. Nov 2, 2021 5:00 PM - 6:00 PM EP2DS)

[E-6-02] Imaging topological currents and twist-angle disorder in magic-angle graphene

*Eli Zeldov¹ (1. Weizmann Inst. of Sci. (Israel))

M-4

Session Chair: Jean-Michel Gérard (CEA IRIG)

Tue. Nov 2, 2021 5:00 PM - 6:00 PM MSS (MSS)

5:00 PM - 5:30 PM (Tue. Nov 2, 2021 5:00 PM - 6:00 PM MSS)

[M-4-01] Phonon engineering in nanostructures: material design and innovative experimental techniques

*Ilaria Zardo¹ (1. Univ. of Basel (Switzerland))

5:30 PM - 5:45 PM (Tue. Nov 2, 2021 5:00 PM - 6:00 PM MSS)

[M-4-02] Single-Electron Transport with Acousto-Electric Chirp Pulses

*Shunsuke Ota^{1,2}, Junliang Wang³, Hermann Edlbauer³, Aymeric Richard³, Baptiste Jadot³, Pierre-André Mortemousque^{3,4}, Yuma Okazaki², Shuji Nakamura², Tetsuo Kodera¹, Nobu-Hisa Kaneko², Arne Ludwig⁵, Andreas Dirk Wieck⁵, Matias Urdampilleta³, Tristan Meunier³, Shintaro Takada², Christopher Bäuerle³ (1. Tokyo Tech. (Japan), 2. AIST. (Japan), 3. Inst. Néel (France), 4. Leti (France), 5. Ruhr-Univ. Bochum (Germany))

5:45 PM - 6:00 PM (Tue. Nov 2, 2021 5:00 PM - 6:00 PM MSS)

[M-4-03] Electron transport in semiconductor double barrier thermionic cooling heterostructures

*Xiangyu Zhu¹, Marc Bescond², Toshiki Onoue¹, Gerald Bastard³, Francesca Carosella⁴, Robson Ferreira³, Naomi Nagai¹, Kazuhiko Hirakawa^{1,2} (1. IIS and INQIE, Univ. of Tokyo (Japan), 2. LIMMS/CNRS-IIS (Japan), 3. ENS PSL (France), 4. ENS PSL, Paris Diderot Univ. (France))

E-7

Session Chair: Toshimasa Fujisawa (Tokyo Tech)

Tue. Nov 2, 2021 6:15 PM - 7:30 PM EP2DS (EP2DS)

6:15 PM - 6:30 PM (Tue. Nov 2, 2021 6:15 PM - 7:30 PM EP2DS)

[E-7-01] Shuttling-based controlled-phase gate in silicon

*Akito Noiri¹, Kenta Takeda¹, Takashi Nakajima¹, Takashi Kobayashi¹, Amir Sammak², Giordano Scappucci³, Seigo Tarucha¹ (1. RIKEN, Center for Emergent Matter Science (Japan), 2. QuTech and Netherlands Organisation for Applied Scientific Research (Netherlands), 3. QuTech and Kavli Institute of Nanoscience, Delft University of Technology (Netherlands))

6:30 PM - 6:45 PM (Tue. Nov 2, 2021 6:15 PM - 7:30 PM EP2DS)

[E-7-02] Hole Spin Qubits Manipulation with Shortcuts to Adiabaticity Protocols

*David Fernandez Fernandez¹, Yue Ban², Gloria Platero¹ (1. Inst. of Material Science of Madrid, ICMM-CSIC (Spain), 2. Univ. of the Basque Country UPV/EHU (Spain))

6:45 PM - 7:00 PM (Tue. Nov 2, 2021 6:15 PM - 7:30 PM EP2DS)

[E-7-03] Adiabatic to Non-Adiabatic Crossover in the Emission Time Statistics of a Driven Single Electron Transistor

*Johannes C. Bayer¹, Fredrik Brange², Adrian Schmidt¹, Timo Wagner¹, Christian Flindt², Rolf J. Haug¹ (1. Inst. of Solid State Physics, Leibniz Univ. Hannover (Germany), 2. Department of Applied Physics, Aalto Univ. (Finland))

7:00 PM - 7:30 PM (Tue. Nov 2, 2021 6:15 PM - 7:30 PM EP2DS)

[E-7-04] Probing the collision of single-electron wavepackets in the Hong Ou Mandel geometry

*Jonathan Fletcher¹, Sungguen Ryu², Patrick See¹, Jonathan Griffiths³, James Aldous³, Dave Ritchie³, Heung-Sun Sim⁴, Masaya Kataoka¹ (1. National Physical Laboratory (UK), 2. Institute for Cross-Disciplinary Physics & Complex Systems IFISC (UIB-CSIC) (Spain), 3. Cavendish Laboratory, University of Cambridge (UK), 4. Department of Physics, Korea Advanced Institute of Science and Technology (Korea))

M-5

Session Chair: Hongqi Xu (Peking Univ.)

Tue. Nov 2, 2021 6:15 PM - 7:30 PM MSS (MSS)

6:15 PM - 6:45 PM (Tue. Nov 2, 2021 6:15 PM - 7:30 PM MSS)

[M-5-01] Interacting Fermi-polaron-polaritons and Bose-polaron-polaritons in 2D semiconductors

*Li Bing Tan¹, Ovidiu Cotlet¹, Andrea Bergschneider¹, Richard Schmidt^{2,3}, Martin Kroner¹, Atac Imamoglu¹ (1. ETH Zurich (Switzerland), 2. Max Planck Institute of Quantum Optics (Germany), 3. Munich Center for Quantum Science and Technology (Germany))

6:45 PM - 7:00 PM (Tue. Nov 2, 2021 6:15 PM - 7:30 PM MSS)

[M-5-02] Illumination Effects on Gate-defined GaAs Quantum Dots in an Undoped Quantum Well

*Genki Fukuda¹, Ryota Hayashi¹, Takafumi Fujita¹, Makoto Kohda², Julian Ritzmann³, Arne Ludwig³, Junsaku Nitta², Andreas D Wieck³, Akira Oiwa¹ (1. SANKEN, Osaka Univ (Japan), 2. Dept of Mater Sci, Tohoku Univ (Japan), 3. Ruhr Univ Bochum (Germany))

7:00 PM - 7:15 PM (Tue. Nov 2, 2021 6:15 PM - 7:30 PM MSS)

[M-5-03] Minority-Spin Impurity Band in n-Type (In,Fe)As: A Materials Perspective for Ferromagnetic Semiconductors

*Masaki Kobayashi^{1,7}, Le Duc Anh¹, Jan Minar², Walayat Khan³, Stephan Borek⁴, Pham Nam Hai⁵, Yoshihisa Harada¹, Thorsten Schmitt⁷, Masaharu Oshima¹, Atsushi Fujimori^{1,6}, Masaaki Tanaka¹, Vladimir N. Strocov⁷ (1. University of Tokyo (Japan), 2. University of West Bohemia (Czech Republic), 3. Bacha Khan University (Pakistan), 4. Deutsches Zentrum für Luft- und Raumfahrt (DLR) (Germany), 5. Tokyo Institute of Technology (Japan), 6. Waseda University (Japan), 7. Paul Scherrer Institute (Switzerland))

7:15 PM - 7:30 PM (Tue. Nov 2, 2021 6:15 PM - 7:30 PM MSS)

[M-5-04] Onset of ferromagnetism in Fe-doped magnetic semiconductors depending on the occupation of the impurity band by electrons

*Takahito Takeda¹, Shoya Sakamoto², Le Duc Anh^{1,3,4}, Yukiharu Takeda⁵, Shin-ichi Fujimori⁵, Miho Kitamura⁶, Koji Horiba⁶, Hiroshi Kumigashira^{6,7}, Atsushi Fujimori^{8,9}, Masaaki Tanaka^{1,10}, Masaki Kobayashi^{1,10} (1. Grad. Sch. Eng., Univ. of Tokyo (Japan), 2. ISSP, Univ. of Tokyo (Japan), 3. IEI, Univ. of Tokyo (Japan), 4. PREST, JST (Japan), 5. MSRC, JAEA (Japan), 6. IMSS, KEK (Japan), 7. IMRAM, Tohoku Univ. (Japan), 8. Dep. Phys., Univ. of Tokyo (Japan), 9. Dep. Appl. Phys., Waseda Univ. (Japan), 10. CSRN, Univ. of Tokyo (Japan))

Plenary Sessions | Joint Session | Plenary Sessions

PL-3

Session Chair: Masaaki Tanaka (Univ. Tokyo)

Tue. Nov 2, 2021 7:45 PM - 8:30 PM Joint (Joint)

7:45 PM - 8:30 PM (Tue. Nov 2, 2021 7:45 PM - 8:30 PM Joint)

[PL-3-01] Spin Current carried by various quasi particles

*Eiji Saitoh¹ (1. Univ. of Tokyo (Japan))

Plenary Sessions | Joint Session | Plenary Sessions

PL-4

Session Chair: Koji Muraki (NTT)

Wed. Nov 3, 2021 9:00 AM - 9:45 AM Joint (Joint)

9:00 AM - 9:45 AM (Wed. Nov 3, 2021 9:00 AM - 9:45 AM Joint)

[PL-4-01] Setting a new standard for ultra-high mobility GaAs quantum wells

*Loren Pfeiffer¹ (1. Princeton Univ. (United States of America))

E-8

Session Chair: Rui Rui Du (Peking Univ.)

Wed. Nov 3, 2021 10:00 AM - 11:15 AM EP2DS (EP2DS)

10:00 AM - 10:30 AM (Wed. Nov 3, 2021 10:00 AM - 11:15 AM EP2DS)

[E-8-01] Bloch Ferromagnetism and Luttinger Theorem in Composite Fermions

*Mansour Shayegan¹ (1. Princeton Univ. (United States of America))

10:30 AM - 10:45 AM (Wed. Nov 3, 2021 10:00 AM - 11:15 AM EP2DS)

[E-8-02] Coulomb Blockade violating Double Electron Additions at the Edge of a 2D Electron System

*Raymond Ashoori¹, Ahmet Demir¹, Neal Staley¹, Samuel Aronson¹, Ken West², Kirk Baldwin², Loren Pfeiffer² (1. MIT (United States of America), 2. Princeton Univ. (United States of America))

10:45 AM - 11:00 AM (Wed. Nov 3, 2021 10:00 AM - 11:15 AM EP2DS)

[E-8-03] Valley Isospin Controlled Fractional Quantum Hall States in Bilayer Graphene

*Ke Huang¹, Hailong Fu¹, Danielle Reifsnnyder Hickey¹, Alem Nasim¹, Xi Lin², Kenji Watanabe³, Takashi Taniguchi³, Jun Zhu¹ (1. Penn State Univ. (United States of America), 2. Peking Univ. (China), 3. National Inst. for Materials Sci. (Japan))

11:00 AM - 11:15 AM (Wed. Nov 3, 2021 10:00 AM - 11:15 AM EP2DS)

[E-8-04] Correlated Electron States near the Landau level filling $\nu=1/7$

*Yoon Jang Chung¹, David Graf², Lloyd Engel², Pranav Madathil¹, Kevin Villegas Rosales¹, Kirk Baldwin¹, Kenneth West¹, Loren Pfeiffer¹, Mansour Shayegan¹ (1. Princeton University (United States of America), 2. National High Magnetic Field Laboratory (United States of America))

M-6

Session Chair: Yuzo Ohno (Univ. of Tsukuba)

Wed. Nov 3, 2021 10:00 AM - 11:00 AM MSS (MSS)

10:00 AM - 10:30 AM (Wed. Nov 3, 2021 10:00 AM - 11:00 AM MSS)

[M-6-01] High sensitive and high dynamic range quantum sensing with diamond semiconductors

*Norikazu Mizuochi¹ (1. Kyoto Univ. (Japan))

10:30 AM - 10:45 AM (Wed. Nov 3, 2021 10:00 AM - 11:00 AM MSS)

[M-6-02] Scaling Electron Spin Coherence in Solid-state Spin Defects

*Shun Kanai^{1,2,3,4}, Joseph F. Heremans^{5,6}, Hosung Seo⁷, Gary Wolfowicz^{5,6}, Christopher P. Anderson^{6,8}, Sean E. Sullivan⁵, Mykita Onizhuk⁹, Giulia Galli^{5,6,9}, David D. Awschalom^{5,6,8}, Hideo Ohno^{1,3,4,10} (1. Lab. for Nanoelectronics and Spintronics, RIEC, Tohoku Univ. (Japan), 2. DEFS, Tohoku Univ. (Japan), 3. CSIS, Tohoku Univ. (Japan), 4. CSRN, Tohoku Univ. (Japan), 5. CME/MSD, Argonne National Laboratory (United States of America), 6. Pritzker School of Molecular Engineering, Univ. of Chicago (United States of America), 7. Dep. of Phys./Dep. of Energy System Research, Ajou Univ. (Korea), 8. Dep. of Phys., Univ. of Chicago (United States of America), 9. Dep. of Chem., Univ. of Chicago (United States of America), 10. CIES, Tohoku Univ. (Japan))

10:45 AM - 11:00 AM (Wed. Nov 3, 2021 10:00 AM - 11:00 AM MSS)

[M-6-03] Visualization of the electromagnetic field using nitrogen-vacancy centers in diamond by spin-locking

*Shintaro Nomura¹, Koki Kaida¹, Hideyuki Watanabe², Satoshi Kashiwaya³ (1. Univ. of Tsukuba (Japan), 2. AIST (Japan), 3. Nagoya Univ. (Japan))

E-9

Session Chair: Akira Oiwa (Osaka Univ.)

Wed. Nov 3, 2021 4:30 PM - 5:45 PM EP2DS (EP2DS)

4:30 PM - 4:45 PM (Wed. Nov 3, 2021 4:30 PM - 5:45 PM EP2DS)

[E-9-01] Ultra-strong coupling in a hybrid quantum system of a quantum dot and a terahertz split-ring resonator observed by magnetoterahertz photocurrent spectroscopy

*Kazuyuki Kuroyama¹, Jinkwan Kwoen², Yasuhiko Arakawa², Kazuhiko Hirakawa^{1,2} (1. Institute of Industrial Science (IIS), The University of Tokyo (Japan), 2. Institute for Nano Quantum Information Electronics (INQIE), The University of Tokyo (Japan))

4:45 PM - 5:00 PM (Wed. Nov 3, 2021 4:30 PM - 5:45 PM EP2DS)

[E-9-02] Spatial Control of Graphene Plasmons in the THz Range

*Norio Kumada¹, Ngoc Han Tu¹, Katsumasa Yoshioka¹, Satoshi Sasaki¹, Makoto Takamura¹, Koji Muraki¹ (1. NTT Basic Research Labs. (Japan))

5:00 PM - 5:15 PM (Wed. Nov 3, 2021 4:30 PM - 5:45 PM EP2DS)

[E-9-03] Simulation of 1D topological phases in quantum dot arrays

*Beatriz Perez-Gonzalez¹, Miguel Bello², Alvaro Gomez-Leon³, Gloria Platero¹ (1. Instituto de Ciencia de Materiales de Madrid (ICMM-CSIC) (Spain), 2. Max Planck Institute of Quantum Optics (MPQ) (Germany), 3. Instituto de Física Fundamental (IFF-CSIC) (Spain))

5:15 PM - 5:30 PM (Wed. Nov 3, 2021 4:30 PM - 5:45 PM EP2DS)

[E-9-04] InSbAs two-dimensional electron gases as a platform for topological superconductivity

*Chung-Ting Ke¹, Christian M. Moehle¹, Qingzhen Wang¹, Candice Thomas^{2,3}, Di Xiao^{2,3}, Saurabh Karwal⁴, Mario Lodari¹, Vincent van de Kerkhof¹, Ruben Termaat¹, Georey C. Gardner⁵, Giordano Scappucci¹, Michael J. Manfra^{2,3,5,6,7}, Srijit Goswami¹ (1. QuTech and Kavli Institute of Nanoscience (Netherlands), 2. Department of Physics and Astronomy, Purdue University (United States of America), 3. Birck Nanotechnology Center, Purdue University (United States of America), 4. QuTech and Netherlands Organization for Applied Scientific Research (TNO) (Netherlands), 5. Microsoft Quantum Purdue (United States of America), 6. School of Electrical and Computer Engineering, Purdue University (United States of America), 7. School of Materials Engineering, Purdue University (United States of America))

5:30 PM - 5:45 PM (Wed. Nov 3, 2021 4:30 PM - 5:45 PM EP2DS)

[E-9-05] Beam Splitter With Spin Rotation On Quantum Hall Copropagating Edge Channels

EP2DS-24/MSS-20 Oral Sessions

*Takase Shimizu¹, Taketomo Nakamura¹, Akira Endo¹, Jun-ichiro Ohe², Shingo Katsumoto¹ (1. Institute for Solid State Physics, The University of Tokyo (Japan), 2. Department of Physics, Toho University (Japan))

M-7

Session Chair: Amalia Patane (Univ. Nottingham)

Wed. Nov 3, 2021 4:15 PM - 5:45 PM MSS (MSS)

4:15 PM - 4:45 PM (Wed. Nov 3, 2021 4:15 PM - 5:45 PM MSS)

[M-7-01] Two-Dimensional hBN Grown by High Temperature Molecular Beam Epitaxy

*Sergei Novikov¹ (1. Univ. of Nottingham (UK))

4:45 PM - 5:00 PM (Wed. Nov 3, 2021 4:15 PM - 5:45 PM MSS)

[M-7-02] Graphene/ α -In₂Se₃/Graphene Ferroelectric Semiconductor Junctions

*Shihong Xie^{1,2}, Anubhab Dey¹, Wenjing Yan¹, Zakhar R. Kudrynskiy¹, Nilanthy Balakrishnan^{3,4}, Oleg Makarovskiy¹, Zakhar D. Kovalyuk⁵, Eli G. Castanon⁶, Oleg Kolosov⁶, Kaiyou Wang², Amalia Patanè¹ (1. School of Physics and Astronomy, Univ. of Nottingham, Nottingham NG7 2RD, United Kingdom (UK), 2. State Key Lab. of Superlattices and Microstructures, Inst. of Semiconductors, Chinese Academy of Sciences, Beijing 100083, China (China), 3. School of Chemical and Physical Sciences, Keele Univ., Keele ST5 5BG, United Kingdom (UK), 4. National Graphene Inst., The Univ. of Manchester, Manchester M13 9PL, United Kingdom (UK), 5. Frantsevich Inst. for Problems of Materials Sci., The National Academy of Sciences of Ukraine, Chernivtsi Branch, Chernivtsi 58001, Ukraine (Ukraine), 6. Department of Physics, Lancaster Univ., Lancaster LA1 4YB, United Kingdom (UK))

5:00 PM - 5:15 PM (Wed. Nov 3, 2021 4:15 PM - 5:45 PM MSS)

[M-7-03] Emergence of orbital moment at van Hove singularity in graphene/h-BN moiré superlattice probed by magnetothermoelectric measurement

*Rai Moriya¹, Kei Kinoshita¹, J. A. Crosse², Kenji Watanabe³, Takashi Taniguchi^{3,1}, Satoru Masubuchi¹, Pilkyung Moon², Mikito Koshino⁴, Tomoki Machida^{1,5} (1. Univ. of Tokyo (Japan), 2. NYU Shanghai (China), 3. NIMS (Japan), 4. Osaka Univ. (Japan), 5. CREST-JST (Japan))

5:15 PM - 5:45 PM (Wed. Nov 3, 2021 4:15 PM - 5:45 PM MSS)

[M-7-04] Electric Control of Exchange Interaction in Co/(Cd,Mg)Te/CdTe Hybrid Structure

*Ina V. Kalitukha¹, Vladimir L. Korenev¹, Ilya A. Akimov^{1,2}, Victor F. Sapega¹, Evgeny A. Zhukov^{1,2}, Erik Kirstein², Olga S. Ken¹, Dennis Kudlacik², Grzegorz Karczewski³, Maciej Wiater⁴, Tomasz Wojtowicz⁴, Natalia D. Ilyinskaya¹, Natalia M. Lebedeva¹, Tatiana A. Komissarova¹, Yuri G. Kusrayev¹, Dmitri R. Yakovlev^{1,2}, Manfred Bayer^{1,2} (1. Ioffe Institute (Russia), 2. TU Dortmund (Germany), 3. IF PAN (Poland), 4. International Research Centre MagTop, IF PAN (Poland))

Special Sessions | Joint Session | Special Sessions

SS-3 (Spin qubit)

Session Chair: Keiji Ono (RIKEN)

Wed. Nov 3, 2021 6:00 PM - 7:10 PM Joint (Joint)

6:00 PM - 6:35 PM (Wed. Nov 3, 2021 6:00 PM - 7:10 PM Joint)

[SS-3-01] Quantum Computation and Simulation -- Spins Inside

*Lieven Vandersypen¹ (1. QuTech/TU Delft (Netherlands))

6:35 PM - 7:10 PM (Wed. Nov 3, 2021 6:00 PM - 7:10 PM Joint)

[SS-3-02] Silicon-based quantum computing:

The path from the laboratory to industrial manufacture

*Andrew Dzurak¹ (1. Univ. of New South Wales (Australia))

Special Sessions | Joint Session | Special Sessions

SS-4 (Spin qubit)

Session Chair: David Richie (Univ. Cambridge)

Wed. Nov 3, 2021 7:20 PM - 8:30 PM Joint (Joint)

7:20 PM - 7:55 PM (Wed. Nov 3, 2021 7:20 PM - 8:30 PM Joint)

[SS-4-01] High-fidelity Entanglement Control of Two and Three Spin Qubits with Si Quantum Dots

*Seigo Tarucha¹ (1. RIKEN (Japan))

7:55 PM - 8:30 PM (Wed. Nov 3, 2021 7:20 PM - 8:30 PM Joint)

[SS-4-02] Quantum computation with semiconductors: from qubits to integrated quantum circuits

*Menno Veldhorst¹ (1. QuTech/TU Delft (Netherlands))

E-10

Session Chair: Heung-Sun Sim (KAIST)

Thu. Nov 4, 2021 9:00 AM - 10:15 AM EP2DS (EP2DS)

9:00 AM - 9:30 AM (Thu. Nov 4, 2021 9:00 AM - 10:15 AM EP2DS)

[E-10-01] Direct Observation of Anyonic Braiding Statistics

*Michael Manfra¹ (1. Purdue Univ. (United States of America))

9:30 AM - 10:00 AM (Thu. Nov 4, 2021 9:00 AM - 10:15 AM EP2DS)

[E-10-02] Interference Measurements Testing Non-Abelian Excitation Properties in FQHE States

*Robert L. Willett¹, Kirill Shtengel², Chetan Nayak³, Loren Pfeiffer⁴, Edwin Chung⁴, Kirk Baldwin⁴, Milton Peabody¹ (1. Nokia Bell Labs (United States of America), 2. Univ. of California, Riverside (United States of America), 3. Microsoft Quantum (United States of America), 4. Princeton University (United States of America))

10:00 AM - 10:15 AM (Thu. Nov 4, 2021 9:00 AM - 10:15 AM EP2DS)

[E-10-03] Tunable Aharonov-Bohm Interference in a Graphene Quantum Hall Interferometer

*Thomas Werkmeister¹, Yuval Ronen¹, Danial Haie Najafabadi¹, James Ehrets¹, Andrew T. Pierce¹, Kenji Watanabe², Takashi Taniguchi², Amir Yacoby¹, Philip Kim¹ (1. Harvard Univ. (United States of America), 2. National Inst. of Materials Sci. (Japan))

M-8

Session Chair: Chris Palmstrom (UCSB)

Thu. Nov 4, 2021 9:00 AM - 10:30 AM MSS (MSS)

9:00 AM - 9:30 AM (Thu. Nov 4, 2021 9:00 AM - 10:30 AM MSS)

[M-8-01] Periodic Table of Topological Magnetic and Non Magnetic Materials

*Andrei Bernevig¹ (1. Princeton Univ. (United States of America))

9:30 AM - 9:45 AM (Thu. Nov 4, 2021 9:00 AM - 10:30 AM MSS)

[M-8-02] Anomalous Hall Effect of Non-collinear Antiferromagnetic Weyl Semimetal $Mn_{3+x}Sn_{1-x}$ Thin Films: Correlation with Crystalline, Magnetic, and Electronic Structures

*Ju-Young Yoon^{1,2}, Yutaro Takeuchi^{1,3}, Samik DuttaGupta^{1,4,5}, Yuta Yamane^{1,6}, Shun Kanai^{1,4,5,7}, Jun'ichi Ieda^{1,8}, Hideo Ohno^{1,2,3,4,5,9}, Shunsuke Fukami^{1,2,3,4,5,9} (1. Lab. for Nanoelectronics and Spintronics, Research Inst. of Electrical Communication, Tohoku Univ. (Japan), 2. Graduate School of Eng., Tohoku Univ. (Japan), 3. WPI-Advanced Inst. for Materials Research, Tohoku Univ. (Japan), 4. Center for Science and Innovation in Spintronics, Tohoku Univ. (Japan), 5. Center for Spintronics Research Network, Tohoku Univ. (Japan), 6. Frontier Research Inst. for Interdisciplinary Sciences, Tohoku Univ. (Japan), 7. Division for the Establishment of Frontier Sciences, Organization for Advanced Studies, Tohoku Univ. (Japan), 8. Advanced Science Research Center (Japan), 9. Center for Innovative Integrated Electronic Systems, Tohoku Univ. (Japan))

9:45 AM - 10:00 AM (Thu. Nov 4, 2021 9:00 AM - 10:30 AM MSS)

[M-8-03] Elemental Topological Dirac Semimetal α -Sn With High Quantum Mobility

*Anh Le Duc^{1,2,3}, Kengo Takase¹, Takahiro Chiba⁴, Yohei Kota⁴, Kosuke Takiguchi¹, Masaaki Tanaka^{1,5} (1. Dept. of Electrical Engineering and Information Systems, The University of Tokyo (Japan), 2. Institute of Engineering Innovation, The Univ. of Tokyo (Japan), 3. PRESTO, JST (Japan), 4. National Inst. of Technology, Fukushima College (Japan), 5. Center for Spintronics Research Network (CSRN), The University of Tokyo (Japan))

10:00 AM - 10:15 AM (Thu. Nov 4, 2021 9:00 AM - 10:30 AM MSS)

[M-8-04] Intrinsic Torques Emerging from Anomalous Velocity in Magnetic Textures

*Yasufumi Araki¹, Jun'ichi Ieda¹ (1. Japan Atomic Energy Agency (Japan))

10:15 AM - 10:30 AM (Thu. Nov 4, 2021 9:00 AM - 10:30 AM MSS)

[M-8-05] Ultrafast Reorientation of the Neel Vector in Antiferromagnetic
Dirac Semimetals

*Atsushi Ono¹ (1. Tohoku Univ. (Japan))

E-11

Session Chair: Gil-Ho Lee (POSTECH)

Thu. Nov 4, 2021 10:45 AM - 12:15 PM EP2DS (EP2DS)

10:45 AM - 11:15 AM (Thu. Nov 4, 2021 10:45 AM - 12:15 PM EP2DS)

[E-11-01] Induced Superconductivity in a Fractional Quantum Hall Edge

*Yuval Ronen¹, Onder Gul¹, Si Young Lee³, Hassan Shapourian¹, Jonathan Zauberman¹, Young Hee Lee², Kenji Watanabe⁴, Takashi Taniguchi⁴, Ashvin Vishwanath¹, Amir Yacoby¹, Philip Kim¹ (1. Harvard Univ. (United States of America), 2. Sungkyunkwan Univ. (Korea), 3. Center for Integrated Nanostructure Physics (Korea), 4. National Institute for Materials Science (Japan))

11:15 AM - 11:30 AM (Thu. Nov 4, 2021 10:45 AM - 12:15 PM EP2DS)

[E-11-02] Induced Superconducting Pairing in Integer Quantum Hall Edge Modes of InAs

*Mehdi Hatefipour¹, Joseph J Cuzzo², William Strickland¹, Jesse Kanter¹, Enrico Rossi², Javad Shabani¹ (1. New York University (United States of America), 2. William & Mary (United States of America))

11:30 AM - 11:45 AM (Thu. Nov 4, 2021 10:45 AM - 12:15 PM EP2DS)

[E-11-03] Resistance enhancement of InAs 2D electron gas near the superconductor

*Taketomo Nakamura¹, Yoshiaki Hashimoto¹, Shingo Katsumoto¹ (1. Inst. for Solid State Phys., Univ. of Tokyo (Japan))

11:45 AM - 12:00 PM (Thu. Nov 4, 2021 10:45 AM - 12:15 PM EP2DS)

[E-11-04] Switching current oscillation controlled by a nonlocal phase difference in the double nanowire Josephson junctions

*Sadashige Matsuo^{1,2}, Joon Sue Lee^{3,4}, Chien Yuan Chang¹, Yosuke Sato¹, Kento Ueda⁵, Christopher J. Palmstrom³, Seigo Tarucha^{1,6} (1. Riken (Japan), 2. JST (Japan), 3. Univ. of California (United States of America), 4. Univ. of Tennessee (United States of America), 5. Univ. of Tokyo (Japan), 6. Tokyo Univ. of Science (Japan))

12:00 PM - 12:15 PM (Thu. Nov 4, 2021 10:45 AM - 12:15 PM EP2DS)

[E-11-05] Electronic subbands in the two-dimensional electron gas at the a-LaAlO₃/KTaO₃ interface revealed by high-field quantum oscillations

EP2DS-24/MSS-20 Oral Sessions

*Rubi Km¹, Shengwei Zeng², Femke Bangma¹, Michel Goiran³, Araindo Ariando², Walter Escoffier³, Uli Zeitler¹
(1. Radboud University (Netherlands), 2. National University of Singapore (Singapore), 3. French National High Magnetic Field Laboratory - Toulouse (France))

M-9

Session Chair: Tetsuo Kodera (Tokyo Tech)

Thu. Nov 4, 2021 10:45 AM - 12:15 PM MSS (MSS)

10:45 AM - 11:15 AM (Thu. Nov 4, 2021 10:45 AM - 12:15 PM MSS)

[M-9-01] A high temperature silicon qubit and simulation experiments

*Keiji Ono¹ (1. RIKEN (Japan))

11:15 AM - 11:30 AM (Thu. Nov 4, 2021 10:45 AM - 12:15 PM MSS)

[M-9-02] Phase-coherent spin qubit transport in silicon

*Jun Yoneda^{1,2}, Wister Huang¹, Mengke Feng¹, Chih-Hwan Yang¹, Kok Wai Chan¹, Tuomo Tantt¹, William Gilbert¹, Ross C. C. Leon¹, Fay Hudson¹, Kohei M. Itoh³, Andrea Morello¹, Stephen D. Bartlett⁴, Arne Laucht¹, Andre Saraiva¹, Andrew S. Dzurak¹ (1. Univ. of New South Wales (Australia), 2. Tokyo Inst. of Tech. (Japan), 3. Keio Univ. (Japan), 4. Univ. of Sydney (Australia))

11:30 AM - 11:45 AM (Thu. Nov 4, 2021 10:45 AM - 12:15 PM MSS)

[M-9-03] Electron Counting Statistics for Observation of Thermoelectric Effect in a Si Electron Box

*Kensaku Chida¹, Akira Fujiwara¹, Katsuhiko Nishiguci¹ (1. NTT Basic Res. Labs. (Japan))

11:45 AM - 12:00 PM (Thu. Nov 4, 2021 10:45 AM - 12:15 PM MSS)

[M-9-04] Equivalent Circuit Analysis of RF Reflectometry of Physically Defined Quantum Dot Systems

*Raisei Mizokuchi¹, Masaru Hirayama¹, Shimpei Nishiyama^{1,2}, Kimihiko Kato², Yongxun Liu², Shigenori Murakami², Takahiro Mori², Jun Yoneda¹, Tetsuo Kodera¹ (1. Tokyo Inst. of Tech. (Japan), 2. National Inst. of Advanced Indus. Sci. and Tech. (Japan))

12:00 PM - 12:15 PM (Thu. Nov 4, 2021 10:45 AM - 12:15 PM MSS)

[M-9-05] Spin transport in Si-based spin metal-oxide-semiconductor field-effect transistors: Spin drift effect in the inversion channel and spin relaxation in the n^+ -Si source/drain regions

*Shoichi Sato¹, Masaaki Tanaka¹, Ryosho Nakane¹ (1. Univ. of Tokyo (Japan))

E-12

Session Chair: Yasuhiro Tokura (Tsukuba Univ.)

Thu. Nov 4, 2021 5:00 PM - 6:00 PM EP2DS (EP2DS)

5:00 PM - 5:15 PM (Thu. Nov 4, 2021 5:00 PM - 6:00 PM EP2DS)

[E-12-01] Fast singlet-triplet readout using a deep neural network

*Yuta Matsumoto¹, Takafumi Fujita¹, Arne Ludwig², Andreas D. Wieck², Akira Oiwa¹ (1. SANKEN (The Institute of Scientific and Industrial Research), Osaka University (Japan), 2. Lehrstuhl für Angewandte Festkörperphysik, Ruhr-Universität Bochum (Germany))

5:15 PM - 5:30 PM (Thu. Nov 4, 2021 5:00 PM - 6:00 PM EP2DS)

[E-12-02] Circuit Quantum Electrodynamics with Two Remote Electron Spins

*Patrick Harvey-Collard¹, Jurgen Dijkema¹, Guoji Zheng¹, Amir Sammak², Giordano Scappucci¹, Lieven M. K. Vandersypen¹ (1. Delft University of Technology (Netherlands), 2. Netherlands Organization for Applied Scientific Research (TNO) (Netherlands))

5:30 PM - 5:45 PM (Thu. Nov 4, 2021 5:00 PM - 6:00 PM EP2DS)

[E-12-03] Probing Spin Relaxation Time in Bilayer Graphene Quantum Dots using Pulsed-Gate Spectroscopy

*Lisa Maria Gaechter¹, Chuyao Tong¹, Rebekka Garreis¹, Max Ruckriegel¹, Benedikt Kratochwil¹, Folkert Kornelis de Vries¹, Annika Kurzmann¹, Peter Maerki¹, Kenji Watanabe², Takashi Taniguchi², Thomas Ihn¹, Klaus Ensslin¹, Wister Huang¹ (1. Solid State Physics Lab., ETH Zurich (Switzerland), 2. National Inst. for Materials Sci. (Japan))

5:45 PM - 6:00 PM (Thu. Nov 4, 2021 5:00 PM - 6:00 PM EP2DS)

[E-12-04] Pulsed-Gate Spectroscopy of Single-Electron Spin States in Bilayer Graphene Quantum Dots

Luca Banszerus^{1,2}, Katrin Hecker^{1,2}, Eike Icking^{1,2}, Kenji Watanabe³, Takashi Taniguchi⁴, *Christian Volk^{1,2}, Christoph Stampfer^{1,2} (1. JARA-FIT and 2nd Institute of Physics, RWTH Aachen University, 52074 Aachen (Germany), 2. Peter Grünberg Institute (PGI-9), Forschungszentrum Jülich, 52425 Jülich (Germany), 3. Research Center for Functional Materials, National Institute for Materials Science, 1-1 Namiki, Tsukuba 305-0044 (Japan), 4. International Center for Materials Nanoarchitectonics, National Institute for Materials Science, 1-1 Namiki, Tsukuba 305-0044 (Japan))

E-13

Session Chair: Marek Potemski (LNCMI)

Thu. Nov 4, 2021 5:00 PM - 6:00 PM MSS (MSS)

5:00 PM - 5:30 PM (Thu. Nov 4, 2021 5:00 PM - 6:00 PM MSS)

[E-13-01] Signatures of Wigner Crystal of Electrons in a Monolayer Semiconductor

*Tomasz Smolenski¹, Pavel E. Dolgirev², Clemens Kuhlenkamp^{1,3,4}, Alexander Popert¹, Yuya Shimazaki¹, Patrick Back¹, Xiaobo Lu¹, Martin Kroner¹, Kenji Watanabe⁵, Takashi Taniguchi⁶, Ilya Esterlis², Eugene Demler^{2,7}, Atac Imamoglu¹ (1. Institute for Quantum Electronics, ETH Zurich, Zurich, Switzerland (Switzerland), 2. Department of Physics, Harvard University, Cambridge, Massachusetts, USA (United States of America), 3. Department of Physics and Institute for Advanced Study, Technical University of Munich, Garching, Germany (Germany), 4. Munchen Center for Quantum Science and Technology, Munich, Germany (Germany), 5. Research Center for Functional Materials, National Institute for Materials Science, Tsukuba, Japan (Japan), 6. International Center for Materials Nanoarchitectonics, National Institute for Materials Science, Tsukuba, Japan (Japan), 7. Institute for Theoretical Physics, ETH Zurich, Zurich, Switzerland (Switzerland))

5:30 PM - 5:45 PM (Thu. Nov 4, 2021 5:00 PM - 6:00 PM MSS)

[E-13-02] Fractal energy gaps and topological invariants in hBN/Graphene/hBN double moiré systems

*Hiroki Oka¹, Mikito Koshino¹
(1. Osaka Univ. (Japan))

5:45 PM - 6:00 PM (Thu. Nov 4, 2021 5:00 PM - 6:00 PM MSS)

[E-13-03] Anomalous Low Thermal Conductivity of Atomically Thin InSe Probed by Scanning Thermal Microscopy

*Zakhar R. Kudrynskyi¹, David Buckley², Nilanthy Balakrishnan^{3,4}, Tom Vincent², Debarati Mazumder¹, Eli Castanon², Zakhar D. Kovalyuk⁵, Oleg Kolosov⁶, Olga Kazakova², Alexander Tzalenchuk², Amalia Patané¹ (1. School of Physics and Astronomy, University of Nottingham (UK), 2. National Physical Laboratory (UK), 3. National Graphene Institute, The University of Manchester (UK), 4. School of Chemical and Physical Sciences, Keele University (UK), 5. Institute for Problems of Materials Science, NAS of Ukraine, Chernivtsi Branch (Ukraine), 6. Department of Physics, Lancaster University (UK))

E-14

Session Chair: Preden Roulleau (CEA Saclay)

Thu. Nov 4, 2021 6:15 PM - 7:30 PM EP2DS (EP2DS)

6:15 PM - 6:30 PM (Thu. Nov 4, 2021 6:15 PM - 7:30 PM EP2DS)

[E-14-01] Quantized Charge Fractionalization at Quantum Hall Y Junctions in the Disorder-Dominated Regime

*Chaojing Lin¹, Masayuki Hashisaka², Takafumi Akiho², Koji Muraki², Toshimasa Fujisawa¹ (1. Tokyo Institute of Technology (Japan), 2. NTT Basic Research Laboratories, NTT Corp. (Japan))

6:30 PM - 6:45 PM (Thu. Nov 4, 2021 6:15 PM - 7:30 PM EP2DS)

[E-14-02] Magnetic-Field-Dependent Equilibration of Fractional Quantum Hall Edge Modes

*Tanmay Maiti¹, Pooja Agarwal¹, Suvankar Purkait¹, G. J. Sreejit², Sourin Das³, Giorgio Biasiol⁴, Lucia Sorba⁵, Biswajit Karmakar¹ (1. SINP Kolkata (India), 2. IISER Pune (India), 3. IISER Kolkata (India), 4. CNR Trieste (Italy), 5. NEST Pisa (Italy))

6:45 PM - 7:00 PM (Thu. Nov 4, 2021 6:15 PM - 7:30 PM EP2DS)

[E-14-03] Andreev Reflection of Fractional Quantum Hall Quasiparticles

*Masayuki Hashisaka^{1,2}, Thibaut Jonckheere³, Takafumi Akiho¹, Satoshi Sasaki¹, Jerome Rech³, Thierry Martin³, Koji Muraki¹ (1. NTT Basic Research Labs. (Japan), 2. JST, PRESTO (Japan), 3. Aix Marseille Univ., Univ. de Toulon, CNRS (France))

7:00 PM - 7:30 PM (Thu. Nov 4, 2021 6:15 PM - 7:30 PM EP2DS)

[E-14-04] Thermal Conductance of the Majorana Edge Mode

*Bivas Dutta¹, Vladimir Umansky¹, Moty Heiblum¹ (1. Weizmann Institute of Science (Israel))

E-15

Session Chair: Juhn-Jong Lin (National Chiao Tung Univ.)

Thu. Nov 4, 2021 6:15 PM - 7:30 PM MSS (MSS)

6:15 PM - 6:45 PM (Thu. Nov 4, 2021 6:15 PM - 7:30 PM MSS)

[E-15-01] Discovery of Superluminal Two-Dimensional Plasma Waves

*Pavel Gusikhin¹, Vyacheslav Muravev¹, Alexey Shuvaev², Jan Gospodaric², Andrei Pimenov², Igor Kukushkin¹
(1. Institute of Solid State Physics RAS (Russia), 2. Institute of Solid State Physics, TU Wien (Austria))

6:45 PM - 7:00 PM (Thu. Nov 4, 2021 6:15 PM - 7:30 PM MSS)

[E-15-02] Few-Photon All-Optical Phase Rotation in a Quantum-Well Micropillar Cavity

*Paul Michael Walker¹, Tintu Kuriakose¹, Toby Dowling¹, Oleksandr Kyriienko², Ivan A. Shelykh^{3,4}, Phillipe St.-Jean⁵, Nicola Carlon Zambon⁵, Aristide Lemaître⁵, Isabelle Sagnes⁵, Luc Legratiet⁵, Abdelmounaim Harouri⁵, Sylvain Ravets⁵, Maurice S. Skolnick^{1,4}, Alberto Amo⁶, Jacqueline Bloch⁵, Dmitry N. Krizhanovskii^{1,4} (1. Univ. Sheffield (UK), 2. Univ. Exeter (UK), 3. Univ. Iceland (Iceland), 4. ITMO Univ. (Russia), 5. Univ. Paris Saclay - CNRS (France), 6. Univ. Lille - CNRS (France))

7:00 PM - 7:15 PM (Thu. Nov 4, 2021 6:15 PM - 7:30 PM MSS)

[E-15-03] A new quantum mechanism of detecting terahertz radiation in 2D electron systems

*Wladislaw Michailow¹, Peter Spencer¹, Nikita Almond¹, Stephen Kindness¹, Robert Wallis¹, Thomas Mitchell¹, Riccardo Degl'Innocenti², Sergey Mikhailov³, Harvey Beere¹, David Ritchie¹ (1. Cavendish Lab., Univ. of Cambridge (UK), 2. Dept. of Engineering, Univ. of Lancaster (UK), 3. Inst. of Physics, Univ. of Augsburg (Germany))

7:15 PM - 7:30 PM (Thu. Nov 4, 2021 6:15 PM - 7:30 PM MSS)

[E-15-04] Observation of terahertz induced magnetooscillations in graphene

Erwin Mönch¹, Denis A. Bandurin², *Ivan Dmitriev^{1,3}, Isabelle Y. Phinney², Ivan Yahniuk⁴, Takashi Taniguchi⁵, Kenji Watanabe⁵, Pablo Jarillo-Herrero², Sergey D. Ganichev¹ (1. THz Center, Univ. Regensburg (Germany), 2. MIT, Cambridge, Massachusetts (United States of America), 3. Ioffe Inst., St. Petersburg (Russia), 4. CENTERA, Inst. of High Pressure Physics, Warsaw (Poland), 5. National Inst. of Material Science, Tsukuba (Japan))

Plenary Sessions | Joint Session | Plenary Sessions

PL-5

Session Chair: Satoshi Iwamoto (Univ. Tokyo)

Thu. Nov 4, 2021 7:45 PM - 8:30 PM Joint (Joint)

7:45 PM - 8:30 PM (Thu. Nov 4, 2021 7:45 PM - 8:30 PM Joint)

[PL-5-01] Fast and sensitive terahertz detection at room temperature through thermomechanical transduction using microelectromechanical resonators

*Kazuhiko Hirakawa¹ (1. Univ. of Tokyo (Japan))

Plenary Sessions | Joint Session | Plenary Sessions

PL-6

Session Chair: Ray Ashoori (MIT)

Fri. Nov 5, 2021 9:00 AM - 9:45 AM Joint (Joint)

9:00 AM - 9:45 AM (Fri. Nov 5, 2021 9:00 AM - 9:45 AM Joint)

[PL-6-01] Semiconductor moiré materials

*Kin Fai Mak¹ (1. Cornell Univ. (United States of America))

E-16

Session Chair: Young Woo Son (KAIST)

Fri. Nov 5, 2021 10:00 AM - 11:00 AM EP2DS (EP2DS)

10:00 AM - 10:15 AM (Fri. Nov 5, 2021 10:00 AM - 11:00 AM EP2DS)

[E-16-01] Disorder-induced 2D Metal-Insulator Transition in Twisted Transition Metal Dichalcogenides

*Sankar Das Sarma¹ (1. University of Maryland; Department of Physics (United States of America))

10:15 AM - 10:30 AM (Fri. Nov 5, 2021 10:00 AM - 11:00 AM EP2DS)

[E-16-02] Magnetic Domain Walls and Collective Excitations in Graphene Based Flat Bands

*Nemin Wei¹, Chunli Huang¹, Allan Hugh MacDonald¹ (1. The University of Texas at Austin (United States of America))

10:30 AM - 10:45 AM (Fri. Nov 5, 2021 10:00 AM - 11:00 AM EP2DS)

[E-16-03] Moiré edge states in twisted bilayer graphene and their topological relation to quantum pumping

*Manato Fujimoto¹, Henri Koschke^{1,2}, Mikito Koshino¹ (1. Osaka University (Japan), 2. University of Cologne (Germany))

10:45 AM - 11:00 AM (Fri. Nov 5, 2021 10:00 AM - 11:00 AM EP2DS)

[E-16-04] Purcell-like enhancement of electron-phonon interactions in long-period superlattices: Linear-T resistivity and cooling power

*Hiro Ishizuka¹, Ali Fahimniya², Francisco Guinea^{3,4}, Leonid Levitov² (1. Tokyo Inst. of Tech. (Japan), 2. Massachusetts Inst. of Tech. (United States of America), 3. IMDEA-Nanociencia (Spain), 4. Donostia Int'l Phys. Center (Spain))

E-17

Session Chair: Norio Kumada (NTT)

Fri. Nov 5, 2021 11:15 AM - 12:30 PM EP2DS (EP2DS)

11:15 AM - 11:45 AM (Fri. Nov 5, 2021 11:15 AM - 12:30 PM EP2DS)

[E-17-01] Observation of the Kondo cloud

*Michihisa Yamamoto¹ (1. RIKEN (Japan))

11:45 AM - 12:00 PM (Fri. Nov 5, 2021 11:15 AM - 12:30 PM EP2DS)

[E-17-02] Gapless Spin Wave Transport through a Quantum Canted-Antiferromagnet

*HAILONG FU¹, Ke Huang¹, Kenji Watanabe², Takashi Taniguchi², Jun Zhu¹ (1. Penn State University (United States of America), 2. National Institute for Materials Science (Japan))

12:00 PM - 12:15 PM (Fri. Nov 5, 2021 11:15 AM - 12:30 PM EP2DS)

[E-17-03] Probing Hydrodynamic and Ballistic Transport Regimes in High-Mobility GaAs/AlGaAs

Adbhut Gupta¹, *Jean Joseph Heremans¹, Gitansh Kataria², Mani Chandra³, Saeed Fallahi^{4,5}, Geoffrey C. Gardner^{5,6}, Michael James Manfra^{4,5,6,7,8} (1. Virginia Tech, Dept. of Physics (United States of America), 2. Virginia Tech, ECE Dept. (United States of America), 3. Rensselaer Polytechnic Inst., Dept. Materials Science & Engineering (United States of America), 4. Purdue Univ., Dept. of Physics & Astronomy (United States of America), 5. Purdue Univ., Birck Nanotechnology Center (United States of America), 6. Purdue Univ., Microsoft Quantum Purdue (United States of America), 7. Purdue Univ., School of ECE (United States of America), 8. Purdue Univ., School of Materials Engineering (United States of America))

12:15 PM - 12:30 PM (Fri. Nov 5, 2021 11:15 AM - 12:30 PM EP2DS)

[E-17-04] Heat-Driven Electron Motion in a Nanoscale Electronic Circuit

*Shintaro Takada¹, Giorgos Georgiou^{2,3}, Everton Arrighi^{2,4}, Hermann Edlbauer², Yuma Okazaki¹, Shuji Nakamura¹, Arne Ludwig⁵, Andreas D. Wieck⁵, Michihisa Yamamoto⁶, Christopher Bäuerle², Nobu-Hisa Kaneko¹ (1. National institute of Advanced Industrial Science and Technology (AIST), National Metrology Institute of Japan (NMIJ) (Japan), 2. Univ. Grenoble Alpes, CNRS, Grenoble INP, Institut Néel (France), 3. James Watt School of Engineering, Electronics and Nanoscale Engineering, University of Glasgow (UK), 4. Université Paris-Saclay, CNRS, Centre de Nanosciences et de Nanotechnologies (France), 5. Angewandte Festkörperphysik, Ruhr-Universität Bochum (Germany), 6. Center for Emergent Matter Science, RIKEN (Japan))

E-18

Session Chair: Michihisa Yamamoto (RIKEN)

Fri. Nov 5, 2021 5:00 PM - 6:15 PM EP2DS (EP2DS)

5:00 PM - 5:15 PM (Fri. Nov 5, 2021 5:00 PM - 6:15 PM EP2DS)

[E-18-01] Coherent Jetting from a gate-defined Channel in Bilayer Graphene

*Carolyn Gold¹, Angelika Knothe², Annika Kurzmam¹, Aitor Garcia-Ruiz², Kenji Watanabe³, Takashi Taniguchi⁴, Vladimir Fal'ko^{2,5,6}, Klaus Ensslin^{1,7}, Thomas Ihn^{1,7} (1. ETH Zurich (Switzerland), 2. National Graphene Institute, University of Manchester (UK), 3. Research Center for Functional Materials, National Institute for Materials Science (Japan), 4. International Center for Materials Nanoarchitectonics, National Institute for Materials Science (Japan), 5. Department of Physics, University of Manchester (UK), 6. Henry Royce Institute, University of Manchester (UK), 7. Quantum Center, ETH Zürich (Switzerland))

5:15 PM - 5:30 PM (Fri. Nov 5, 2021 5:00 PM - 6:15 PM EP2DS)

[E-18-02] Proximity coupling graphene to a TMD: moiré effects on coupled Fermi seas, and Rydberg excitons as probes for fractional quantum hall states

*Alexander Popert¹, Tomasz Smolenski¹, Yuya Shimazaki¹, Puneet Murthy¹, Thibault Chervy¹, Kenji Watanabe², Takashi Taniguchi³, Martin Kroner¹, Atac Imamoglu¹ (1. Institute for Quantum Electronics, ETH Zürich (Switzerland), 2. Research Center for Functional Materials, National Institute for Materials Science (Japan), 3. International Center for Materials Nanoarchitectonics, National Institute for Materials Science (Japan))

5:30 PM - 5:45 PM (Fri. Nov 5, 2021 5:00 PM - 6:15 PM EP2DS)

[E-18-03] Tunable Interlayer Transitions in van der Waals Heterostructures

*Nicolas UBRIG¹, Evgeniy Ponomarev¹, Daniil Domaretskiy¹, Johanna Zultak², Daniel Terry², Roman V Gorbachev², Vladimir I Fal'ko², Alberto F Morpurgo¹ (1. Department of Quantum Matter Physics, University of Geneva (Switzerland), 2. School of Physics & Astronomy, University of Manchester, Manchester (UK))

5:45 PM - 6:15 PM (Fri. Nov 5, 2021 5:00 PM - 6:15 PM EP2DS)

[E-18-04] Tunable valley currents in aligned bilayer graphene/BN

*Rebeca Ribeiro-Palau¹ (1. C2N, CNRS (France))

M-10

Session Chair: Hartmut Buhmann (Univ. Würzburg)

Fri. Nov 5, 2021 5:00 PM - 6:15 PM MSS (MSS)

5:00 PM - 5:30 PM (Fri. Nov 5, 2021 5:00 PM - 6:15 PM MSS)

[M-10-01] Highly Efficient Spin-orbit Torque Magnetization Switching and the Electric Field Control in a Perpendicularly Magnetized Ferromagnetic Semiconductor GaMnAs Single Layer

*Miao Jiang¹, Hirokatsu Asahara¹, Shoichi Sato¹, Toshike Kanaki¹, Hiroki Yamasaki¹, Shinobu Ohya^{1,2,3}, Masaaki Tanaka^{1,2} (1. Univ. of Tokyo (Japan), 2. CSRN (Japan), 3. Inst. of Eng. Innovation (Japan))

5:30 PM - 5:45 PM (Fri. Nov 5, 2021 5:00 PM - 6:15 PM MSS)

[M-10-02] A method for controlling valence states of wide-bandgap semiconductors using magnetic elements

*Akira Masago¹, Hikari Shinya², Tetsuya Fukushima³, Kazunori Sato⁴, Hiroshi Katayama-Yoshida⁵ (1. Osaka Univ. (Japan), 2. Tohoku Univ. (Japan), 3. Univ. of Tokyo (Japan), 4. Osaka Univ. (Japan), 5. Univ. of Tokyo (Japan))

5:45 PM - 6:00 PM (Fri. Nov 5, 2021 5:00 PM - 6:15 PM MSS)

[M-10-03] Topological band structure in InAs/GaSb/InAs triple quantum wells

*Manuel Meyer¹, Sebastian Schmid¹, Gerald Bastard^{1,2}, Fabian Hartmann¹, Sven Höfling^{1,2} (1. Technische Physik, Physikalisches Institut and Würzburg-Dresden Cluster of Excellence ct.qmat, Universität Würzburg, Am Hubland 97074 Würzburg, Germany (Germany), 2. Département de Physique, Ecole Normale Supérieure de Paris, 75005 Paris, France (France))

6:00 PM - 6:15 PM (Fri. Nov 5, 2021 5:00 PM - 6:15 PM MSS)

[M-10-04] High-quality two-dimensional electron gas in undoped InSb quantum wells

*Zijin Lei¹, Erik Cheah¹, Km Rubi², Maurice E. Bal², Christoph Adam¹, Rüdiger Schott¹, Uli Zeitler², Werner Wegscheider¹, Thomas Ihn¹, Klaus Ensslin¹ (1. Solid State Physics Lab., ETH Zurich (Switzerland), 2. High Field Magnet Lab. (HFML-EMFL), Radboud Univ. (Netherlands))

E-19

Session Chair: Jurgen Smet (Max Planck Inst.)

Fri. Nov 5, 2021 6:30 PM - 7:45 PM EP2DS (EP2DS)

6:30 PM - 6:45 PM (Fri. Nov 5, 2021 6:30 PM - 7:45 PM EP2DS)

[E-19-01] Spin-valley coupling in single-electron bilayer graphene double quantum dots

*Luca Felix Banszerus^{1,2}, Samuel Möller^{1,2}, Alexander Rothstein^{1,2}, Corinne Steiner^{1,2}, Kenji Watanabe³, Takashi Taniguchi⁴, Christian Volk^{1,2}, Christoph Stampfer^{1,2} (1. RWTH Aachen Univ. (Germany), 2. Peter Grü nberg Inst., Res. center Jülich (Germany), 3. Res. Center for Functional Materials, National Inst. for Materials Science (Japan), 4. Int'l Center for Materials Nanoarchitectonics, National Inst. for Materials Sci. (Japan))

6:45 PM - 7:00 PM (Fri. Nov 5, 2021 6:30 PM - 7:45 PM EP2DS)

[E-19-02] Valley and Spin Blockade in Graphene Quantum Dots

*Chuyao Tong¹, Annika Kurzmänn¹, Rebekka Garreis¹, Wei Wister Huang¹, Samuel Jele¹, Marius Eich¹, Lev Ginzburg¹, Christopher Mittag¹, Kenji Watanabe², Takashi Taniguchi², Klaus Ensslin¹, Thomas Ihn¹ (1. Solid State Physics Laboratory, ETH Zurich (Switzerland), 2. National Institute for Materials Science (Japan))

7:00 PM - 7:15 PM (Fri. Nov 5, 2021 6:30 PM - 7:45 PM EP2DS)

[E-19-03] Resonances at Multiple Cyclotron Frequencies and Near-field Magnetoabsorption via Bernstein Modes in Graphene

Denis Bandurin¹, Erwin Mönch³, *Kirill Kapralov², Isabelle Phinney¹, K. Lindner³, Song Liu⁴, James Edgar⁴, Ivan Dmitriev³, Pablo Jarillo-Herrero¹, Dmitry Svintsov², Sergey Ganichev³ (1. Department of Physics, Massachusetts Institute of Technology (United States of America), 2. Center for Photonics and 2d Materials, Moscow Institute of Physics and Technology (National Research University) (Russia), 3. Terahertz Center, University of Regensburg (Germany), 4. The Tim Taylor Department of Chemical Engineering, Kansas State University (United States of America))

7:15 PM - 7:45 PM (Fri. Nov 5, 2021 6:30 PM - 7:45 PM EP2DS)

[E-19-04] Unveiling excitonic properties of magnons in a quantum Hall ferromagnet

*Preden Roulleau¹, Alexandre Assouline¹, Myunglae Jo¹, Paul Brasseur¹, Kenji Watanabe³, Takasi Taniguchi³, Thierry Jolicoeur¹, D.C. Glattli¹, Norio Kumada², Patrice Roche¹, Francois Parmentier¹ (1. CEA Saclay (France), 2. NTT BRL (Japan), 3. National Institute for Materials Science (Japan))

M-11

Session Chair: Claes Thelander (Lund Univ.)

Fri. Nov 5, 2021 6:30 PM - 7:45 PM MSS (MSS)

6:30 PM - 7:00 PM (Fri. Nov 5, 2021 6:30 PM - 7:45 PM MSS)

[M-11-01] Progress on epitaxial growth of low noise quantum dot heterostructures

*Arne Ludwig¹ (1. Ruhr-Univ. Bochum (Germany))

7:00 PM - 7:15 PM (Fri. Nov 5, 2021 6:30 PM - 7:45 PM MSS)

[M-11-02] Complex Quantum Dots in III-As Nanowires

*Donovan Hilliard^{1,2}, Tina Tauchnitz^{1,2}, René Hübner¹, Harald Schneider¹, Manfred Helm^{1,2}, Emmanouil Dimakis¹ (1. Helmholtz-Zentrum Dresden-Rossendorf (Germany), 2. Technische Universität Dresden (Germany))

7:15 PM - 7:45 PM (Fri. Nov 5, 2021 6:30 PM - 7:45 PM MSS)

[M-11-03] Quantum Interference of Identical Photons from Remote Quantum Dots

*Liang Zhai¹, Giang Nam Nguyen¹, Clemens Spinnler¹, Julian Ritzmann², Matthias Christian Löbl¹, Andreas D. Wieck², Arne Ludwig², Alisa Javadi¹, Richard J. Warburton¹ (1. University of Basel (Switzerland), 2. Ruhr-Universität Bochum (Germany))

EP2DS-24/MSS-20 Oral Sessions

Closing | Joint Session | Closing

CL

Fri. Nov 5, 2021 7:45 PM - 8:00 PM Joint (Joint)

7:45 PM - 8:00 PM (Fri. Nov 5, 2021 7:45 PM - 8:00 PM Joint)

[CL] Closing