

Sunday, 31st July, 2016

13:00 - 17:20 Nobel Symposium Chair: Hongqi Xu

13:00 - 13:10 Symposium Opening

13:10 - 13:50 Su-PL.1

Quantum Hall Effect: The driving force for a new international system of units
Nobel Laureate: Klaus von Klitzing (Germany)

13:50 - 14:30 Su-PL.2

Nitrides as tools for solving global problems
Nobel Laureate: Hiroshi Amano (Japan)

14:30 - 15:10 Su-PL.3

The invention of high efficient blue LEDs and future Solid State lighting
Nobel Laureate: Shuji Nakamura (USA)

15:10 - 15:30 Coffee & Tea Break

15:30 - 16:10 Su-PL.4

China's VLSI foundry manufacturing in fast expansion
Senior Vice President of SMIC: Han-Ming Wu (China)

16:10 - 17:10 Panel Discussions

Distinguished Guests: Klaus von Klitzing, Andre Geim, Hiroshi Amano, Shuji Nakamura,
Han-Ming Wu

17:10 - 17:20 Symposium Closing

18:00 - 19:30 Welcome Reception Sponsored by Shijia Photons

Monday, 1st August, 2016

08:15 - 08:50 Opening Addresses

08:50 - 10:20 Plenary Session I Chair: Andre Geim

08:50 - 09:35 Mo-PL.1

Majorana electronics
Charles Marcus (Denmark)

09:35 - 10:20 Mo-PL.2

Majorana Fermions in atomic chains: Spin and charge signatures
Ali Yazdani (USA)

10:20 - 10:50 Coffee & Tea Break

10:50 - 12:20 Plenary Session II Chair: Hiroyuki Sakaki

10:50 - 11:35 Mo-PL.3
Quantum spintronics with semiconductors
David D. Awschalom (USA)

11:35 - 12:20 Mo-PL.4
Cavity quantum electrodynamics in single quantum dot with photonic crystal nanocavity
Yasuhiko Arakawa (Japan)

12:00 - 13:30 Lunch

13:30 - 15:00 1st Parallel Sessions

Mo-A3: Material growth, structural properties and characterization, phonons
Chair: Jianhua Zhao

13:30 - 14:00 Mo-A3.1
High quantum efficiency semiconductor nanowires for optoelectronic devices (Invited)
Chennupati Jagadish (Australia)

14:00 - 14:15 Mo-A3.2
Chalcogenide perovskites-an emerging class of ionic semiconductors
Hao Zeng (USA)

14:15 - 14:30 Mo-A3.3
Composition study of hexagonal Si and SiGe shells by combined TEM and atom probe study
Rianne Plantenga (Netherland)

14:30 - 14:45 Mo-A3.4
On the development of multi-component ZnO alloys: Materials design, thin film growth and bandgap engineering
Yunbin He (China)

14:45 - 15:00 Mo-A3.5
Quantum confinement phenomena in ultrathin GaAs nanowires
Bernhard Loitsch (Germany)

Mo-B3: Spintronics and spin phenomena
Chair: Guido Burkard

13:30 - 14:00 Mo-B3.1
Spin injection into two-dimensional electron systems (Invited)
Dieter Weiss (Germany)

14:00 - 14:15 Mo-B3.2

Long-lived electron spin relaxation and spin coherence in monolayer transition-metal dichalcogenide semiconductors
Luyi Yang (USA)

14:15 - 14:30 Mo-B3.3
Theory of spin control, dynamics and noise in quantum dot microcavities
Dmitry Smirnov (Russia)

14:30 - 14:45 Mo-B3.4
Individual Cr atom in a semiconductor quantum dot -optical addressability and spin-strain coupling
Herve Boukari (France)

14:45 - 15:00 Mo-B3.5
Spin gates and textures in quasi-one-dimensional polariton condensates
Luis Vina (Spain)

Mo-C3: Special topic Majorana fermions in solid state
Chair: Seigo Tarucha

13:30 - 14:00 Mo-C3.1
Topological superconductivity and Majorana bound states in chains of magnetic adatoms on superconductors (Invited)
Felix von Oppen (Germany)

14:00 - 14:30 Mo-C3.2
Observation of Majorana fermions in the vortex of artificial topological superconductor (Invited)
Jinfeng Jia (China)

14:30 - 14:45 Mo-C3.3
Interactions and transport in Majorana wires
Alfredo Levy Yeyati (Spain)

14:45 - 15:00 Mo-C3.4
Majorana fermions in ballistic nanowire devices
Hao Zhang (Netherland)

Mo-D3: 2D Materials beyond Graphene
Chair: Robin Nicholas

13:30 - 14:00 Mo-D3.1
Phase transition engineering of 2D layered materials (Invited)
Young Hee Lee (South Korea)

14:00 - 14:15 Mo-D3.2
Dual gate black phosphorus velocity modulated transistor
Thomas Szkopek (Canada)

14:15 - 14:30 Mo-D3.3
Gate tunable WSe₂-BP van der Waals heterojunction devices
Peng Chen (China)

14:30 - 14:45 Mo-D3.4
Single photon emitters in exfoliated WSe₂ structures
Maciej Koperski (France)

14:45 - 15:00 Mo-D3.5
Low dimensional metal chalcogenide semiconductors: Design, synthesis and applications
Jun He (China)

Mo-E3: Carbon Nanotubes and Graphene
Chair: Guillaume Cassabois

13:30 - 14:00 Mo-E3.1
Graphene electro-mechanical devices (Invited)
Adrian Bachtold (Spain)

14:00 - 14:15 Mo-E3.2
Remote cooling by hBN phonons in Graphene/hBN transistors
Wei Yang (France)

14:15 - 14:30 Mo-E3.3

15:00 - 15:30 Coffee & Tea Break

Incommensurate double-walled carbon nanotubes as one-dimensional moiré crystals
Pilkung Moon (USA)

14:30 - 14:45 Mo-E3.4
Hybrid graphene-quantum dot transistor: Controlling carrier concentration, mobility and photoresponsivity
Lyudmyla Tyryanska (UK)

14:45 - 15:00 Mo-E3.5
Direct growth of graphene crystals on hexagonal boron nitride by chemical vapor deposition
Haomin Wang (China)

Mo-F3: Optical properties, optoelectronics, solar cells
Chair: Fabio Beltram

13:30 - 14:00 Mo-F3.1
Thermal conduction control using phononic crystal nanostructures (Invited)
Masahiro Nomura (Japan)

14:00 - 14:15 Mo-F3.2
Excited-state charging energies in quantum dots investigated by Terahertz photocurrent spectroscopy
Ya Zhang (Japan)

14:15 - 14:30 Mo-F3.3
Fabrication of visible to MWIR broadband InAs/GaSb superlattice photon-trap array detectors
Zhichuan Niu (China)

14:30 - 14:45 Mo-F3.4
Wave function control in single or coupled semiconductor nanostructures with a magnetic field
Xiulai Xu (China)

14:45 - 15:00 Mo-F3.5
The study of thermal dissociation of free and acceptor-bound positively charged excitons in GaAs/Ga_{1-x}Al_xAs quantum wells
Leszek Bryja (Poland)

2nd Parallel Sessions 15:30 - 17:00

Mo-A4: Material growth, structural properties and characterization, phonons

Chair: Kimberly Dick Thelander

15:30 - 16:00 Mo-A4.1
Scanning tunneling microscopy and spectroscopy of III-V nanowire devices to the atomic scale and during operation (Invited)
Anders Mikkelsen (Sweden)

16:00 - 16:15 Mo-A4.2
Surface-diffusion enhanced impurity incorporations in semiconductor nanowires through vacancy-assistance
Yi Shi (China)

16:15 - 16:30 Mo-A4.3
Composition oscillations near heterointerface in axial nanowire heterostructure
Nickolay Sibirev (Russia)

16:30 - 16:45 Mo-A4.4
Site-defined InP/InAs heterostructure nanowires with the diameter tuned from microscale to nanoscale
Guoqiang Zhang (Japan)

16:45 - 17:00 Mo-A4.5
SWIR room temperature emission in defect-free Ge/Ge_{0.87}Sn_{0.13} core/shell nanowire arrays
Simone Assali (Netherland)

Mo-B4: Wide-bandgap semiconductors

Chair: Bernard Gil

15:30 - 16:00 Mo-B4.1
Tunnel junction LED, edge emitting Laser diode and VCSEL (Invited)
Shuji Nakamura (USA)

16:00 - 16:15 Mo-B4.2
Hybrid III-nitride/nanocrystal semiconductor white light-emitting diodes with efficient nonradiative energy transfer
Bin Liu (China)

16:15 - 16:30 Mo-B4.3
Designing III-nitride quantum dots for ultra-violet emission

Julien Brault (France)

16:30 - 16:45 Mo-B4.4
Auger recombination in InGaN/GaN quantum wells
Benoit Deveaud (Switzerland)

16:45 - 17:00 Mo-B4.5
Understanding the mechanism of catalyst-mediated GaN nanowire growth
Carina B. Maliakkal (India)

Mo-C4: Special topic Majorana fermions in solid state

Chair: Ali Yazdani

15:30 - 16:00 Mo-C4.1
On-chip microwave spectroscopy of InAs nanowire Josephson junctions (Invited)
Attila Geresdi (Netherland)

16:00 - 16:15 Mo-C4.2
Majorana spintronics
Xin Liu (China)

16:15 - 16:30 Mo-C4.3
Engineering topological quantum states: From 1D to 2D
Jelena Klinovaja (Switzerland)

16:30 - 16:45 Mo-C4.4
Josephson supercurrent in a spin-split quasi-ballistic channel
Juan Carlos Estrada Saldana (France)

16:45 - 17:00 Mo-C4.5
Multiple Pairs of Majorana fermions in hole-doped nanowire at zero magnetic field
Guangyao Huang (China)

Mo-D4: 2D Materials beyond Graphene

Chair: Young Dong Kim

15:30 - 16:00 Mo-D4.1
Novel Interaction and correlation phenomena in atomically thin quasi 2D crystals (invited)
Steve G. Louie (USA)

16:00 - 16:15 Mo-D4.2

Static and dynamic optical properties of monolayer black phosphorus
Alessandro Surrente (France)

16:15 - 16:30 Mo-D4.3
Exciton brightening in monolayer phosphorene via dimensionality modification
Yuerui Lu (Australia)

16:30 - 16:45 Mo-D4.4
From InSe nanosheets to InSe/graphene hybrid heterostructures
Amalia Patane (UK)

16:45 - 17:00 Mo-D4.5
Electric transport measurements of WTe_2
Changming Wu (China)

Mo-E4: Transport in heterostructures
Chair: Alex Hamilton

15:30 - 16:00 Mo-E4.1
Thermoelectrical properties of nanoscale systems (invited)
Saskia F. Fischer (Germany)

16:00 - 16:15 Mo-E4.2
Few hole lateral double quantum dots
Andrew Sachrajda (Canada)

16:15 - 16:30 Mo-E4.3
A complete laboratory for transport studies of electron-hole interactions
Ugo Siciliani de Cumis (UK)

16:30 - 16:45 Mo-E4.4

17:30 - 19:30 Poster Session I Sponsored by Quantum Design Poster Area

Quantum Griffiths singularity and possible unconventional pairing mechanism at superconducting $LaAlO_3/SrTiO_3(110)$ Interface
Shengchun Shen (China)

16:45 - 17:00 Mo-E4.5
Pairing of Cooper-pairs into a quartet and non-local supercurrent in a biased three-terminal Josephson junction
Yuval Ronen (Israel)

Mo-F4: Quantum optics, nanophotonics
Chair: David Gershoni

15:30 - 16:00 Mo-F4.1
Quantum optics with one-dimensional artificial atoms (invited)
Loic Lanco (France)

16:00 - 16:15 Mo-F4.2
Coexistence of strong and weak coupling in ZnO nanowire cavities
Chris Sturm (Germany)

16:15 - 16:30 Mo-F4.3
Bundles of entangled photons emitted from quantum dots in cavities
Carlos Sanchez Munoz (Spain)

16:30 - 16:45 Mo-F4.4
Optical detection of single electron tunneling into a single self-assembled quantum dot
Axel Lorke (Germany)

16:45 - 17:00 Mo-F4.5
InAs based Terahertz Quantum Cascade Lasers
Martin Alexander Kainz (Austria)

Tuesday, 2nd August, 2016

08:30 - 10:00 3rd Parallel Sessions

Tu-A1: Electron devices and applications
Chair: Claude Weisbuch

08:30 - 09:00 Tu-A1.1
Gigahertz single-electron pump for quantum current standard (Invited)

Akira Fujiwara (Japan)

09:00 - 09:15 Tu-A1.2
Novel plasma excitations with anomalously weak damping in a two-dimensional electron system

Viacheslav Muravev (Russia)

09:15 - 09:30 Tu-A1.3
Competition between Kondo screening and quantum Hall edge reconstruction
Alexander Heine (Germany)

09:30 - 09:45 Tu-A1.4
Tunable Ultra-strong coupling between magneto-plasmon and split-ring cavity
Gian Lorenzo Paravicini-Bagliani (Switzerland)

09:45 - 10:00 Tu-A1.5
High-Tc superconductor-semiconductor photon-assisted tunneling
Victoria Perepelook (Israel)

Tu-B1: Spintronics and spin phenomena
Chair: David Awschalom

08:30 - 09:00 Tu-B1.1
Single self-assembled quantum dots for quantum hardware: Performance limits set by charge noise and spin noise (Invited)
Richard J. Warburton (Switzerland)

09:00 - 09:15 Tu-B1.2
High-frequency optically detected magnetic resonance of nitrogen-related centers in diamond
Dion Braukmann (Germany)

09:15 - 09:30 Tu-B1.3
Probing variations of the Rashba spin-orbit coupling at the nanometer scale
Marcus Liebmann (Germany)

09:30 - 09:45 Tu-B1.4
Magnetic ground state of an individual Fe²⁺ ion in strained semiconductor nanostructure
Tomasz Smolenski (Poland)

09:45 - 10:00 Tu-B1.5
Spin manipulation of drifting electrons by electrically-controlled spin-orbit interaction in GaAs quantum wells
Yoji Kunihashi (Japan)

Tu-C1: Topological states of matter, topological Insulators and Weyl semimetals
Chair: Felix von Oppen

08:30 - 09:00 Tu-C1.1
Surface-state transport in HgTe-based topological insulators (Invited)
Hartmut Buhmann (Germany)

09:00 - 09:30 Tu-C1.2
Bulk gaps and helical edge modes in InAs/GaSb quantum spin Hall insulators (Invited)
Rui-rui Du (China/USA)

09:30 - 09:45 Tu-C1.3
Theory of weak (anti-)localization in topological semimetals
Haizhou Lu (China)

09:45 - 10:00 Tu-C1.4
Evidence for superconductivity in the anti-ferromagnetic phase of monolayer FeTe on Bi₂Te₃
Lasse Cornils (Germany)

Tu-D1: 2D Materials beyond Graphene
Chair: Young Hee Lee

08:30 - 09:00 Tu-D1.1
Quantum transport and spin physics in ZnO 2DEGS with record mobilities (Invited)
Masashi Kawasaki (Japan)

09:00 - 09:15 Tu-D1.2
Origins of thickness-dependent electronic performance in layered two-dimensional semiconductors
Songlin Li (China)

09:15 - 09:30 Tu-D1.3
Optical coherence in atomic monolayer transition metal dichalcogenides limited by electron-phonon interactions
Denis Karaiskaj (USA)

09:30 - 09:45 Tu-D1.4
Pressure-induced single photon emission in monolayer WSe₂
Yanxia Ye (China)

09:45 - 10:00 Tu-D1.5
Intervalley exciton relaxation in monolayer tungsten diselenide under strong excitation
Lukasz Kłopotowski (Poland)

Tu-E1: Carbon Nanotubes and Graphene
Chair: Christian Schöenberger

08:30 - 09:00 Tu-E1.1
Tunnelling spectroscopy in graphene-hBN heterostructures to probe chiral Landau levels, electron-phonon interactions and defects (Invited)
Laurence Eaves (UK)

09:00 - 09:15 Tu-E1.2
Fractional quantum Hall states in bilayer graphene probed by transconductance fluctuations
Youngwook Kim (Germany)

09:15 - 09:30 Tu-E1.3
CVD growth of large single crystal graphene
Li Lin (China)

09:30 - 09:45 Tu-E1.4
Carbon based nanoelectromechanics for future device applications
Sang Wook Lee (South Korea)

09:45 - 10:00 Tu-E1.5
Graphene nanoribbons epitaxy on boron nitride
Xiaobo Lu (China)

10:00 - 10:30 Coffee & Tea Break

10:30 - 12:00 4th Parallel Sessions

Tu-A2: Material growth, structural properties and characterization, phonons
Chair: Anders Mikkelsen

10:30 - 11:00 Tu-A2.1
High-quality free-standing two-dimensional single-crystalline InSb nanosheets grown by molecular-beam epitaxy (Invited)
Jianhua Zhao (China)

11:00 - 11:15 Tu-A2.2
GaAs quantum dots in AlGaAs nanowires
Christine Pepke Pedersen (Denmark)

11:15 - 11:30 Tu-A2.3

Tu-F1: Optical properties, optoelectronics, solar cells
Chair: Luis Vina

08:30 - 09:00 Tu-F1.1
Solid state quantum memory for single photon from quantum dot (Invited)
Chuan-Feng Li (China)

09:00 - 09:15 Tu-F1.2
Plasmonic silicon nanocrystals doped with boron and phosphorus
Xiaodong Pi (China)

09:15 - 09:30 Tu-F1.3
Ring quantum cascade lasers with metal-covered distributed feedback gratings
Martin Holzbauer (Austria)

09:30 - 09:45 Tu-F1.4
Local states and optical Aharonov Bohm oscillations of a heat-treated single droplet quantum dot
Seongho Park (South Korea)

09:45 - 10:00 Tu-F1.5
Trains of bright and dark conservative hybrid light-matter solitons with continuum-like generation
Maksym Sich (UK)

Spatial electronic structure of an isovalent nitrogen center in GaAs
Rianne Plantenga (Netherlands)

11:30 - 11:45 Tu-A2.4
Direct observation of atomic structure of ferroelectric surfaces by annular bright field imaging
Peng Gao (China)

11:45 - 12:00 Tu-A2.5
Controlled-direction growth of planar InAsSb nanowires on Si substrates
Xiaoguan Yang (China)

Tu-B2: Spintronics and spin phenomena

Chair: Junsaku Nitta

10:30 - 11:00 Tu-B2.1
Extraordinary defect-enabled spin functionalities in semiconductors (Invited)
Weimin M. Chen (Sweden)

11:00 - 11:15 Tu-B2.2
Coherent Zitterbewegung of electrons in semiconductor structures triggered by optical pulses
Alexander Poshakinskiy (Russia)

11:15 - 11:30 Tu-B2.3
Electronic spin-transport over ten microns in a nanosecond time-scale in a bare GaAs/AlGaAs layer
Lukas Nadvornik (Czech Republic)

11:30 - 11:45 Tu-B2.4
Conductance quantization in one-dimensional p-type Ge
Yilmaz Gul (UK)

11:45 - 12:00 Tu-B2.5
Spin transport in the persistent photoconductor $\text{Al}_{0.3}\text{Ga}_{0.7}\text{As:Si}$
Peng Xiong (USA)

Tu-C2: Special topic Majorana fermions in solid state
Chair: Shun-Qing Shen

10:30 - 11:00 Tu-C2.1
Towards confirming and braiding Majoranas in semiconductors (Invited)
Jay Deep Sau (USA)

11:00 - 11:15 Tu-C2.2
Superconducting proximity effect in $\text{Bi}_2\text{Se}_3/\text{NbSe}_2$ heterostructures
Huachen Zhang (China)

11:15 - 11:30 Tu-C2.3
Supercurrent in the quantum Hall regime
Chung-Ting Ke (USA)

11:30 - 11:45 Tu-C2.4
Non-local interference and Hong-Ou-Mandel collisions of single Bogoliubov quasiparticles
Thibaut Jonckheere (Switzerland)

11:45 - 12:00 Tu-C2.5
Search for Majorana zero modes in Josephson devices constructed on Bi_2Te_3 surface
Junhua Wang (China)

Tu-D2: 2D Materials beyond Graphene
Chair: Yi Shi

10:30 - 11:00 Tu-D2.1
Valley-spintronics in 2D semiconductors: From monolayers to heterobilayers (Invited)
Wang Yao (China)

11:00 - 11:15 Tu-D2.2
Room temperature tamm-plasmon exciton-polaritons with a WSe_2 monolayer
Nils Lundt (Germany)

11:15 - 11:30 Tu-D2.3
The evaluation of charged defects in two-dimensional materials
Dan Wang (China)

11:30 - 11:45 Tu-D2.4
Se doping-induced tunability of second harmonic generation of monolayer
Yong Soo Kim (South Korea)

11:45 - 12:00 Tu-D2.5
Observation of Interlayer phonons in transition metal dichalcogenide atomic layers and heterostructures
Rui He (USA)

Tu-E2: Transport in heterostructures
Chair: Alfredo Levy Yeyati

10:30 - 11:00 Tu-E2.1
Symmetry games in driven quantum dot circuits (Invited)
Stefan Ludwig (Germany)

11:00 - 11:15 Tu-E2.2
Scanning gate imaging in confined geometries
Richard Steinacher (Switzerland)

11:15 - 11:30 Tu-E2.3
Single-shot ternary readout of electron spin states in a quantum dot coupled to quantum Hall edge states

Haruki Kiyama (Japan)

11:30 - 11:45 Tu-E2.4
Kondo phase shift at the zero bias anomaly of quantum point contacts
Boris Brun (France)

11:45 - 12:00 Tu-E2.5
Electromechanical coupling in suspended nanomechanical resonators with two-dimensional electron gas
Andrey Shevyrin (Russia)

Tu-F2: Optical properties, optoelectronics, solar cells
Chair: Benoit Deveaud

10:30 - 11:00 Tu-F2.1
Quantum Optics with Nanowires (Invited)
Valery Zwiller (Sweden)

12:00 - 13:30 Lunch

13:30 - 15:00 5th Parallel Sessions

Tu-A3: Narrow-bandgap semiconductors
Chair: Uli Zulicke

13:30 - 14:00 Tu-A3.1
Temperature-driven massless Kane fermions in HgCdTe crystals (Invited)
Sergey Krishtopenko (France)

14:00 - 14:15 Tu-A3.2
Charge detection of quantum dots in indium arsenide nanowires
Felix Jekat (Germany)

14:15 - 14:30 Tu-A3.3
Electron effective mass enhancement in Ga(AsBi) alloys
Giorgio Pettinari (Italy)

14:30 - 14:45 Tu-A3.4
Experimental determination of band overlap in type II InAs/GaSb superlattice based on temperature dependent photoluminescence signal
Wenquan Ma (China)

11:00 - 11:15 Tu-F2.2
Room temperature polariton lasing in a ZnTe based microcavity containing a single CdSe/(Cd,Mg)Se quantum well
Rousset Jean-Guy (Poland)

11:15 - 11:30 Tu-F2.3
Efficient visible-light-driven water splitting using ZnCdO single-crystalline films as a photoanode material
Xuanhu Chen (China)

11:30 - 11:45 Tu-F2.4
Measurement of the electric field of zero-point optical phonons in GaAs quantum wells using the Urbach rule
Bhavtosh Bansal (India)

11:45 - 12:00 Tu-F2.5
Laser cooling in semiconductors
Jun Zhang (China)

14:45 - 15:00 Tu-A3.5
Probing the band structure of InSb nanowires and by magneto-transport in quasi-ballistic regime
Florian Vigneau (France)

Tu-B3: Electron devices and applications
Chair: Ru Huang

13:30 - 14:00 Tu-B3.1
Physics behind LEDs and future directions (Invited)
Claude Weisbuch (USA)

14:00 - 14:30 Tu-B3.2
CryoHEMTs for low-temperature, low-power and low-frequency readout electronics: Performance and applications (Invited)
Yong Jin (France)

14:30 - 14:45 Tu-B3.3
Charge state manipulation in quantum dot arrays
Johannes Bayer (Germany)

14:45 - 15:00 Tu-B3.4
Fabrication of a lateral p-n junction in an n-type modulation-doped GaAs/AlGaAs quantum well
Ateeq Nasir (UK)

Tu-C3: Topological states of matter, topological Insulators and Weyl semimetals
Chair: Hong Ding

13:30 - 14:00 Tu-C3.1
Visualizing electronic structures of topological quantum materials (Invited)
Yulin Chen (China)

14:00 - 14:15 Tu-C3.2
Novel phase transition in commonly-used semiconductors via interface engineering
Dong Zhang (China)

14:15 - 14:30 Tu-C3.3
Symmetry-protected ideal Weyl semimetal
Haijun Zhang (China)

14:30 - 14:45 Tu-C3.4
Quantum capacitance and spin susceptibility of HgTe quantum wells
Michele Governale (New Zealand)

14:45 - 15:00 Tu-C3.5
Engineering topological surface states using nano-ARPES as an effective band structure probe
Maria Asensio (France)

Tu-D3: 2D Materials beyond Graphene
Chair: Peide D. Ye

13:30 - 14:00 Tu-D3.1
New opportunities in two-dimensional material research (Invited)
Yuanbo Zhang (China)

14:00 - 14:15 Tu-D3.2
Tuning valley polarization in a WSe₂ monolayer with a tiny magnetic field
Tomasz Kazimierzuk (Poland)

14:15 - 14:30 Tu-D3.3
Understanding of scattering mechanisms in highly crystalline CVD graphene and MoS₂ through interface engineering

Jianbin Xu (China)

14:30 - 14:45 Tu-D3.4
Excitonic optical absorption in two-dimensional transition metal dichalcogenides: The role of "Diracness"
Maxim Trushin (Germany)

14:45 - 15:00 Tu-D3.5
Plasmonic hot electrons doping of 2D Materials
Zheyu Fang (China)

Tu-E3: Transport in heterostructures
Chair: Hiroshi Yamaguchi

13:30 - 14:00 Tu-E3.1
Photoemission and masing in cavity-coupled semiconductor double quantum dots (Invited)
Jason Petta (USA)

14:00 - 14:15 Tu-E3.2
Microwave-induced magneto-oscillations of phonon-drag voltage in two dimensional electron systems
Zahra Sadre Momtaz (Brazil)

14:15 - 14:30 Tu-E3.3
Direct experimental evidence for the scaling hypothesis of localization: Length-dependent electrical conductivity, ultra-high phase coherence length, and mesoscopic thermopower fluctuations
Narayan Vijay (UK)

14:30 - 14:45 Tu-E3.4
Two electron coherence in electron quantum optics
Pascal Degiovanni (France)

14:45 - 15:00 Tu-E3.5
Transport study of electron-hole interaction in GaSb/InAsSb core-shell nanowire quantum dots
Bahram Ganjipour (Sweden)

Tu-F3: Optical properties, optoelectronics, solar cells
Chair: Yasuhiko Arakawa

13:30 - 14:00 Tu-F3.1

**Semiconductor nanowire heterostructures:
From large quantum confinement to small gap
materials (Invited)
Leigh Smith (USA)**

14:00 - 14:15 Tu-F3.2
InP/InAsP NWs-based SAM-APDs
Vishal Jain (Sweden)

14:15 - 14:30 Tu-F3.3
Excitons in large area CVD grown MoS₂ and
MoSe₂

15:00 - 15:30 Coffee & Tea Break

15:30 - 17:00 6th Parallel Sessions

**Tu-A4: Quantum Hall Effect
Chair: Yoshiro Hirayama**

**15:30 - 16:00 Tu-A4.1
Scanning nuclear electric resonance
microscopy in a quantum Hall system (Invited)
Katsushi Hashimoto (Japan)**

16:00 - 16:15 Tu-A4.2
Disorder-induced stabilization of the quantum
Hall ferromagnet
Benjamin Piot (France)

16:15 - 16:30 Tu-A4.3
Negative compressibility of the bubble and
stripe phases in the quantum Hall regime
Benedikt Friess (Germany)

16:30 - 16:45 Tu-A4.4
Detecting the fractional statistics and
topological vacuum bubbles in an anyon
interferometer
Cheolhee Han (South Korea)

16:45 - 17:00 Tu-A4.5
Competing $\nu=5/2$ fractional quantum Hall states
in confined geometry
Xi Lin (China)

**Tu-B4: Spintronics and spin phenomena
Chair: Andrew Sachrajda**

15:30 - 16:00 Tu-B4.1

Paulina Plochocka (France)

14:30 - 14:45 Tu-F3.4
Electronic structure and properties of highly
ordered C₆₀ nano arrays on Au (111): STM & DFT
study
Zaw Myo Win (Hong Kong)

14:45 - 15:00 Tu-F3.5
Giant Nonlinear spatio-temporal modulation in
polaritonic waveguides
Paul Walker (UK)

**Weak anti-localization in layered
semiconductor GaSe thin films (Invited)
Junsaku Nitta (Japan)**

16:00 - 16:15 Tu-B4.2
Spin-orbit coupling in CdSe nanowires
Ning Tang (China)

16:15 - 16:30 Tu-B4.3
Advanced pump-probe Faraday rotation
spectroscopy of electron spin dynamics in bulk
GaAs and InGaAs quantum dots
Vasilii Belykh (Germany)

16:30 - 16:45 Tu-B4.4
Tuning the optical transitions of a single nuclear
spin in silicon
Chunming Yin (Australia)

16:45 - 17:00 Tu-B4.5
Single crystals growth and properties study of
diluted magnetic semiconductor
(Ba,K)(Zn,Mn)₂As₂ with decoupled spin & charge
doping
Guoqiang Zhao (China)

**Tu-C4: Topological states of matter, topological
Insulators and Weyl semimetals
Chair: Ady Stern**

**15:30 - 16:00 Tu-C4.1
Weyl semi-metal: A new topological state in
condensed matter (Invited)
Xi Dai (China)**

16:00 - 16:15 Tu-C4.2
Probing geometric resonances in the 3D
topological insulator HgTe
Hubert Maier (Germany)

16:15 - 16:30 Tu-C4.3
Optical access to topological insulator spin
dynamics
Alex Hayat (Israel)

16:30 - 16:45 Tu-C4.4
Field-driven phase transition and
magneto-optical properties in topological Dirac
semimetals
Faxian Xiu (China)

16:45 - 17:00 Tu-C4.5
THz-induced edge photocurrents excited in 2D
HgTe topological insulators
Kathrin-Maria Dantscher (Germany)

Tu-D4: 2D Materials beyond Graphene
Chair: Masashi Kawasaki

15:30 - 16:00 Tu-D4.1
Electron transport and device physics in
monolayer transition-metal dichalcogenides
(Invited)
Xinran Wang (China)

16:00 - 16:15 Tu-D4.2
Transport study of ZrTe₅ nano-sheets
Xiaosong Wu (China)

16:15 - 16:30 Tu-D4.3
Photocurrent response of transition metal
dichalcogenides excited by linearly polarized
light
Mustafa Eginligil (China)

16:30 - 16:45 Tu-D4.4
Epitaxial growth of two-dimensional stanene
Fengfeng Zhu (China)

16:45 - 17:00 Tu-D4.5
Resonance fluorescence and laser spectroscopy
of three-dimensionally confined excitons in
monolayer WSe₂
Brian Gerardot (UK)

Tu-E4: Quantum information
Chair: Guoping Guo

15:30 - 16:00 Tu-E4.1
Ultralong electron quantum memory in silicon
carbide wafers (Invited)
Georgy Astakhov (Germany)

16:00 - 16:15 Tu-E4.2
Generation of heralded entanglement between
distant quantum dot hole spins
Zhe Sun (Switzerland)

16:15 - 16:30 Tu-E4.3
Charge noise double sweet spot and long
distance coupling of RX Qubits
Maximilian Russ (Germany)

16:30 - 16:45 Tu-E4.4
Negative U centers for qubit architecture
Nikolay Bagraev (Russia)

16:45 - 17:00 Tu-E4.5
Correlated phonons in spectrally and spatially
distinct electromechanical resonators
Hiroshi Yamaguchi (Japan)

Tu-F4: Optical properties, optoelectronics,
solar cells
Chair: Weimin M. Chen

15:30 - 16:00 Tu-F4.1
Coherent quantum dynamics of quasiparticles
in atomically thin semiconductors: Excitons,
trions, and valley pseudo spins (Invited)
Xiaoqin Li (USA)

16:00 - 16:15 Tu-F4.2
Generating hot luminescence in silicon by
coupling with nanocavity plasmons
Chang-Hee Cho (South Korea)

16:15 - 16:30 Tu-F4.3
Thermally assisted photocurrent in an
AlGaAs/GaAs coupled quantum well solar cell
and its bias voltage dependence
Takeshi Noda (Japan)

16:30 - 16:45 Tu-F4.4
Emission of single indistinguishable photons
from single quantum dots

Ido Schwartz (Israel) GaAs-AlGaAs core-shell nanowire lasers on silicon
16:45 - 17:00 Tu-F4.5 Thomas Stettner (Germany)

17:30 - 19:30 Poster Session II Sponsored by Quantum Design Poster Area

Wednesday 3rd August, 2016

08:30 - 10:00 Plenary Session III Chair: Klaus von Klitzing

08:30 - 09:15 We-PL.1
Recent progress on 2D crystals and their heterostructures
Andre Geim (UK)

09:15 - 10:00 We-PL.2
Seeing electrons in 2D - light/matter interactions in atomically thin semiconductors
Tony Heinz (USA)

10:00 - 10:30 Coffee & Tea Break

10:30 - 12:00 Plenary Session IV Chair: Houzhi Zheng

10:30 - 11:15 We-PL.3
Quantum computing in silicon with donors
Michelle Y. Simmons (Australia)

11:15 - 12:00 We-PL.4
Quantum control of spins in solids
Jiangfeng Du (China)

12:00 - 12:30 Lunch

12:30 - 17:00 Conference Excursion

18:30 - 22:00 Conference Banquet Sponsored by Oxford Instruments

Thursday, 4th August, 2016

08:30 - 10:00 7th Parallel Sessions

Th-A1: Quantum Hall Effect
Chair: Katsushi Hashimoto

Specific heat measurement in the $5/2$ fractional quantum Hall state
Benjamin Schmidt (Canada)

08:30 - 09:00 Th-A1.1
Dirac composite fermions at the Half-filled Landau level (Invited)
Wei Pan (USA)

09:15 - 09:30 Th-A1.3
Nonlocal polarization feedback in a fractional quantum Hall ferromagnet
Szymon Hennel (Switzerland)

09:00 - 09:15 Th-A1.2

09:30 - 09:45 Th-A1.4
Quantum Hall state at $\nu = 5/2$: Edge reconstruction and a striped phase
Xin Wan (China)

09:45 - 10:00 Th-A1.5
Reorientations of quantum Hall stripes by in-plane magnetic field
Michael Zudov (USA)

Th-B1: Wide-bandgap semiconductors
Chair: Gil-Ho Kim

08:30 - 09:00 Th-B1.1
Dynamic control of quantum dot-like emission centers in III-nitride nanowire heterostructures by surface acoustic waves (Invited)
Snezana Lazic (Spain)

09:00 - 09:15 Th-B1.2
Influence of the sample design on the strong light-matter coupling in ZnSe based periodic structures
Kathrin Sebald (Germany)

09:15 - 09:30 Th-B1.3
Pseudo-direct to direct crossover in wurtzite GaP/In_xGa_{1-x}P core-shell nanowires
Luca Gagliano (Netherland)

09:30 - 09:45 Th-B1.4
Relaxation effect of the core-level X-ray photoelectron spectroscopy for the dopant defects in 3C-silicon carbide: A first-principles study
Jun Yamauchi (Japan)

09:45 - 10:00 Th-B1.5
First observation of repeatable NDR in deep-ultra violet LEDs
S. M. Islam (USA)

Th-C1: Topological states of matter, topological Insulators and Weyl semimetals
Chair: Tomasz Dietl

08:30 - 09:00 Th-C1.1
Discovery of Weyl fermions in condensed matter (Invited)
Hong Ding (China)

09:00 - 09:15 Th-C1.2
Topological states and phase transitions in GeTe-Sb₂Te₃ heterostructures
Narayan Vijay (UK)

09:15 - 09:30 Th-C1.3
Magnetotransport properties in individual Cd₃As₂ nanowires
Zhi-Min Liao (China)

09:30 - 09:45 Th-C1.4
Fermion-induced quantum critical points: Type-II Landau-forbidden transitions
Hong Yao (China)

09:45 - 10:00 Th-C1.5
Photovoltaic chiral magnetic effect in a Weyl semimetal
Katsuhisa Taguchi (Japan)

Th-D1: Carbon Nanotubes and Graphene
Chair: Masahiro Nomura

08:30 - 09:00 Th-D1.1
PN Junction-based devices in ultra-clean graphene (Invited)
Christian Schönenberger (Switzerland)

09:00 - 09:15 Th-D1.2
Interaction effect on the field dependence of a carbon nanotube excitation spectrum
Tokuro Hata (Japan)

09:15 - 09:30 Th-D1.3
Electron optics with ballistic graphene junctions
Shaowen Chen (USA)

09:30 - 09:45 Th-D1.4
Recent progress on realizing gate-controlled topological 1D mode in bilayer graphene
Zhenhua Qiao (China)

09:45 - 10:00 Th-D1.5
Angle-resolved photoemission spectroscopy studies of graphene/h-BN heterostructure to reveal secondary-generation Dirac cones and inversion
Eryin Wang (China)

Th-E1: Quantum information
Chair: Donghan Lee

08:30 - 09:00 **Th-E1.1**
Linear optical quantum computing with a single-photon device (Invited)
Chao-Yang Lu (China)

09:00 - 09:15 Th-E1.2
Few-electron double quantum dots in undoped GaAs/AlGaAs heterostructures
Egle Tylaite (UK)

09:15 - 09:30 Th-E1.3
Generation of single photon-electron pairs from single entangled photon pairs
Kazuyuki Kuroyama (Japan)

09:30 - 09:45 Th-E1.4
Decoherence of a moving qubit
Xuedong Hu (USA)

09:45 - 10:00 Th-E1.5
Anisotropic charge Kondo effect in a triple quantum dot
Gwangso Yoo (South Korea)

Th-F1: Transport in heterostructures
Chair: Thomas Ihn

10:00 - 10:30 Coffee & Tea Break

10:30 - 12:00 **8th Parallel Sessions**

Th-A2: Narrow-bandgap semiconductors
Chair: Richard J. Warburton

10:30 - 11:00 **Th-A2.1**
Optical/electrical phase-change memory semiconductors: Working principle and new design (Invited)
Xian-Bin Li (China)

11:00 - 11:15 Th-A2.2
Gate-tunable Andreev bound states in InSb nanowire Josephson junction
Ning Kang (China)

11:15 - 11:30 Th-A2.3
Influence of environment and geometry on measured quantum coherence in InGaAs mesoscopic wires and stadia

08:30 - 09:00 **Th-F1.1**
Observation of the three-channel Kondo effect (Invited)
Frédéric Pierre (France)

09:00 - 09:15 Th-F1.2
Long-range interacting electrons transfer in a dimer chain induced by topology and AC fields
Gloria Platero (Spain)

09:15 - 09:30 Th-F1.3
Extracting and characterizing the microwave-induced magneto-resistance oscillations from bell-shape negative giant magnetoresistance in the GaAs/AlGaAs 2DEGS
Ramesh Mani (USA)

09:30 - 09:45 Th-F1.4
Parity-dependent shot noise in a hybrid superconductor and semiconductor nanowire
Keiko Takase (Japan)

09:45 - 10:00 Th-F1.5
Transport characteristics of InSb trench-type in-plane gate quantum point contact in parallel magnetic field
Takafumi Masuda (Japan)

Jean J. Heremans (USA)

11:30 - 11:45 Th-A2.4
Study of cyclotron resonance assisted Nernst effect in a HgTe QW with single gapped Dirac cone electronic dispersion
Mehdi Pakmehr (USA)

11:45 - 12:00 Th-A2.5
Two dimensional electron gas in CdTe/PbTe heterojunction
Huizhen Wu (China)

Th-B2: Spintronics and spin phenomena
Chair: Daniel Loss

10:30 - 11:00 **Th-B2.1**

Conversion from single photons to single electron spins in gate-defined quantum dots (Invited)

Akira Oiwa (Japan)

11:00 - 11:15 Th-B2.2
Magnetic wafer based magnonics
Jiang Xiao (China)

11:15 - 11:30 Th-B2.3
Spin-orbit coupling on the level of single electrons
Andrea Hofmann (Switzerland)

11:30 - 11:45 Th-B2.4
Physics of iron dopant in ZnO: 3+ valency and s, p-d exchange interaction
Jan Suffczynski (Poland)

11:45 - 12:00 Th-B2.5
Control of magnetism by electric field in Rare-Earth-Substituted BiFeO₃
Bin Xu (USA)

Th-C2: Topological states of matter, topological Insulators and Weyl semimetals
Chair: Hartmut Buhmann

10:30 - 11:00 Th-C2.1
Tuning magnetic order and quantum transport in topological insulators with broken time reversal symmetry (Invited)
Yayu Wang (China)

11:00 - 11:15 Th-C2.2
Thermodynamical measurements of Landau diamagnetic susceptibility and large effective masses in HgTe quantum wells
Alexander Kuntsevich (Russia)

11:15 - 11:30 Th-C2.3
Emergent spacetime supersymmetry in 3D Weyl semimetals and 2D Dirac semimetals
Shaokai Jian (China)

11:30 - 11:45 Th-C2.4
Topological semimetals and valley-dependent electronics
Shengyuan Yang (Singapore)

11:45 - 12:00 Th-C2.5

Bulk-Induced 1/f noise at the surface-states of three-dimensional topological insulators
Semonti Bhattacharyya (India)

Th-D2: 2D Materials beyond Graphene
Chair: Yuanbo Zhang

10:30 - 11:00 Th-D2.1
Imaging electron motion in a few layer MoS₂ device (Invited)
Sagar Bhandari (USA)

11:00 - 11:15 Th-D2.2
Electronic transport in 2D materials: ReS₂ and strained graphene
Feng Miao (China)

11:15 - 11:30 Th-D2.3
High-resolution electronic and chemical imaging of novel nanomaterials beyond graphene
Maria C Asensio (France)

11:30 - 11:45 Th-D2.4
Phonon and Raman scattering of two-dimensional layered materials
Ping-Heng Tan (China)

11:45 - 12:00 Th-D2.5
Growth, defects, oxidization, metal intercalation, and substrate effects of silicene
Jijun Zhao (China)

Th-E2: Quantum optics, nanophotonics
Chair: Gwendal Fève

10:30 - 11:00 Th-E2.1
Ultra-strong coupling with the free space: The superradiance (Invited)
Simon Huppert (France)

11:00 - 11:15 Th-E2.2
Quenching across a quantum phase transition in radiation-semiconductor systems
Luis Quiroga (Colombia)

11:15 - 11:30 Th-E2.3
Accumulation of topological Pancharatnam-Berry phase in polariton spin-orbit coupled states
Emiliano Cancellieri (UK)

11:30 - 11:45 Th-E2.4
On-chip interference of single photons from an embedded quantum dot and a laser
O'Hara John (UK)

11:45 - 12:00 Th-E2.5
Response time of dilute nitride MQW vertical cavity enhanced photodetectors
Mohammad Syahmi Nordin (UK)

Th-F2: Late News -1
Chair: Li Lu

10:30 - 10:45 Th-F2.1
Revealing Dirac fermions in strained three-dimensional HgTe topological insulators via Quantum Hall spectroscopy
Candice Thomas (France)

10:45 - 11:00 Th-F2.2

12:00 - 13:30 Lunch

13:30 - 15:00 9th Parallel Sessions

Th-A3: Quantum Hall Effect
Chair: Jason Petta

13:30 - 14:00 Th-A3.1
Signatures of gapless Andreev bound states in HgTe based topological insulators (Invited)
Jonas Wiedenmann (Germany)

14:00 - 14:15 Th-A3.2
New paradigm for edge reconstruction of hole-conjugate fractional states
Amir Rosenblatt (Israel)

14:15 - 14:30 Th-A3.3
Spatial-temporal photoluminescence imaging of non-equilibrium fractional quantum Hall liquid dynamics
John N. Moore (Japan)

14:30 - 14:45 Th-A3.4
Effect of alloy disorder on quantum Hall stripes and their orientation
Qianhui Shi (USA)

14:45 - 15:00 Th-A3.5

Emergence of two-dimensional massless Dirac fermions, chiral pseudospins, and Berry's phase in potassium doped black phosphorus
Seung Su Baik (South Korea)

11:00 - 11:15 Th-F2.3
Temporal filtering and coherent dynamics of an entangled on-demand photon-pair source
R. Winik (Israel)

11:15 - 11:30 Th-F2.4
Fractional solitons and anomalous supercurrents in excitonic Josephson junctions in the quantum Hall regime
Ya-Fen Hsu (Chinese Taipei)

11:30 - 11:45 Th-F2.5
Near-transform-limited single photons from an efficient solid-state quantum emitter
Hui Wang (China)

Exciton condensation in graphene double-layer in quantum Hall regime
Xiaomeng Liu (USA)

Th-B3: Electron devices and applications
Chair: Heike E. Riel

13:30 - 14:00 Th-B3.1
Squeezing of shot noise using feedback controlled single-electron tunneling (Invited)
Timo Wagner (Germany)

14:00 - 14:15 Th-B3.2
Gate coupling effect in liquid-gated nanowire FETs
Svetlana Vitusevich (Germany)

14:15 - 14:30 Th-B3.3
Charge locking multiplexer for large numbers of coupled quantum devices in semiconductor heterostructures
Reuben Puddy (UK)

14:30 - 14:45 Th-B3.4
Electronic properties of InGaZnO based Schottky diodes

Jiawei Zhang (UK)

14:45 - 15:00 Th-B3.5

Spectroscopy of charge transfer between quantum dots in a magnetic field

Tobias Kraehenmann (Switzerland)

Th-C3: Topological states of matter, topological Insulators and Weyl semimetals

Chair: Xi Dai

13:30 - 14:00 Th-C3.1

Current at a distance and resonant transparency in Weyl semimetals (Invited)
Ady Stern (Israel)

14:00 - 14:15 Th-C3.2

Multiple Coulomb islands realized in a Bi_2Te_3 topological insulator nanoplate by lateral constrictions

Shaoyun Huang (China)

14:15 - 14:30 Th-C3.3

Interaction effects in a polariton Chern topological insulator

Olivier Bleu (France)

14:30 - 14:45 Th-C3.4

2D optical control of ferromagnetism and chemical potential in a topological insulator

Andrew Yeats (USA)

14:45 - 15:00 Th-C3.5

Quantum magnetoconductivity in topological Weyl semimetals

Shun-Qing Shen (China)

Th-D3: 2D Materials beyond Graphene

Chair: Stefan Ludwig

13:30 - 14:00 Th-D3.1

From black phosphorus to phosphorene (Invited)
Peide D Ye (USA)

14:00 - 14:15 Th-D3.2

Spin-valley coupling and topological phase transition in antiferromagnetic 2D organometallic thin film

Hyun-Jung Kim (South Korea)

14:15 - 14:30 Th-D3.3

Molecular-beam epitaxy of monolayer MoTe_2 : Structural phase and electronic properties

Maohai Xie (China)

14:30 - 14:45 Th-D3.4

Ambipolar field-effect transistor with atomically thin dual-channel of $\text{WSe}_2/\text{MoS}_2$ heterostructure

Gil-Ho Kim (South Korea)

14:45 - 15:00 Th-D3.5

The growth of GeSn layer on patterned Si substrate by MBE method

Chuanbo Li (China)

Th-E3: Carbon Nanotubes and Graphene

Chair: Kookrin Char

13:30 - 14:00 Th-E3.1

Cavity quantum electrodynamics with carbon nanotubes: From atomic-like systems to condensed matter (Invited)

Takis Kontos (France)

14:00 - 14:15 Th-E3.2

AFM studies on twisted bilayers of folded graphene

Henrik Schmidt (Germany)

14:15 - 14:30 Th-E3.3

Direct imaging of topological edge states at a bilayer graphene domain wall

Lin He (China)

14:30 - 14:45 Th-E3.4

Charge impurity scattering in ultra-high mobility nitrogen-doped graphene

Jiayu Li (China)

14:45 - 15:00 Th-E3.5

Wafer-sized single crystalline graphene crystal from a controlled nucleus on Cu-Ni substrate

Tianru Wu (China)

Th-F3: Quantum optics, nanophotonics

Chair: Jerome Faist

13:30 - 14:00 Th-F3.1

Quantum dots - deterministic sources for long strings of entangled photons and photonic cluster states (Invited)
David Gershoni (Israel)

14:00 - 14:15 Th-F3.2
Nanowire quantum dots tuned to atomic resonances
Lorenzo leandro (Denmark)

14:15 - 14:30 Th-F3.3
Coulomb mediated hybridization of excitons in double quantum dots

15:00 - 15:30 Coffee & Tea Break

15:30 - 17:00 10th Parallel Sessions

Th-A4: Spintronics and spin phenomena
Chair: Dieter Weiss

15:30 - 16:00 Th-A4.1
Long-range transfer of spin information using individual electrons (Invited)
Christopher Bauerle (France)

16:00 - 16:15 Th-A4.2
Magnetoresistance of InAs nanowire quantum dots with ferromagnetic split-gates
Andreas Baumgartner (Switzerland)

16:15 - 16:30 Th-A4.3
Footprints of hyperfine, spin-orbit, and decoherence effects in Pauli spin blockade
Peter Stano (Japan)

16:30 - 16:45 Th-A4.4
Tuning of Rashba/Dresselhaus spin splittings and anomalous Hall effect by inserting ultra-thin InAs layers at interfaces in insulating GaAs/AlGaAs quantum wells
Jinling Yu (China)

16:45 - 17:00 Th-A4.5
g-factor anisotropy of holes in planar silicon quantum dots
Paul Christiaan Spruijtenburg (Netherlands)

Th-B4: Wide-bandgap semiconductors
Chair: Leigh Smith

Krzysztof Gawarecki (Poland)

14:30 - 14:45 Th-F3.4
Polaritonic enhancement of optomechanical interaction in GaAs/AlAs multiple quantum wells
Alexander Poddubny (Russia)

14:45 - 15:00 Th-F3.5
Light-hole heavy-hole excitons in a nanowire quantum dot
Joel Cibert (France)

15:30 - 16:00 Th-B4.1
Polaritons in micro-assembled polaritonic crystal (Invited)
Zhanghai Chen (China)

16:00 - 16:15 Th-B4.2
High performance perovskite light-emitting diodes
Jianpu Wang (China)

16:15 - 16:30 Th-B4.3
Optical properties of 3D hybrid organic perovskites monocrystals
Emmanuelle Deleporte (France)

16:30 - 16:45 Th-B4.4
Polarization and interface engineering in ZnMgO/ZnO heterostructures towards novel functional device applications
Jiandong Ye (China)

16:45 - 17:00 Th-B4.5
Merits of {1014} facets in undoped and N-doped ZnO
Junyong Kang (China)

Th-C4: Topological states of matter, topological Insulators and Weyl semimetals
Chair: Jiannong Wang

15:30 - 16:00 Th-C4.1
Topological materials doped with magnetic impurities (Invited)

Tomasz Dietl (Poland)

16:00 - 16:15 Th-C4.2
The topological shift in Weyl semimetals
Qing-Dong Jiang (China)

16:15 - 16:30 Th-C4.3
Magneto-optical investigation of Dirac fermions
in $Pb_{1-x}Sn_xTe$ topological crystalline insulator
Thanyanan Phuphachong (France)

16:30 - 16:45 Th-C4.4
Electron and spin structure of topological
crystalline insulator (Pb,Sn,Mn)Se
P. Dziawa (Poland)

16:45 - 17:00 Th-C4.5
Ratchet transport of surface carriers in
three-dimensional topological insulators based
on strained HgTe films
Grigory Budkin (Russia)

Th-D4: 2D Materials beyond Graphene

Chair: Seung Joo Lee

15:30 - 16:00 Th-D4.1
Controlling the band structure of black
phosphorus (Invited)
Keun Su Kim (South Korea)

16:00 - 16:15 Th-D4.2
Reconfigurable quantum-dot molecules created
by atom manipulation
Yi Pan (Germany)

16:15 - 16:30 Th-D4.3
Radiatively limited dephasing in $MoSe_2$
monolayers
Tomasz Jakubczyk (France)

16:30 - 16:45 Th-D4.4
Electronic structures of epitaxial transition
metal dichalcogenides $MoSe_2$ and WSe_2
Yi Zhang (China)

16:45 - 17:00 Th-D4.5
A systematic study of MoS_2 grown by chemical
vapor deposition using MoO_2 as the
molybdenum source
Yong Xie (China)

Th-E4: Quantum information

Chair: Rolf Haug

15:30 - 16:00 Th-E4.1
Quantum spin entanglement in a three-spin
triple quantum dot (Invited)
Seigo Tarucha (Japan)

16:00 - 16:15 Th-E4.2
Highly tunable multiple quantum dots in InAs
Nanowires
Jiyin Wang (China)

16:15 - 16:30 Th-E4.3
Optical manipulation of the Berry phase in a
solid-state spin qubit
Guido Burkard (Germany)

16:30 - 16:45 Th-E4.4
Quantum simulation of the Hubbard model with
dopant atoms in silicon
Sven Rogge (Australia)

16:45 - 17:00 Th-E4.5
Spin network information processing automata
in semiconductors
Sougato Bose (UK)

Th-F4: Late News -2

Chair: Li Lu

15:30 - 15:45 Th-F4.1
Robust room temperature spin-orbit torque at
the Fe/GaAs (001) interface
Lin Chen (Germany)

15:45 - 16:00 Th-F4.2
Solution-processed high-k magnesium oxide
dielectric for n-Type In_2O_3 thin film transistors
Fukai Shan (China)

16:00 - 16:15 Th-F4.3
Effective long-range p-d exchange interaction in
a ferromagnet semiconductor hybrid structure
Joerg Debus (Germany)

16:15 - 16:30 Th-F4.4
On the use of optimized cubic spline atomic
form factor potentials for band structure
calculations in layered semiconductor
structures

Kagiso Mpshe (South Africa)

17:30 - 19:30

Poster Session III Sponsored by Quantum Design

Poster Area

Friday, 5th August, 2016

08:30 - 10:00 11th Parallel Sessions

Fr-A1: Electron devices and applications

Chair: Saskia F. Fischer

08:30 - 09:00 Fr-A1.1

III-V nanoscale devices for heterogeneous integration with silicon (Invited)

Heike E. Riel (Switzerland)

09:00 - 09:15 Fr-A1.2

Germanium Tin (GeSn) based tunneling FET: Theory and experiment
Hongjuan Wang (China)

09:15 - 09:30 Fr-A1.3

Detection and control of the charge states of a quintuple quantum dot in a scalable multiple quantum dot architecture
Takumi Ito (Japan)

09:30 - 09:45 Fr-A1.4

Detection of picosecond single-electron wavepackets
Jonathan Fletcher (UK)

09:45 - 10:00 Fr-A1.5

Large-scale deployment and batch-transferring of highly stretchable zigzag silicon nanowires
Linwei Yu (China)

Fr-B1: Quantum optics, nanophotonics

Chair: Valery Zwiller

08:30 - 09:00 Fr-B1.1

Quantum chaos and breaking of all anti-unitary symmetries in Rydberg excitons (Invited)

Marc-Alexander Aßmann (Germany)

09:00 - 09:15 Fr-B1.2

Single polarized-photon emitters based on elongated III-nitride pyramidal quantum dots
Per Olof Holtz (Sweden)

09:15 - 09:30 Fr-B1.3

Coherent control of plasmonic spin-Hall effect
Hui Liu (China)

09:30 - 09:45 Fr-B1.4

Efficient control of optically active frequencies in artificial molecules
Hanz Y. Ramírez (Colombia)

09:45 - 10:00 Fr-B1.5

Quantum dots as sources of coherent entangled photons at telecommunication wavelengths
Martin Felle (UK)

Fr-C1: Topological states of matter, topological Insulators and Weyl semimetals

Chair: Jinfeng Jia

08:30 - 09:00 Fr-C1.1

Quantum Griffiths singularity in 2D superconductors and potential topological superconductivity in 3D Dirac semimetal (Invited)

Jian Wang (China)

09:00 - 09:15 Fr-C1.2

Hybridization and anisotropy in the exchange interaction in 3D Dirac semimetals
Sergio Ulloa (USA)

09:15 - 09:30 Fr-C1.3

Yu-Shiba-Rusinov sub-gap states in hybrid single and double quantum dots based on III-V nanowires
Kasper Grove-Rasmussen (Denmark)

09:30 - 09:45 Fr-C1.4

Visualizing weakly bound Fermi-arcs and their correspondence with Weyl fermions
Nurit Avraham (Israel)

09:45 - 10:00 Fr-C1.5

Anderson localization in 3D topological insulator ultrathin films
Jian Liao (China)

Fr-D1: 2D Materials beyond Graphene
Chair: Xinran Wang

08:30 - 09:00 Fr-D1.1
Resonance Raman spectroscopy of layered 2-dimensional materials (Invited)
Hyeonsik Cheong (South Korea)

09:00 - 09:15 Fr-D1.2
Localized states in monolayer tungsten diselenide
Beata Kardynał (Germany)

09:15 - 09:30 Fr-D1.3
Origin of two-dimensional electron gas and its superconductivity at LaAlO₃/SrTiO₃ interfaces
Jia-Cai Nie (China)

09:30 - 09:45 Fr-D1.4
Band gap engineering of atomic layer semiconductor nanosheets
Honglai Li (China)

Fr-E1: Quantum information
Chair: Tomas Jungwirth

08:30 - 09:00 Fr-E1.1
Spin qubits in semiconductors: An overview with outlook (Invited)
Daniel Loss (Switzerland)

09:00 - 09:15 Fr-E1.2
Multiple semiconductor charge qubits
Ming Xiao (China)

09:15 - 09:30 Fr-E1.3
Dephasing due to nuclear spins in large-amplitude electric dipole spin resonance
Sefano Chesi (China)

10:00 - 10:30 Coffee & Tea Break

10:30 - 12:00 12th Parallel Sessions

Fr-A2: Carbon Nanotubes and Graphene
Chair: Hyeonsik Cheong

09:30 - 09:45 Fr-E1.4
Dispersive singlet-triplet readout of two holes on coupled acceptors in a silicon transistor
Joost van der Heijden (Australia)

09:45 - 10:00 Fr-E1.5
A photonic solution for coupling donor spin qubits in silicon
M. L. W. Thewalt (Canada)

Fr-F1: Transport in heterostructures
Chair: Akira Oiwa

08:30 - 09:00 Fr-F1.1
Spin-coherent electronic cavities as a long-range spin-qubits coupler (Invited)
Oded Zilberberg (Switzerland)

09:00 - 09:15 Fr-F1.2
Measurement and control of the velocity of a few electrons wave packet
Gregoire Roussely (France)

09:15 - 09:30 Fr-F1.3
Comparative study of microwave radiation-induced magnetoresistance oscillations induced by circularly- and linearly-polarized microwaves
Ramesh Mani (USA)

09:30 - 09:45 Fr-F1.4
Observation of Conductance Fluctuation due to Zitter bewegung in InAs 2-dimensional Electron Gas
Yu Iwasaki (Japan)

09:45 - 10:00 Fr-F1.5
Demonstration of a directional coupler for single flying electrons transferred by surface acoustic waves
Shintaro Takada (France)

10:30 - 11:00 Fr-A2.1
When superconductors meet graphene (Invited)

Philip Kim (USA)

11:00 - 11:15 Fr-A2.2
Negative Coulomb drag in double bilayer graphene
J. I. A Li (USA)

11:15 - 11:30 Fr-A2.3
Photo-thermionic effect in graphene-based heterostructures
Mathieu Massicotte (Spain)

11:30 - 11:45 Fr-A2.4
Evidence of artificial Frohlich polaron in graphene/hexagonal boron nitride heterostructure probed by Nano-ARPES
Chaoyu Chen (France)

11:45 - 12:00 Fr-A2.5
Magneto-electric effects in bi-layer graphene
Ulrich Zuelicke (New Zealand)

Fr-B2: Wide-bandgap semiconductors Chair: Georgy Astakhov

10:30 - 11:00 Fr-B2.1
A new wide-bandgap perovskite semiconductor BaSnO₃: High mobility, stability, and bipolar dupability (Invited)
Kookrin Char (South Korea)

11:00 - 11:15 Fr-B2.2
Direct determination of ultra-long charge carrier lifetime and mobility in hybrid Halide perovskites by ac Hall effect
Yuanzhen Chen (USA)

11:15 - 11:30 Fr-B2.3
Efficient Auger-type charge transfer processes in ZnO
Jan Eric Stehr (Sweden)

11:30 - 11:45 Fr-B2.4
Functionality-directed first-principles screening of hybrid organic-inorganic perovskites with target intrinsic photovoltaic functionalities
Lijun Zhang (China)

11:45 - 12:00 Fr-B2.5

Optical characterization of natural and CVD diamonds and diamond nano-particles:
Emission dynamics studies
Tomasz J. Ochalski (Ireland)

Fr-C2: Topological states of matter, topological Insulators and Weyl semimetals Chair: Rui-Rui Du

10:30 - 10:45 Fr-C2.1
Superconducting and normal transport in 2D TI InAs/GaSb
Fanming Qu (Netherland)

10:45 - 11:00 Fr-C2.2
Tunable Weyl fermions and Fermi arcs in magnetized topological crystalline insulators
Junwei Liu (USA)

11:00 - 11:15 Fr-C2.3
Negative magnetoresistance in Dirac semimetal Cd₃As₂
Hui Li (China)

11:15 - 11:30 Fr-C2.4
Topologically nontrivial bismuth thin films
Dong Qian (China)

11:30 - 11:45 Fr-C2.5
Robust Type-II Weyl semimetal phase in transition metal diphosphides XP₂ (X=Mo, W)
Gabriel Autès (Switzerland)

11:45 - 12:00 Fr-C2.6
Probing quantum capacitance in a 3D topological insulator
Kozlov Dmitriy (Russia)

Fr-D2: 2D Materials beyond Graphene Chair: Keun Su Kim

10:30 - 11:00 Fr-D2.1
Indirect excitons, electron-phonon interaction and intervalley scattering in hexagonal boron nitride (Invited)
Guillaume Cassabois (France)

11:00 - 11:15 Fr-D2.2
Interlayer coupling of layered materials
Wei Ji (China)

11:15 - 11:30 Fr-D2.3
Phosphorene: Phononic and electronic properties and environmental effects via first-principles study
Yongqing Cai (Singapore)

11:30 - 11:45 Fr-D2.4
Photodetectors based on layered(III-Se) and their heterostructures
Kaiyou Wang (China)

11:45 - 12:00 Fr-D2.5
Interlayer interaction in Bi-layer MoS₂ under uniaxial strain
Jae-Ung Lee (South Korea)

Fr-E2: Quantum information
Chair: Kazuhiko Hirakawa

10:30 - 11:00 Fr-E2.1
One- and two-qubit logic using silicon-MOS quantum dots (Invited)
A. S. Dzurak (Australia)

11:00 - 11:15 Fr-E2.2
Semiconductor entangled photon sources: Electrical injection and energy tunability
Fei Ding (Germany)

11:15 - 11:30 Fr-E2.3
Silicon CMOS platform for quantum information processing
S. De Franceschi (France)

11:30 - 11:45 Fr-E2.4
All-optical formation of coherent dark states of Silicon-vacancy spins in diamond

12:00 - 13:30 Lunch

13:30 - 14:15 Plenary Session V Chair: Bangfen Zhu

13:30 - 14:15 Fr-PL.1
Inorganic-organic hybrid perovskite semiconducting materials and their photovoltaic applications
Sang Il Seok (Korea)

14:15 - 16:00 Plenary Session VI Chair: Mike Thewalt

14:15 - 15:35 IUPAP YSP Winner Lectures

15:35 - 16:00 Best Student Posters Announcement

Benjamin Pingault (UK)

11:45 - 12:00 Fr-E2.5
Nanowire spin-orbit qubits: Electric-dipole spin resonance and anisotropic exchange coupling
Jian-Qiang You (China)

Fr-F2: Quantum optics, nanophotonics
Chair: Zhanghai Chen

10:30 - 11:00 Fr-F2.1
Few-second-long correlation times in a quantum dot nuclear spin bath probed by frequency-comb NMR spectroscopy (Invited)
Evgeny Chekhovich (UK)

11:00 - 11:15 Fr-F2.2
Magneto optical studies of organic inorganic perovskites
Paulina Plochocka (France)

11:15 - 11:30 Fr-F2.3
Unidirectional spin transfer in nanophotonic waveguides with embedded quantum emitters
Maxim N. Makhonin (UK)

11:30 - 11:45 Fr-F2.4
Hydrogen-assisted fabrication of site-controlled single-photon emitters and their deterministic coupling with photonic crystal structures
Marco Felici (Italy)

11:45 - 12:00 Fr-F2.5
Ultra-strong coupling with spin-split heavy-hole cyclotron resonances in strained Ge quantum wells
J. Keller (Switzerland)

16:00 - 16:30 Closing Ceremony

16:00 - 16:30 Closing Addresses

Poster Session I: Monday 17:30 - 19:30

Material growth, structural properties and characterization, phonons

Mo-P.001 Experimental and theoretical study of recombination processes in GaN/AlN quantum dots
Ivan Aleksandrov

Mo-P.002 Epitaxy of strained topological insulator Bi₂Se₃ thin films
Li Bin

Mo-P.003 Self-equilibration effect on the droplet size in Ga-catalyzed GaAs nanowires
Egor Leshchenko

Mo-P.004 MBE growth of nanowires using colloidal Au nanoparticles
Alexei Bouravleuv

Mo-P.005 Gate Tunable Nonlinear Rashba Spin Splitting in Transition Metal Dichalcogenide Monolayers
Cheng Cai

Mo-P.006 Influence of stacking fault on a high quality GaN films grown on sapphire substrate with sputtered AlN nucleation layer
Zhibin Chen

Mo-P.007 Quantum pump in quantum spin Hall edge states
Fang Cheng

Mo-P.008 Metal-to-insulator transition data collapsed within Fermi-gas based model
Maxim Cheremisin

Mo-P.009 Order and dielectric properties in P₃HT:PCBM active layer under the control of stress field
Guanglei Cui

Mo-P.010 Detecting monopole charge in Weyl semimetals via quantum interference transport
Xin Dai

Mo-P.011 Influence of ion beam parameters and annealing processes on formation of few-layer graphene by Cn cluster ion implantation
Dejun Fu

Mo-P.012 Defect induced intragap states in free-standing CdS nanocrystal arrays obtained by the Langmuir-Blodgett technique
Dmitry Gulyaev

Mo-P.013 Theoretical investigation of GaN growth on spinel substrates
Yao Guo

Mo-P.014 Temperature dependence of ferromagnetic resonance of Py on (Bi_{1-x}Sb_x)₂Te₃
Sachin Gupta

Mo-P.015 Negative photoconductivity of InAs nanowire
Yuxiang Han

Mo-P.016 Electron-phonon interaction in ternary mixed crystals of zinc compounds
Junhua Hou

Mo-P.017 Photoelectrical properties of Si nanorods investigated by conductive scanning probe microscopy combined with laser irradiation
Xiaofeng Hu

Mo-P.018 Reflection difference spectroscopy microscope for circular spot defects on InN films
Wei Huang

Mo-P.019 Determination of the Raman tensor of optically anisotropic crystals
Chris Sturm

Mo-P.020 Mechanism of charge transport of stress induced leakage current and trap nature in thermal oxide on silicon
Damir Islamov

Mo-P.021 InAs/GaSb core-shell nanowires grown on Si substrates by metal-organic chemical vapor deposition
Xianghai Ji

Mo-P.022 Excellent photothermal conversion of water-dispersed core/shell Cd(Zn)Se/Bi₂Se₃ quantum dots
Guozhi Jia

Mo-P.023 Investigation on Ge surface diffusion via growing Ge quantum dots on the top of Si pillars
Yuwen Jiang

Mo-P.024 Design of 2D organic materials for photocatalyst and magnetic storage device
Xue Jiang

Mo-P.025 Ellipsometric and magneto-optical study of ionic structure of spinel ferrite thin films with respect to their magnetic properties
Vitaly Zviagin

Mo-P.026 CVD growth of InAs nanowires with optical characterization by means of Raman and photoluminescence spectroscopy
Jingyun Wang

Mo-P.027 Oxygen-plasma treated effects in Mg_xZn_{1-x}O film
Jun-Dar Hwang

Mo-P.028 Achieving long wavelength emission from self-assembled InAs quantum dots by MBE through strain control
Itaru Kamiya

Mo-P.029 Twin InSb/GaAs nano-strips by molecular beam epitaxy
Suwit Kiravittaya

Mo-P.030 Polarization dependent Raman spectroscopic studies of binary oxides
Peter J. Klar

Mo-P.031 Modeling of selective-area MOCVD nanowire formation
Aleksandr Koriakin

Mo-P.032 Clarification of ferromagnetism in heavy ion doped ZnO for room temperature application
Juwon Lee

Mo-P.033 Oxygen polyvacancy in anatase as a filament: First principle investigation
Timofey Perevalov

Mo-P.034 The effect of electrocaloric films on hybrid perovskite semiconductor crystals
Sun Shuang

Mo-P.035 Magnetic and optical properties of normal, disordered, and inverse spinel oxides
Vitaly Zviagin

Mo-P.036 Strain-engineered graphene grown on hexagonal boron nitride by MBE
Laurence Eaves

Wide-bandgap semiconductors

Mo-P.037 Optical tailoring of RF magnetron sputtered N₂-doped ZnO thin films
Ali Hassan

Mo-P.038 Band gap engineering of GaON ternary alloy thin films
Bingsheng Li

Mo-P.039 Investigation on the acceptor state of Li-N codoped ZnO films
Bingye Zhang

Mo-P.040 Photochemical decoration of gold nanoparticles on ZnO nanorods as an efficient multi-purpose plasmonic platform
Da-Ren Hang

Mo-P.041 Abnormal electrical behavior of semiconductor multi-quantum-well laser diodes: Band-gap dependence of slope kinks of curves near threshold
QQ Li

Mo-P.042 Optical study of nitrogen acceptors in ZnO grown at low temperature
Elzbieta Guziewicz

Mo-P.043 Zinc oxide based heterostructures: electro-optical characteristics and detector application
Ewa Przewdziecka

Mo-P.044 Homoepitaxial growth of beta-Ga₂O₃ films by pulsed laser deposition
Fuguo Li

Mo-P.045 Crystal growth and new physical properties of silicon carbide
Gang Wang

Mo-P.046 Source-drain punch-through analysis of high voltage off-state AlGaN/GaN HEMT breakdown
Haisang Jiang

Mo-P.047 Electronic structure of disorder-induced cation defects in amorphous oxide semiconductors
Woohyun Han

Mo-P.048 PVT growth of AlN single crystals with the diameter from nano-to centi-meter level
Honglei Wu

Mo-P.049 Improved Ohmic-contact to AlGaN/GaN recessed and isolated by self-terminating thermal oxidation assisted wet etching technique
Jingqian Liu

Mo-P.050 Control of ionization impact in GaN-based avalanche photodiode
Jiyuan Zheng

Mo-P.051 Modification of TiO₂ surface structure for enhanced photocatalytic performance
Junguang Tao

Mo-P.052 LO phonon replica and exciton many-body effects of GaN nanocolumns
Yuta Inose

Mo-P.053 Reducing Mg acceptor activation energy in Al_{0.83}Ga_{0.17}N disorder alloy substituted by nanoscale (AlN)₅/(GaN)₁ superlattice using MgGa or MgGa-ON δ -doping

Jun-jie Shi

Mo-P.054 Si-doping in AlN: high temperature electrical transport study
Sylvie Contreras

Mo-P.055 Persistent photoconductivity in hydrogen ion-implanted KNbO₃ bulk single crystal
Kazuo Kuriyama

Mo-P.056 Analysis of localized states in InGaN/GaN regularly arranged nanocolumns
Kazuya Kinjo

Mo-P.057 Highly efficient GaN-based light-emitting diodes grown on Si (111) substrates
Guoqiang Li

Narrow-bandgap semiconductors

Mo-P.058 Charge carrier mobility in semiconductor solid solutions and percolation phenomena
Elena Rogacheva

Mo-P.059 The structure, optical and electrical properties of PbPdO₂ thin films prepared by PLD
Xiang Chen

Mo-P.060 Crystal phase- and orientation-dependent electrical transport properties of InAs nanowires
Mengqi Fu

Mo-P.061 Investigation of electronic transport properties in YBaCo₄O₇ ceramic
Yan Jia

Mo-P.062 Phase transitions in two tunnel-coupled HgTe quantum wells: Bilayer graphene analogy and beyond
Sergey Krishtopenko

Mo-P.063 Electronic, Vibrational and Dielectric Properties of PbTe/SnTe (001) Superlattices by First Principles Calculations
Horacio Alves

Mo-P.064 Large-region wavelength-tunable high-quality GaAs_{1-x}Sb_x nanowires
Lixia Li

Mo-P.065 Recombination and Thermalization Dynamics in GaAsSb, GaSb, and GaAsSb/InP nanowires
Leigh M. Smith

Mo-P.066 Hyperdoping silicon with chalcogen: solid vs. liquid phase epitaxy
Fang Liu

Carbon: Nanotubes and Graphene

Mo-P.067 Modifications of the charge carrier mobility of carbon nanotubes by intrinsic defects
Hongcun Bai

Mo-P.068 Effect of charge transfer on the enhanced nonlinear absorption and refraction of graphene/CdS hybrids
Baohua Zhu

Mo-P.069 Electrical control of intervalley scattering via the charge state of defects
Baoming Yan

Mo-P.070 Discovery of one hidden phase with 7% lattice expansion in monolayer graphene on copper by Nano-ARPES
Chaoyu Chen

Mo-P.071 Large scale synthesis of bilayer graphene on various substrates via chemical vapor deposition
Shanshan Chen

Mo-P.072 The effect of the spin orbit interactions on the Specular Andreev reflection
Chunxu Bai

Mo-P.073 Valley polarization in graphene via out-of-plane deformations
Dawei Zhai

Mo-P.074 SEM images of singled-walled carbon nanotubes with high resolution and conductivity information
Dongqi Li

Mo-P.075 Atomic-scale investigation of grain boundary motion in graphene
Dongwook Kim

Mo-P.076 Spin transport properties of a single benzene molecule connected to zigzag graphene leads
Zhiqiang Fan

Mo-P.077 Revisit on scanning tunneling spectroscopy of semiconducting carbon nanotubes
Fangxing Zha

Mo-P.078 Heavily N-doped graphene electrodes used for high-performance N-channel polymeric field-effect transistors
Fapei Zhang

Mo-P.079 Electronic states of coupled armchair-edge nanoribbon arrays
Futo Hashimoto

Mo-P.080 Electric field induced evolution of CPS in parallel graphene quantum dots
Gang Luo

Mo-P.081 Effect of strain on the electronic transport properties of mono- and bilayer graphene
Guan Fen

Mo-P.082 Quantum Dot Behavior in Graphene Cavity Structures
Guanqun Zhang

Mo-P.083 Contact resistance study of monolayer CVD graphene devices
Hejun Xu

Mo-P.084 Breakdown of the quantum Hall effect and charge transfer in epitaxial graphene at high magnetic fields
Nathaniel Jian Huang

Mo-P.085 Electronically pure single-chirality semiconducting single-walled carbon nanotube
Huaping Li

Mo-P.086 Temperature scaling of the critical current in long ballistic superconducting graphene junctions
Ivan Borzenets

Mo-P.087 Quantum interference in nanometre-sized graphene junctions
Jan Mol

Mo-P.088 Interface coupling in twisted multilayer graphene by resonance Raman spectroscopy
Jiang-Bin Wu

2D Materials beyond Graphene

Mo-P.089 Electronic and magnetic properties of graphene, silicene and germanene with vacancies
Muhammad Ali

Mo-P.090 High performance NIR photodetector based on MoTe₂ nanosheets
Yan Chen

Mo-P.091 Valley polarization in magnetic doped transition metal dichalcogenides
Yingchun Cheng

Mo-P.092 Ultrafast strain response of charge density wave in NbSe₂ with optical pump-probe method
Junwei Chu

Mo-P.093 Imaging coherent transport in chemical vapor deposition graphene wide constriction using scanning gate microscopy
Chiashain Chuang

Mo-P.094 Bound exciton and free exciton states in GaSe thin slab
Junfeng Dai

Mo-P.095 Exciton dynamics in 2D-hybrid organic perovskites
Emmanuelle Deleporte

Mo-P.096 Two-dimensional graphene-like planar stanene on Cu(111) surface
Jialiang Deng

Mo-P.097 The Edge Related Exciton of Layered GaSe
Huaiyi Ding

Mo-P.098 Investigation of transport properties and band structure in MoS₂/MoSe₂ based heterojunctions
Mingxu Fang

Mo-P.099 A reassessment of optical spectrum of bulk 2H-MoS₂: H-point transitions and exciton properties
Sandip Ghosh

Mo-P.100 Temperature dependent Raman scattering in few-layer MoTe₂
Magdalena Grzeszczyk

Mo-P.101 Visible to short wavelength In₂Se₃-nanoflake photodetector gated by ferroelectric polymer
Guangjian Wu

Mo-P.102 Atomic structures and electronic properties of phosphorene grain boundaries
Yu Guo

Mo-P.103 Computational design of innovative catalysts for hydrogen evolution reaction
Guoping Gao

Mo-P.104 Controllable synthesis of hexagonal boron nitride film by chemical vapor deposition
Hao Ying

Mo-P.105 Frank-van der Merwe growth vs. Volmer-Weber growth in van der Waals heteroepitaxial stacking of Bi₂Te₃/Sb₂Te₃ few monolayers
Hoseok Heo

Mo-P.106 Photoluminescence investigation of ReS₂:X (X=W, Nb) layered semiconductors
Hung-Pin Hsu

Mo-P.107 Raman properties of mono and few layer MoTe₂ crystal
Hai Huang

Mo-P.108 Evolution of Raman spectrum of charge density wave mode in 1T-TiSe₂ thin film
Mingyuan Huang

Mo-P.109 Robust trion emission in two-dimensional Mo(S_xSe_{1-x})₂ alloys
Joanna Jadczyk

Mo-P.110 Coherent lattice vibrations in single-layer MoSe₂
Tae-Young Jeong

Mo-P.111 Studies of the epitaxial monolayer NbSe₂ by ultra-low-temperature scanning tunnelling microscope
Shuaihua Ji

Mo-P.112 Strain modulated monolayer germanene grown on Sb(111)
Jian Gou

Mo-P.113 Bottom contact-a promising alternative for 2D semiconductor devices?
Jinbao Jiang

Mo-P.114 Specific interlayer states coupling dependent ultrafast charge transfer in WS₂/MS₂ bilayers
Jin Zhang

Mo-P.115 Proximity effect induced supercurrent in InSb nanosheet-superconductor hybrid devices
Jinhua Zhi

Mo-P.116 Resonant Zener tunneling through point defects in MoS₂
Juan Lv

Mo-P.117 Screw dislocation-driven growth of tungsten disulfide nanoplates
Honglai Li

Mo-P.118 Graphene oxide as p-dopant and tunneling barrier for holes in WSe₂ rectification device
Muhammad Atif Khan

Organic Semiconductors

Mo-P.119 ZnO modified by PEIE as cathode buffer layer for flexible organic solar cells to enhance electron transport
Junchi Zhang

Mo-P.120 Probing spin and localization of the interfacial charge transfer exciton in organic photo-voltaic devices by optically-detected magnetic resonance: Charge loss vs. charge generation.
Yuttapoom Puttisonong

Mo-P.121 Two-dimensional molecular single-crystalline semiconductors achieved by floating coffee ring-driven assembly
Yun Li

Mo-P.122 Exploring charge transport in organic field effect transistors at two-dimensional limit
Yuhan Zhang

Mo-P.123 Modelling charge transport in organic molecular materials
Hui Yang

Topological states of matter, topological Insulators and Weyl semimetals

Mo-P.124 Magnetically defined nanostructures formed at the surface of topological insulator
Anton Konakov

Mo-P.125 Spin textures and spin-wave dispersion in magnetically-doped Dirac/Weyl semimetals
Yasufumi Araki

Mo-P.126 Influence of thickness on the electrical transport properties of exfoliated Bi₂Te₃ ultrathin films
Qun Cai

Mo-P.127 Landau levels in Bi₂Se₃ topological insulator single crystals
Olivio Chiatti

Mo-P.128 Excitonic insulator phase of degenerate InAs/GaSb double quantum wells
Enrique Diez

- Mo-P.129 Classification of topological crystalline insulators based on representation theory
Xiao-Yu Dong
- Mo-P.130 Electron structure of helical edge states and edge photocurrents in HgTe/CdTe quantum wells with strong interface inversion asymmetry
Mikhail Durnev
- Mo-P.131 Electron transport of edge electrons in a strip of 2D topological insulator
Lev Magarill
- Mo-P.132 Tuning the magnetotransport of thin WTe₂ flakes by ion injection
Dongzhi Fu
- Mo-P.133 Prediction of silicon-based room temperature quantum spin Hall insulator via orbital mixing
Huixia Fu
- Mo-P.134 Terahertz probing of surface electron states in topological insulators (Bi_{1-x}In_x)₂Se₃
Alexandra Galeeva
- Mo-P.135 Thermoelectric transport in 2D topological insulator in HgTe quantum well
Gennady Gusev
- Mo-P.136 AC electronic surface compressibility in 3D HgTe topological insulator
Andreas Inhofer
- Transport in heterostructures**
- Mo-P.137 Triggering piezoelectricity directly by heat to produce alternating electric voltage
Wu-Xing Zhou
- Mo-P.138 Inevitable oxygen-vacancy doping in the LaAlO₃/SrTiO₃ heterostructure
Yun Li
- Mo-P.139 Generalized non-equilibrium vertex correction method in coherent medium
theory for quantum transport simulation of disordered anoelectronics
Youqi Ke
- Mo-P.140 Driven long-range heat transport
Fernando Gallego-Marcos
- Mo-P.141 Magnetointersubband oscillations within magnetic breakdown regime in GaAs quantum wells
William Mayer
- Mo-P.142 2D electron-hole system in HgTe quantum well under hydrostatic pressure
Valerii Prudkoglyad
- Mo-P.143 Transport properties in quantum well heterostructures doped with remote atomic Mn δ -layer
Tatiana Charikova
- Mo-P.144 Non-linear Transport in Arrays of Quantum Rings
Taketomo Nakamura
- Mo-P.145 Constructive influence of the induced electron pairing on the Kondo state
Tadeusz Domanski
- Mo-P.146 Impact of polystyrene-based passivating interlayer on hybrid polymer/ZnO nanowire heterojunctions
Stephanie Bley
- Mo-P.147 Wavefunction hybridisation in laterally-uncoupled one-dimensional quantum wires
Sanjeev Kumar
- Mo-P.148 Tunable 0- π junction in hybrid superconductor-InSb nanowire quantum dot devices
Sen Li
- Mo-P.149 Photoluminescence properties affected by subband resonances and scatterings in GaAs/AlAs asymmetric sevenfold multiple quantum wells
Rui Wang

Mo-P.150 Exciton localization in quasi one-dimensional GaAs/AlGaAs quantum well tube nano wires
Howard E. Jackson

Mo-P.151 Semiconductor film/PMN-PT single crystal heterostructures with gate-tunable electronic transport and magnetic behaviors
Ren-Kui Zheng

Mo-P.152 Magneto-transport Characteristics of a 2D electron system driven to negative magneto-conductivity by microwave photo-excitation
Ramesh Mani

Mo-P.153 Multichannel conductance and resonant tunneling in double barrier structures under transverse and longitudinal electric fields
Pedro Pereyra Padilla

Mo-P.154 Life and death of a single electronic excitation in a 1D chiral conductor
Clément Cabart

Mo-P.155 Beating pattern in microwave-induced resistance oscillations
Qianhui Shi

Quantum Hall effects

Mo-P.156 Evolution of the frequency-dependent polarization-angle phase-shift in the microwave radiation-induced magnetoresistance oscillations
Han-Chun Liu

Mo-P.157 Wigner crystal melting temperature in high-mobility GaAs/AlGaAs structure. Acoustic study
Ivan Yu Smirnov

Mo-P.158 Physical origin of the $\frac{1}{4}$ -cycle phase shift in the radiation-induced oscillatory magnetoresistance in 2DES: Is this a universal effect?
Jesus Inarrea

Mo-P.159 High temperature quantum Hall and de Haas-van Alphen effects in silicon nanostructures confined by impurity strata
Leonid E Klyachkin

Mo-P.160 A scanning single-electron transistor array microscope working below 40 mk to probe the hall potential distribution in the $\nu=2/3$ fractional quantum Hall state
Marcel Mausser

Mo-P.161 HgTe/CdHgTe double quantum well with a quasi-Dirac energy spectrum and the peculiarities of its quantum magnetotransport
Mikhail Yakunin

Spintronics and spin phenomena

Mo-P.162 Time resolved spin studies of a single Co^{2+} ion in a CdTe/ZnTe quantum dot
Aleksander Bogucki

Mo-P.163 Spin Phenomena in Array of Ge/Si Quantum Dots
Anatoly Dvurechenskii

Mo-P.164 Strongly in-plane anisotropic electron g-factor in (110) GaAs quantum wells
Jian Ma

Mo-P.165 The variable nonlinear absorption and carrier dynamics in GaN thin film under femtosecond ultraviolet wavelength
Yulan Dong

Mo-P.166 Coherent manipulation of three-electron spin states in a double quantum dot
Baobao Chen

Mo-P.167 Ab initio calculation of the magnetic properties of oxygen impurity complexes in CdSe
Wei Cheng

Mo-P.168 The Rashba Hall effect in $\text{In}_{0.75}\text{Ga}_{0.25}\text{As}$ quantum wells
Chong Chen

Mo-P.169 (La,AE)(Zn,TM)AsO (AE = Ba, Sr, Ca; TM = Mn): Two-dimensional 1111-type diluted magnetic semiconductors in bulk form
Cui Ding

Mo-P.170 Pauli spin blockade of holes in GaAs double quantum dots
Daisy Qingwen Wang

Mo-P.171 Determination of Curie temperature in (Ga,Mn)As non-metallic samples by means of electrical transport measurements
Dariusz Wasik

Mo-P.172 Electrical spin orientation in hopping regime
Dmitry Smirnov

Mo-P.173 Controllable Cooper-pair beam splitting through double-quantum-dot system subject to gate voltages and magnetic fields
Bing Dong

Mo-P.174 Optical generation of complementary spin populations: the spin photovoltaic cell
Federico Bottegoni

Mo-P.175 Macroscopic transport of a current-induced spin polarization
Felix Hernandez

Mo-P.176 Time correlations and Leggett-Garg inequalities for probing quantum phase transitions in chains of semiconductor quantum dots
Ferney Rodriguez

Mo-P.177 Magnetic properties in (Ga,Mn)As films epitaxied on GaAs (110)
Hailong Wang

Mo-P.178 Strain induced coherent dynamics of coupled carriers and Mn spins in a quantum dot
Herve Boukari

Mo-P.179 Hole-induced magnetic solitons and photoemission spectra in diluted magnetic semiconductor $Ga_{1-x}Mn_xAs$
Ikuzo Kanazawa

Mo-P.180 Ferromagnetic properties of five-period InGaMnAs/GaAs quantum well structure
Im Taek Yoon

Mo-P.181 Exciton emission dynamics in individual semimagnetic (Zn,Mn)Te/(Zn,Mg)Te nanowires
Jan Suffczynski

Mo-P.182 Ab initio study of Mn-dimers on zb-GaN/ zb-SiC(001) interfaces
Magdalena Popielska

Mo-P.183 Persistent skyrmion lattice of non-interacting electrons in spin-orbit coupled double wells
Jiyong Fu

Electron devices and applications

Mo-P.184 InAs nanowire transistors with multiple, independent, wrap-gate segments
Adam Micolich

Mo-P.185 Tuning the supercurrent and the coupling of the josephson junctions based on Ge-Si core-shell nanowire
Jie Shen

Mo-P.186 Terahertz electroluminescence induced by injection of nonequilibrium carriers in Si based p-n-structures
Alexander Andrianov

Mo-P.187 Selector device based on TiN/a-Si/TiN structure for crossbar RRAM array
Bing Song

Mo-P.188 Highly tunable InAs nanowire quantum dots defined by top finger gates
Yuanhuan Cao

Mo-P.189 Charge density wave in TiS_3 nanoribbon
Ce Huang

Mo-P.190 Artificial neurons based on multi-gate oxide-based electric-double-layer transistors
Qing Wan

- Mo-P.191 Effect of polyethylene glycol on resistive switching behaviors in organic-TiO₂ hybrid composite
Da Chen
- Mo-P.192 Coherent electron transport in InSb nanowire quantum dots
Dingxun Fan
- Mo-P.193 High performance MoS₂ field-effect transistor by hydrazine doping treatment
Dongsuk Lim
- Mo-P.194 Low-temperature, nontoxic water-induced high-k zirconium oxide dielectric for fully-solution processed oxide thin-film transistors
Fukai Shan
- Mo-P.195 Chemical vapor deposition graphene decorated with Au nanoparticles using dielectrophoresis technique
Jin Woo Park
- Mo-P.196 Reactively sputtered high performance p-type SnO-based TFTs
Qian Xin
- Mo-P.197 Experimental realization of a powerful and efficient nano-scale energy harvester using the resonant tunneling of quantum dots
Gulzat Jalil
- Mo-P.198 Theoretical investigation of InGaAs based n-channel tunneling FET
Hongjuan Wang
- Optical properties, optoelectronics, solar cells**
- Mo-P.199 Passivation of InGaN/GaN quantum dots in nanowire by aluminum oxide
Zilan Wang
- Mo-P.200 Optical properties of uncapped and AlGaAs capped GaAs membranes
Zhuo Yang
- Mo-P.201 Synthesis and characterization of Fe-doped CuGaS₂ thin films
Jun Zhu
- Mo-P.202 Interband electronic transitions and phase transformations of ferroelectric functional oxides discovered by optical spectroscopy
Zhigao Hu
- Mo-P.203 Exciton-polariton LED based on a ZnO microwire
Zhe Zhang
- Mo-P.204 Au nanoparticles decorated Sb₂S₃ nanowire based visible and infrared photodetector
Zhang Kai
- Mo-P.205 Spectroscopic ellipsometry investigation on the excimer laser annealed indium thin oxide sol-gel films
Yunsang Lee
- Mo-P.206 Recombination processes in CuInS₂/ZnS nanocrystals during steady-state photoluminescence
Yue Sun
- Mo-P.207 Organohalide perovskite phototransistor for visible light detection
Yucong Hu
- Mo-P.208 P-N junction assisted photo-detector based on a heterostructure of graphene/BFCTO/Nb:STO with remarkable on-off response
Yu Liu
- Mo-P.209 Dark exciton and light hole exciton in symmetric GaAs quantum dots
Yongheng Huo
- Mo-P.210 Enhanced efficiency of organic solar cell with Cu₂ZnSnS₄ nanoparticle
Se-Jung Jang
- Mo-P.211 Design of enhanced impact ionization region in separate absorption and multiplication AlGaIn solar-blind avalanche photodiodes

Yin Tang

Mo-P.212 Efficiency improvement achieved by nano-scale surface modification for black silicon solar cells

Yi Wei

Mo-P.213 High performance $\text{Cu}_2\text{ZnSn}(\text{S},\text{Se})_4$ thin film solar cell with enlarged depletion region width

Yi Zhang

Mo-P.214 Electrostatic effect on photoluminescence from Si/SiGe heterostructures by Au nanoparticle/Si Schottky contact

Yefei Yin

Mo-P.215 Optical and spin properties of GaPN dilute nitride alloys

Yara Galvao Gobato

Mo-P.216 A photoconductor intrinsically has no gain

Yaping Dan

Mo-P.217 Development of a high-performance self-powered ultraviolet photodetector using RF sputtered ZnO / GaN film p-n junctions

Yanwei Shen

Mo-P.218 Energy transfer to enhance characteristics emission emission from lanthanide-doped thin films

Yangqing Wu

Mo-P.219 Full optoelectronic simulation of optimized short circuit current in InP nanowire array solar cells

Yang Chen

Mo-P.220 Effect of static magnetic field on defect mode in one-dimensional magnetic photonic crystal

Yang Li

Mo-P.221 Ambipolar InGaAs nanowire field-effect transistors grown by MBE

Xutao Zhang

Mo-P.222 Dynamics and electronic structure in Wurtzite InGaAs and InGaAs/InP nanowires

Leigh M. Smith

Mo-P.223 The nonlinear refraction enhancement of rectangular MoS_2 and $\text{MoS}_2/\text{TiO}_2$ based on spatial self-phase modulation and Z-scan

Xiaohong Li

Mo-P.224 Investigation of deep-level defects in CuGaSe_2 thin-film solar cell by photocapacitance methods

Xiaobo Hu

Mo-P.225 Quasi one-dimensional density of states in a single quantum ring by temperature dependence of radiative decay time

Woojin Lee

Mo-P.226 The improvement of photovoltaic performance of $\text{Cu}_2\text{O}/\text{ZnO}$ solar cell: study on the inserted layer and the doped Cu_2O

Wenzhe Niu

Mo-P.227 Flexible perovskite solar cells based on metal-insulator semiconductor (MIS) structure

Jing Wei

Mo-P.228 Quantum well intermediate band solar cells with ratchet states

Nelson Studart

Mo-P.229 Fine structure of cyclotron resonance in a two-dimensional electron system

Viacheslav Muravev

Quantum optics, nanophotonics

Mo-P.230 Single photon electroluminescence for on-chip quantum networks

Christopher Bentham

Mo-P.231 Dynamics of quantum correlations in quasi-soliton waves in out-of-equilibrium microcavity polariton systems

Emiliano Cancellieri

Mo-P.232 Polariton Bloch equations for the dynamics of polaritons in microcavities
Benoit Deveaud

Mo-P.233 Few quantum emitters-small cavities: Exact treatment of the electron-photon coupling in mesoscopic quantum devices
Michael Gegg

Mo-P.234 The impact of nuclear field fluctuations on resonance fluorescence spectra from a self-assembled InGaAs quantum dot
Brian Gerardot

Mo-P.235 Atomically thin single-photon light emitting diode
Dhiren Kara

Mo-P.236 Ultrafast dynamics of surface plasmon lasing in Ag/InGaAsP nanostructures
Hyangrok Lee

Mo-P.237 Single photon source based on a single quantum dot in a parabolic solid immersion lens
Donghan Lee

Mo-P.238 Single Photon transport: Fano effect and Dark States in Whispering Gallery Resonators
Pedro Orellana Dinamarca

Mo-P.239 Manipulating spin-orbit coupled polaritonic states in a tunable microcavity
Feng Li

Quantum information

Mo-P.240 Spin current without charge transfer in quantum wires
Abolfazl Bayat

Mo-P.241 Theory for energy and STM signatures of isolated donors in Ge
Alejandra Baena Vasquez

Mo-P.242 Tunable hybrid qubit in GaAs quantum dot
Baochuan Wang

Mo-P.243 Theoretical interpretation of donor wavefunctions STM images in silicon
Belita Koiller

Mo-P.244 Quantum computing with acceptor spins in silicon
Dimitrie Culcer

Mo-P.245 Transient dynamics and full counting statistics in interacting nanojunctions
Ruben Seoane SoutoRuben

Other topics in semiconductor physics and devices

Mo-P.246 Semiconductor-superconductor nanostructure modeling
Shlomi Bouscher

Mo-P.247 Relaxation times in elliptical quantum dots with a tilted magnetic field
Wesslén Carl-Johan

Mo-P.248 Ultrafast laser excitation induced quantum electronic forces and stresses for semiconductor lattice control
Nianke Chen

Mo-P.249 New diluted ferromagnetic semiconductors with the hexagonal CaAl_2Si_2 type structure
Bijuan Chen

Mo-P.250 Diluted magnetic semiconductors with independently controllable charge and spin
Zheng Deng

Mo-P.251 Temperature dependence of the multiple quantum effects on the magnetoresistance of granular carbon materials
Alex Ferreira

Mo-P.252 Room-temperature magnetoresistance effect in silicon-strip device
Hui Guo

Mo-P.253 Carrier relaxation across large electronic energy gaps via low-energy vibrations in colloidal quantum dots
Peng Han

Mo-P.254 Quantum simulation of the Mott insulator transition using a semiconductor quantum dot array
Toivo Hensgens

Mo-P.255 Plasmon polariton excitations on surfaces with fluctuating impedance: Scattering, localization, and instability against dissipation
Denis Iakushev

Mo-P.256 Enhanced current fluctuation in Coulomb blockade regime of semiconductor quantum dot
Atsushi Iwasaki

Mo-P.257 Low temperature printed carbon electrode: reducing the pinhole effect in perovskite solar cell

Jia Li

Mo-P.258 Ballistic transport properties of suspended InAs nanowires
Hiroshi Kamata

Special topic: Majorana fermions in solid state

Mo-P.259 Floquet engineering the Kitaev model: Low-frequency Floquet Majorana fermions and long-range superconductivity
Monica Benito Gonzalez

Mo-P.260 Majorana bound states in magnetic skyrmions
Guang Yang

Poster Session II: Tuesday 17:30 - 19:30

Material growth, structural properties and characterization, phonons

Tu-P.001 Leakage currents mechanism in thin films of ferroelectric $\text{Hf}_{0.5}\text{Zr}_{0.5}\text{O}_2$
Damir Islamov

Tu-P.002 Type II InSb/GaAs and type III InSb/InAs nanostructures: molecular beam epitaxial growth and their characterization
Suwit Kiravittaya

Tu-P.003 GaMnAs / GaAs Esaki diodes for investigations
Marta Borysiewicz

Tu-P.004 The band alignment of $\text{ZnO}_{1-x}\text{S}_x/\text{Mg}_{0.4}\text{Zn}_{0.6}\text{O}$ heterojunctions
Lei Li

Tu-P.005 Guided growth of alloy CdSSe nanowires and their integration into visible range photodetectors
Honglai Li

Tu-P.006 Controlled growth and fabrication of ZnTe single nanowire phototransistor
Jing Li

Tu-P.007 Controlled growth of InAs/CdSe alloy nanobelts and their optoelectronic application
Fang Li

Tu-P.008 The effect of lattice vibration on thermodynamics of $\text{ZnO}_{1-x}\text{S}_x$
Mingkai Li

Tu-P.009 Synthesis of GaAs nanosheets by CVD technique
Kan Li

Tu-P.010 Free-standing high quality AlN thin films: fabrication and characterization
Heng Li

Tu-P.011 Selective epitaxial growth (SEG) of p-GaN gate layer for enhancement mode GaN/AlGaIn HEMT
Hu Liang

Tu-P.012 Conducting polymer hydrogels and their applications in electronics
Lijia Pan

Tu-P.013 Achieving high mobility and structural stability zinc oxynitride towards next generation TFT applications
Lina Cheng

Tu-P.014 Transport properties of SrMnBi₂ thin films grown by molecular beam epitaxy
Jiwei Ling

Tu-P.015 Electronic coupling in vertically aligned InAs/GaAs quantum dot pairs separated by a thin Ga(Al)As spacer
Yao Liu

Tu-P.016 "Disorder engineering" of titanium dioxide
Lei Liu

Tu-P.017 Original method of GaN and InGaN quantum dots formation on (0001)AlN surface by ammonia molecular beam epitaxy
Vladimir Mansurov

Tu-P.018 3D printing assisted optimization of the first full spectrum visible light activated antibacterial system
Miaoxing Liu

Tu-P.019 Novel tetrahedral polymorphs of carbon, silicon, and germanium
Andres Mujica

Tu-P.020 Structure and electronic properties of [100] SnSe nanowires: A first principles study
Pan Li

Tu-P.021 Non-injection synthesis of air stable narrow band lead chalcogenide semiconductor quantum dots
Yi Pan

Tu-P.022 Controlled synthesis of 2D MoS₂ atomic layers by chemical vapor deposition
Huayong Pan

Tu-P.023 Improved planar perovskite solar cells using the modified hole transporting layer and solvent annealing
Shangzheng Pang

Tu-P.024 Electronic structure of the oxygen vacancy in noncentrosymmetric orthorhombic Hf_{0.5}Zr_{0.5}O₂
Timofey Perevalov

Tu-P.025 Electron mobility in wurtzite core-shell nanowires limited by optical-phonons
Yuan Qu

Tu-P.026 Fabrication and characterization of CeO₂ nanowires
Evaldo Ribeiro

Tu-P.027 Structural changes in ZnO(Co) nanoparticles induced by different laser power: Phonon properties
Nebojsa Romcevic

Tu-P.028 Fabrication of GaN based heterostructure with an InAlGaN/AlGaN composited barrier
Rudai Quan

Tu-P.029 Positron annihilation spectroscopy of annealed CdTe/CdZnTe
Lukas Sedivy

Tu-P.030 Growth and properties of mid-infrared nonlinear optical chalcogenide crystals
Shanpeng Wang

Tu-P.031 Transient reflection spectroscopy of Cd₃As₂
Shaofeng Ge

Tu-P.032 High-performance photovoltaic perovskite layers fabricated through coherent perfect absorber
Sun Shuang

Tu-P.033 Spreading of nanowire length distribution caused by contact angle oscillations
Nickolay Sibirev

Tu-P.034 Selective growth of lateral periodic CdS-CdSe nanobelts heterojunction
Huawei Liu

Tu-P.035 Multiphonon absorption in ZnO single crystal
Wojciech Szuszkiewicz

Wide-bandgap semiconductors

Tu-P.036 The Ag/ZnO photoelectric studies based on multilayer 3D nanostructure
Lijuan Yan

Tu-P.037 Cobalt - doping influence in ZnO thin films grown by spray pyrolysis
Marcio Godoy

Tu-P.038 Effects of film thickness on the structure and optical properties of epitaxial tin dioxide thin films grown on c-plane sapphire
Mi Zhang

Tu-P.039 First-principles study of thermodynamic properties for $Cd_xZn_{1-x}O$ alloys
Minghai Luo

Tu-P.040 Electronic properties of Si vacancy in SiC
Moein Najafi Ivaki

Tu-P.041 Crystal growth and characterization of β - Ga_2O_3 single crystal
Wenxiang Mu

Tu-P.042 RF sputtered Li-doped ZnO thin films: The effect of Argon to Oxygen flow rate
Musbah Babikier

Tu-P.043 The dependence of temperature on the silicon droplet evolution during 4H-SiC epitaxial growth
Yingxi Niu

Tu-P.044 Investigation of chirped well structures for broad-spectrum AlGaInP based LEDs
Hwa Sub Oh

Tu-P.045 Ga_2O_3 and $(AlGa)_2O_3$ DUV phototransistors grown on sapphire
Qian Feng

Tu-P.046 Effect of well-width on ideal factor and electroluminescence in high-power seven multiple-quantum-wells InGaN/GaN light-emitting diodes
QQ Li

Tu-P.047 ZnO-ALD films implanted with Yb
Elzbieta Guziewicz

Tu-P.048 Properties of the H-terminated diamond surface characterized by the X-ray photoelectron spectroscopy
Zeyang Ren

Tu-P.049 Preparation of SDS capped ZnO by chemical precipitation method
Saengnapa Kakarndee

Tu-P.050 Optical investigations and strain effect in AlGaIn/GaN epitaxial layers
Sandrine Juillaguet

Tu-P.051 Temperature-dependent thermal conductivity and diffusivity of a Mg doped insulating- Ga_2O_3 single crystal along [100], [010] and [001]
Saskia F. Fischer

Tu-P.052 Polarization effects of ZnO/ZnOS quantum well structures
Seung Joo Lee

Tu-P.053 Tree-like ZnO/Si nanowire arrays as a scaffold for sensor application
Shengli Huang

Tu-P.054 Feasible way to enhance nitrogen-doping density of ZnO films in atomic layer deposition technique
Song Cheng

Tu-P.055 Influence of Cd doping on the optical properties of ZnO
Suelen de Castro

Narrow-bandgap semiconductors

Tu-P.056 Vibrational and dielectric properties of PbSnTe alloys
Horacio W Leite Alves

Tu-P.057 Suppressing the cellular breakdown in Ti supersaturated Silicon
Fang Liu

Tu-P.058 Correction model of the strained $\text{Si}_{1-x}\text{Ge}_x$ relaxation induced by thermal annealing
Xiangyu Liu

Tu-P.059 Large-scale growth and characterizations of InAs nanoleaves on Si (111) substrates by molecular-beam epitaxy
Dong Pan

Tu-P.060 Magnetic properties of diluted magnetic semiconductors $\text{Pb}_{1-y}\text{Fe}_y\text{Te}$
Evgeny Skipetrov

Tu-P.061 Maximum entropy mobility spectrum analysis of LPE-grown and anodic oxidated $\text{Hg}_{1-x}\text{Cd}_x\text{Te}$ ($x=0.237$)
Zhiyong Song

Tu-P.062 Electrical conduction and negative magnetoresistance in tellurium-hyperdoped silicon
Mao Wang

Tu-P.063 Anomalous circular photogalvanic effect in inverted-band HgTe quantum wells
Jun Li

Carbon: Nanotubes and Graphene

Tu-P.064 Vertically stacked heterostructure with low-dimensional nanomaterials
Jin Zhang

Tu-P.065 Quantum dot formation in nanostructured bilayer graphene on SiC
Jinggao Sui

Tu-P.066 Andreev bound states and sub-gap transport in three-terminal superconductor / normal metal carbon nanotube devices
Joerg Gramich

Tu-P.067 Evolution of Landau quantization in a twisted graphene bilayer
Johannes Rode

Tu-P.068 Structural and carrier transport properties of epitaxial graphene grown on hexagonal SiC at reduced temperature with metal plate capping
Kibog Park

Tu-P.069 Negative luminescence in graphene field effect transistors
Lei Du

Tu-P.070 Photocurrent in a two-dimensional ribbon with the conic electron spectrum
Lev Magarill

Tu-P.071 A mechanism for highly efficient electrochemical bubbling delamination of CVD-grown graphene from metal substrates
Lihui Liu

Tu-P.072 A self-powered sensitive ultraviolet-photodetector based on epitaxial graphene on SiC
Liwei Guo

Tu-P.073 Laser induced coherent cold field emission from armchair edge of graphene under magnetic field
Ma Luo

Tu-P.074 First-principles study of hydrogenated and fluorinated graphene layers on metallic and insulating substrates
Magdalena Popielska

Tu-P.075 Lithium-intercalation in bilayer graphene devices
Matthias Kuehne

Tu-P.076 Large area single layer graphene grown on SiO_2 substrate by the dewetting process of Cu
Mingling Li

Tu-P.077 Luminescence mechanism and carrier dynamics in diameter-dependent graphene quantum dots and their applications
Min-Ho Jang

Tu-P.078 Negative differential resistance in mesoscopic graphene oxide based two terminal device
Moonshik Kang

Tu-P.079 Fold-assisted transport in graphene systems
R. Carrillo-Bastos

- Tu-P.080 Spontaneous strain on twisted bilayer graphene and its effect on the electronic structure
Ngoc Thanh Nam Nguyen
- Tu-P.081 Graphene based van der Waals heterostructures for Hall sensing
Patrick Herlinger
- Tu-P.082 Thermoelectric properties of vertical graphene nanoribbon devices
Monica Pacheco
- Tu-P.083 Vibron-assisted tunneling in single Ce@C₈₂ molecule transistors investigated by Terahertz spectroscopy
Shaoqing Du
- Tu-P.084 A graphene-based single-wavelength silicon evanescent laser
Zhengliang Ren
- Tu-P.085 Effective Hamiltonian for edge states in graphene
Roland Winkler
- Tu-P.086 Decreased the decomposition temperature of SiC for graphene synthesis by ion beam mixing
Rui Zhang
- 2D Materials beyond Graphene**
- Tu-P.087 Luminescence decay in monolayer MoS₂: The role of exciton and A_{1g} phonon interaction
Sandip Ghosh
- Tu-P.088 Spectroscopic ellipsometry study on the temperature dependent optical properties of monolayer MoS₂ from 35 to 350 K
Young Dong Kim
- Tu-P.089 Electric-field effect on black phosphorus studied by angle-resolved photoemission spectroscopy
Jimin Kim
- Tu-P.090 Growth of monolayer MSe₂ (M=Mo; W) flakes and continuous film by selenization of MO₃ film
Farman Ullah
- Tu-P.091 Excitonic resonance Raman effects in few-layer MoSe₂
Kangwon Kim
- Tu-P.092 Long-lived circular polarization of defect photoluminescence of monolayer tungsten disulphide
Lukasz Klotowski
- Tu-P.093 Magnetoconductance oscillations and edge states in semiconducting monolayer transition metal dichalcogenides
Andor Kormanyos
- Tu-P.094 Energy spectra and magnetism of graphene-like nanoribbons under perpendicular electric field
Stefan Krompiewski
- Tu-P.095 Resonant laser spectroscopy of zero-dimensional excitons in a two dimensional transition metal dichalcogenide semiconductor
Santosh Kumar
- Tu-P.096 Observation of a tunable band gap in 2H Transition Metal Dichalcogenides
MinGu Kang
- Tu-P.097 Charge trap memory based on few-layer black Phosphorus and High-k materials
Kaiyou Wang
- Tu-P.098 Mechanical, optical and electrical coupling effect on vertical transport performance of two-dimensional MoS₂
Feng Li
- Tu-P.099 Ordered chlorinated monolayer silicene structures
Wenbin Li
- Tu-P.100 MoS₂ synthesized on SiO₂/Si substrates by adopting MoO₃ source materials via MBE
Linjie Zhan

- Tu-P.101 Two-dimensional wide-band-gap semiconductors M_3X_2 ($M=Zn, Cd$; $X=N, P, As$) with a dilated honeycomb structure
Bang-Gui Liu
- Tu-P.102 Anisotropic response in black phosphorus under different magnetic fields
Xuefeng Liu
- Tu-P.103 Linearly polarized excitons in ReS_2
Zhengguang Lu
- Tu-P.104 Electrical transport properties of bismuth oxyselenide nanosheets
Mengmeng Meng
- Tu-P.105 Vacancy Defects in Armchair Silicene Nanoribbons under Strain: A DFT Study on the Electronic Properties
Lilia Meza-Montes
- Tu-P.106 Probing the anisotropic interlayer Raman modes of few-layer ReS_2
Philipp Nagler
- Tu-P.107 Optical spectroscopic investigation of defects in TMDs and defect engineering
Zhenhua Ni
- Tu-P.108 Electrical transport in nano-thick $ZrTe_5$ sheets: From three to two dimensions
Jingjing Niu
- Tu-P.109 Mechanical properties and failure behavior of graphene and other 2D materials
Qing-Xiang Pei
- Tu-P.110 Graphene homogeneous research of van der Waals epitaxial growth
Qin Lu
- Tu-P.111 Tunable magneto-optical absorptions in molybdenum disulfide quantum dots
Fanyao Qu
- Tu-P.112 Many-body effect on the optical emission in transition metal dichalcogenide monolayer quantum dots
Fanyao Qu
- Tu-P.113 ARPES studies on single-crystal black phosphorus
Sae Hee Ryu
- Tu-P.114 A scanning tunneling microscopy study of monolayer $TiSe_2$
Huan Shan
- Tu-P.115 First principle study of nonlinear elastic mechanical properties of two-dimensional stanene
Zhe Shi
- Tu-P.116 $MoSe_2$ layers fabricated using an incandescent Mo source
J. Liang
- Tu-P.117 Schottky barrier height variation in $MoTe_2$ /metal junctions studied by spatially resolved photocurrent measurement
Yuen-Wuu Suen
- Organic Semiconductors**
- Tu-P.118 Charge transport in IDTBT electrochemical transistors and field effect transistors gated by ion gel, Cytop and vacuum
Wenhe Wang
- Tu-P.119 Fabrications of organic ferroelectric field-effect-transistor on ultra-flexible substrates
Mingee Kim
- Tu-P.120 Cyanine dye polyelectrolyte for organic homojunction photovoltaics
Lei Wang
- Tu-P.121 Purcell effect in an organic-inorganic Halide Perovskite semiconductor microcavity system
Jun Wang
- Tu-P.122 Artificial neural networks for predicting the solubility parameters of organic semiconductors
Jose Dario Perea
- Topological states of matter, topological Insulators and Weyl semimetals**

Tu-P.123 Nano Fabrications and Transport Characterizations of Bi₂Te₃ Quantum Dot Devices
Yumei Jing

Tu-P.124 Possibility of experimental detections for Rubakov and Witten effects in the domain wall between topological insulators and spin ice compounds
Ikuzo Kanazawa

Tu-P.125 Epitaxial growth of Bi₂Te₃ topological insulator thin films by temperature-gradient induced physical vapor deposition (PVD)
Hsin-Yen Lee

Tu-P.126 ZBCP in point contact measurement of type-II Weyl semimetal MoTe₂
Yanan Li

Tu-P.127 Length Dependence Measurements of the Helical Edge Conductance in InAs/GaSb two-dimensional (2D) Topological Insulators
Tingxin Li

Tu-P.128 Crystal growth of Weyl semimetal TaAs
Zhilin Li

Tu-P.129 Electron transport and magnetic properties of n-HgCr₂Se₄
Chaojing Lin

Tu-P.130 Dirac loops in two-dimensional topological material T-graphene
Yu Liu

Tu-P.131 Intrinsic diamagnetism in the Weyl semimetal TaAs
Yu Liu

Tu-P.132 Modulation of topological phase in the Cd/Te/HgTe quantum well by periodic gates
Lu-Yao Wang

Tu-P.133 Experimental preparation of lateral Heterojunction Sb₂Te₃/Bi₂Te₃ Nanoplates
Fucong Fei

Tu-P.134 Record-high resistivity in ternary compound topological insulators grown by vertical Bridgman method
Andrzej Materna

Tu-P.135 Effective spin dephasing mechanism in confined two-dimensional topological insulators
Junjie Qi

Tu-P.136 The theoretical studies of topology electronic states in HgTe Hall bar and quantum dot
Jinxian Qu

Transport in heterostructures

Tu-P.137 Joule heating in the quantum regime
Benjamin Roussel

Tu-P.138 Microscopic theory of conventional and cooperative impact ionization in narrow-gap semiconductors and quantum wells
Alexander Afanasiev

Tu-P.139 Quantum measurement back-action on virtual transport through stacked graphene quantum dots
Oded Zilberberg

Tu-P.140 DC field response of highly accelerated hot carriers under circularly polarized intense microwave fields and magnetic fields in quantum wells
Noriyoshi Ishida

Tu-P.141 Effect of interface charge transfer energy in the metal-insulator transition for the RNiO₃ (R=La, Nd) heterostructure
X. K. Ning

Tu-P.142 Transfer Statistics of an Array of Single Electron Pumps
Niels Ubbelohde

Tu-P.143 Edge-state blockade of transport in quantum dot arrays
Monica Benito Gonzalez

Tu-P.144 Electron-hole interactions in self-assembled InAs-GaSb core-shell nanowire quantum dots

Malin Nilsson

Tu-P.145 An evidence of interaction between the negative additional polarization charges near the source contact and the positive additional polarization charges underneath the gate contact

Yan Liu

Tu-P.146 Largely enhancing self-powered UV photoresponse by the coupling of Triboelectronics and photonics

Linhong Han

Tu-P.147 Study on leakage current in AlGaIn/GaN high electron mobility transistor structures with different Fe doping concentration in GaN buffer layer

Jianfei Li

Tu-P.148 Spatial rearrangements of electrons in the 1D to 2D transition

Sanjeev Kumar

Tu-P.149 Platform for ultra-low temperature transport measurements on low-dimensional electron systems

Lev Levitin

Tu-P.150 Resonant tunneling of charge carriers in InGaIn/GaN superlattice

Viktor V. Kopyev

Tu-P.151 Graphical representation and origin of piezoresistance effect in germanium

Kazunori Matsuda

Tu-P.152 Current noise spectra and mechanisms of quantum transport through single interacting quantum dot: Dissipaton equation of motion theory

Jinshuang Jin

Tu-P.153 Wigner crystallization and spin-orbit coupling in ultra-dilute strongly correlated two-dimensional systems

Jian Huang

Tu-P.154 Coupled Landau-Zener-Stückelberg quantum dot interferometers

Fernando Gallego-Marcos

Quantum Hall effects

Tu-P.155 Composite Fermion states near $3/2$ in C-doped (001) GaAs 2D hole system
Po Zhang

Tu-P.156 Microwave radiation-induced magnetoresistance oscillations in the high mobility GaAs/AlGaAs system under bichromatic excitation

Ramesh Mani

Tu-P.157 Remotely sensed microwave reflection in microwave irradiated GaAs/AlGaAs two-dimensional electron system

Ramesh Mani

Tu-P.158 Narrow-gap semiconductor nanostructures in the quantum Hall regime

Olivio Chiatti

Tu-P.159 Novel fractional quantum Hall states in graphene

Rebeca Ribeiro-Palau

Tu-P.160 Microwave photoresistance in an ultra-high-quality GaAs quantum well

Sergei Studenikin

Tu-P.161 Quantum anomalous Hall effect in compensated n-p codoped graphene

Shifei Qi

Tu-P.162 Anomalous behavior of the $N=2$ bubble states in a tilted field

Pengjie Wang

Tu-P.163 Scaling properties of the plateau transitions in the two-dimensional hole gas system

Pujia Shan

Tu-P.164 Nonlinear transport of the fractional quantum Hall states in the second Landau level

Hailong Fu

Spintronics and spin phenomena

Tu-P.165 Engineering giant magnetic anisotropy in magnetic nanostructures

Jun Hu

Tu-P.166 Helicity-dependent photocurrent induced by the transverse DC current in InAs quantum well
Junbin Li

Tu-P.167 The mechanism of photoinduced magnetization effect investigated by photoluminescence in p-type $\text{Hg}_{1-x}\text{Mn}_x\text{Te}$ single crystals
Liangqing Zhu

Tu-P.168 Temperature dependence of spin diffusion length in a multilayer graphene device with Co electrodes
Lijun Li

Tu-P.169 Ferromagnetism of Si-SiGe/MnGe core-shell nanocolumns
Liming Wang

Tu-P.170 Stretching magnetism with an electric field in a nitride semiconductor
Marek Foltyn

Tu-P.171 Spin relaxation in a two-dimensional electron system probed in all-electric spin injection devices
Mariusz Ciorga

Tu-P.172 Spin wave reflection and propagation in magnetic thin film with perpendicular magnetic anisotropy
Md Shah Alam

Tu-P.173 Spin interference effect with multiple subband occupation
Mengqi Wang

Tu-P.174 Weak (Anti-) localization in tubular semiconductor nanowires with spin-orbit coupling
Michael Kammermeier

Tu-P.175 Spin properties of $\text{GaBi}_x\text{As}_{1-x}$ /GaAs quantum wells
Miguel Angel Balanta

Tu-P.176 Room temperature remanence-mode spin injection in

CoPt/ Al_2O_3 /GaAs spin-light-emitting diodes grown by MOVPE
Mikhail Dorokhin

Tu-P.177 Electrical detection of spin polarized surface states in high mobility topological insulator BiSbTeSe_2 nanoflakes
Minhao Zhang

Tu-P.178 Spin polarized photocurrents generated by coherently trapping spins in a magnetically doped semiconductor heterostructure
Nelson Studart

Tu-P.179 Current-controlled spin precession of quasi-stationary electrons in a cubic spin-orbit field
Patrick Altmann

Tu-P.180 Multichannel spin injection, spin detection and resonant spin transmission through single and double ferromagnetic/nonmagnetic Esaki barriers
Pedro Pereyra Padilla

Tu-P.181 Interplay of localization and magnetism in (Ga,Mn)As and (In,Mn)As
Ye Yuan

Tu-P.182 Two electrons on Ge/Si quantum dot as pair of qubit
Anatoly Dvurechenskii

Tu-P.183 Spin dependent photoconductivity for in-plane magnetic anisotropy characterization in GaMnAs/GaAs heterojunction
Qing Wu

Tu-P.184 Room temperature spin transport in InAs nanowire lateral spin valve
Yanling Yang

Tu-P.185 High temperature ferromagnetism of ultrathin $\text{La}_{0.7}\text{Sr}_{0.3}\text{MnO}_3$ films
Biao Xu

Tu-P.186 Enhanced magneto-optical properties of cavity polaritons in a Te based

microcavity embedding QWs containing Mn ions
Jean-Guy Rousset

Tu-P.187 Weak anti-localization study of spin-orbit interaction in the Ge/Si core/shell nanowires under dual electrical gating
Rui Wang

Electron devices and applications

Tu-P.188 Influence of dimensionality on tunneling into a quantum dot
Jan Kuehne

Tu-P.189 Room-temperature NO₂ sensor based on rGO/CeO₂ hybrid with p-n junctions
Xinxin Jiang

Tu-P.190 Very high quantum efficiency in InAs/GaSb superlattice for long wavelength detection with cutoff of 14 μm
Dongwei Jiang

Tu-P.191 An OTFT model for flexible AMOLED panel with Gaussian density of states
Jiangnan Lu

Tu-P.192 Using polymer electrolyte gates to set-and-freeze threshold voltage and local potential in nanowire-based devices and thermoelectrics
Adam Micolich

Tu-P.193 Redox chloride elimination reaction: Facile solution route for low-voltage, high-performance oxide transistors
Fukai Shan

Tu-P.194 Study of on-state resistance of high power GaAs photoconductive semiconductor switch
Jinshui Xiao

Tu-P.195 Electric current generation with Maxwell's demon in a Si single-electron device
Kensaku Chida

Tu-P.196 Proton gated oxide-based electric-double-layer transistor for low-voltage inverter and artificial synapse applications

Li Qiang Zhu

Tu-P.197 Study on a novel high-power semi-insulating GaAs photoconductive semiconductor switch
Chongbiao Luan

Tu-P.198 Fast adaptive thermal camouflage based on flexible VO₂/Graphene/CNT thin films
He Ma

Tu-P.199 The study of Van der Waals 2D material memristor device
Mi Jung Lee

Tu-P.200 Microwave photo-conductance of a tunnel point contact
Gennady Gusev

Tu-P.201 Thin SOI lateral IGBT with band-to-band tunneling mechanism
Qiang Fu

Tu-P.202 Unipolar switching phenomena in ultra-thin films formed by field-induced oxygen migration (FIOM) technique
Sangik Lee

Optical properties, optoelectronics, solar cells

Tu-P.203 Excitation and decay of surface plasmon polaritons in n-GaN
Vadim Shalygin

Tu-P.204 Circular photon drag effect in bulk semiconductors
Vadim Shalygin

Tu-P.205 Spatially resolved thermodynamics of the partially ionized exciton gas in GaAs
Tobias Kiessling

Tu-P.206 Composites based on dispersion of metal oxides and metal sulfides in nematic liquid crystals
Suwat Nanan

Tu-P.207 Computational discovery of direct band gap silicon superlattices with efficient optical transition
Sunghyun Kim

- Tu-P.208 Morphological change and wetting enhancement in PTAA by simple film treatment with UV/ozone for efficient planar heterojunction perovskite solar cells
Xu Sun
- Tu-P.209 Observation of the excitonic mobility edge in GaAs quantum wells using picosecond excitation-correlation photoluminescence spectroscopy
Sumi Bhuyan
- Tu-P.210 Silicon quantum dots incorporated ternary hybrid solar cells
Shuangyi Zhao
- Tu-P.211 Bias voltage-modulated position sensitivity and nonlinearity in a-Si:H/c-Si p-i-n structure
Shuang Qiao
- Tu-P.212 Fabrication of efficient perovskite solar cells (PSCs) by the hybrid deposition method and the stability issues of perovskite
Shenghao Wang
- Tu-P.213 Preparation and optical properties of CuO-ZnO nanocomposite
Sawitree Juabrum
- Tu-P.214 Laser surface emission and detection from the same quantum cascade element
Rolf Szedlak
- Tu-P.215 Creation of orbital angular momentum using an on-chip dielectric metamaterial for beam shaping
Rolf Szedlak
- Tu-P.216 Plasmonic photodetectors enhanced by Au localized surface plasmon resonances
Ran Jia
- Tu-P.217 Electric-field-induced second-order nonlinear optical effects in the surface layers of silicon crystals
Qi Wang
- Tu-P.218 Investigation of new absorbers materials for more efficient solar energy use
Perla Wahnnon
- Tu-P.219 Investigation of the dynamic bending properties of MoS₂ thin films by interference colours
Peng Wang
- Tu-P.220 Design of plasmonic bowtie antennas for broadband absorption enhancement in ZnTe nanowire intermediate solar cells
Kuiying Nie
- Tu-P.221 Two photon excited polariton dynamics modulated by detuning in a ZnO microwire
Yafeng Wang
- Tu-P.222 Self-heating by radiative exciton and biexciton recombination in GaAs/AlGaAs quantum wells
Mikhail Kochiev
- Tu-P.223 Spontaneous polarization emission in GaAs microcavity: Time resolved measurements
Mikhail Kochiev
- Tu-P.224 Observation of polaron in emission spectra of a laser based on an In(Ga)As/GaAs quantum-dot superlattice
Mikhail Sobolev
- Tu-P.225 Systematic comparison of alternative barrier materials for InGaAs-based Terahertz quantum cascade lasers
Michael Krall
- Tu-P.226 Squeezing light into an ultra-small area through a split Bull's eye antenna in the range of visible to mid-infrared
Meng Yang
- Tu-P.227 Fabry-Perot cavity behavior in avalanche photodetectors
Mehdi Afshari Bavil
- Tu-P.228 Mechanism and dynamics of biexciton formation from a long-lived dark exciton in a CdTe quantum dot
Mateusz Goryca

Tu-P.229 Effect of doping concentration on Nd-related photoluminescence in TiO₂ with Al co-doping
Mariko Murayama

Tu-P.230 Surface state associated leakage current generation in mesa-type InGaAs/InAlAs avalanche photodetectors
Yingjie Ma

Tu-P.231 Photoluminescence from PbS quantum dots fabricated by the Langmuir-Blodgett technique
Dmitry Gulyaev

Tu-P.232 High performance polymer solar cells with an optical microcavity employing ultrathin Ag film electrode
Ning Li

Tu-P.233 Sb-doped SnO₂ films deposited at room temperature for window layer of Cu(In,Ga)Se₂ solar cells
Lei Wan

Tu-P.234 Metal oxide semiconductor - quantum dot composite structures as effective room temperature gas sensors
Konstantin Drozdov

Quantum optics, nanophotonics

Tu-P.235 Magneto-optic properties of sol-gel-synthesized Co-doped ZnO
Lin Wu

Tu-P.236 Optimum light emission from silicon quantum dots
Xiangkai Liu

Tu-P.237 Enhanced Rabi oscillation and exciton-phonon coupling in a resonantly driven QD-cavity system
Feng Liu

Tu-P.238 Electronic structure dynamics in highly excited nano- and microwire lasers
Tom Michalsky

Tu-P.239 The effect of the temperature on the interaction between InAs quantum dot excitons with surface plasmon polaritons
Euclides Marega Junior

Tu-P.240 Optical fabrication of photonic crystal microcavities for deterministic coupling to quantum dots
Luke Nuttall

Tu-P.241 Nonlinear optical properties of graphene oxide - Fe₂O₃ (GO-Fe₂O₃) hybrid material
Guanghai Huang

Tu-P.242 Cavity photon modes in anisotropic planar microcavities
Tom Michalsky

Quantum information

Tu-P.243 Controlling and imaging interacting donor wave functions in silicon
Juanita Bocquel

Tu-P.244 Quantum computations with magnetically defined qubits at the edge of topological insulator
Anton Konakov

Tu-P.245 Spin relaxation in a single-electron quantum dot
Liuqi Yu

Tu-P.246 Anisotropic Pauli spin blockade in hole quantum dots
Matthias Brauns

Tu-P.247 Quantum dephasing of spin qubits due to nonergodic noise
Matthieu Delbecq

Tu-P.248 Analytical optimal phase estimation at the quantum limit
Yang Wen

Other topics in semiconductor physics and devices

Tu-P.249 The effect of Al doping on effective work function in metal/HfO₂ interfaces

Geun-Myeong Kim

Tu-P.250 Investigation on the electrical transport mechanism of CuO nanowire
Zufang Lin

Tu-P.251 Probing the failure mechanism of InGaAs gate stack
Chen Luo

Tu-P.252 Light and heavy hole exciton polariton Faraday rotation in a single GaAs microcavity
Franklin Matinaga

Tu-P.253 Effect of static disorder in InAs/GaSb topological insulator candidates
Camille Ndebeka-Bandou

Tu-P.254 Strain properties of semiconductors and alloys in the empirical tightbinding approach
Mikhail Nestoklon

Tu-P.255 Individual Cd(Se,Te)/ZnSe epitaxial quantum dots: beyond the crossroad of Se and Te based quantum dot systems
Maciej Sciesiek

Tu-P.256 Gigahertz emission and detection of a single-electron gaussian wave packet
Sungguen Ryu

Tu-P.257 Intra- and Inter-polyad interaction in the energy-level structure of a few electrons confined in a quasi-one-dimensional nanostructure
Tokuei Sako

Tu-P.258 Terahertz electroluminescence from SiC natural superlattices in Wannier-Stark localization regime
Vladimir Sankin

Tu-P.259 Single-color, in situ photolithography marking of individual quantum dots
Krzysztof Sawicki

Special topic: Majorana fermions in solid state

Tu-P.260 Measurements of InAs physical parameters for the purpose of fabrication semiconductor-superconductor hybrid devices for detection of Majorana fermions
Mehdi Pakmehr

Tu-P.261 Transport signatures of time-reversal invariant superconductors coupled to a Luttinger liquid and a quantum dot-normal lead systems
Dong Liu

Tu-P.262 Mapping the phase diagram of a one-dimensional topological superconductor
Sergey Frolov

Poster Session III: Thursday 17:30 - 19:30

Material growth, structural properties and characterization, phonons

Th-P.001 Impacts of the annealing profile on AIC thin film solar cell characteristics fabricated by magnetron sputtering
Omid Shekoofa

Th-P.002 Magnetic and ferroelectric properties of sol - gel synthesized rhombohedral phase AlFeO₃ nanoparticles
Mandar Shirolkar

Th-P.003 Manipulating the electronic transport behaviors of ZnO nanowires through interface modulation doping
Siwen Zhao

Th-P.004 Preparation of phosphate glass-ceramics and study of optical nonlinearities of a low concentration of Copper dispersed in glass
Ying Wang

Th-P.005 Room temperature multiferroism in morphotropic phase mixture of LuFeO₃ thin film
Seungwoo Song

Th-P.006 Low-voltage InGaZnO transistors based on sputtered electrolyte dielectrics
Xiaochen Ma

Th-P.007 Photoluminescence and Raman mapping of hexagonal hillocks in N-polar GaN grown on c-plane sapphire
Teng Jiang

Th-P.008 Coexistence of type-I and type-II band alignments in $\text{In}_{0.46}\text{Al}_{0.54}\text{As}/\text{Ga}_{0.46}\text{Al}_{0.54}\text{As}/\text{GaAs}$ quantum dots
Linlin Su

Th-P.009 Atomic-scale nanoengineering and dynamic characterization of nanomaterials
Litao Sun

Th-P.010 Difference in mechanical properties of bulk crystals and MBE-grown layers of metal tellurides
Wojciech Szuskiewicz

Th-P.011 Thickness-dependent metal-to-semiconductor transition in high-quality epitaxial VO_2 films
Zhiwu Tang

Th-P.012 Comparison of self-assisted VLS GaAs nanowires grown by MBE on Si (111) and GaAs (111)B substrates
Samatcha Vorathamrong

Th-P.013 Excitonic states in asymmetrically coupled double quantum wells of $\text{GaAs}/\text{Al}_x\text{Ga}_{1-x}\text{As}$
Rui Wang

Th-P.014 Structural and optical properties of Y-In co-doping ZnO thin films deposited by magnetron sputtering
Qingpu Wang

Th-P.015 Observation of charge generation and transfer during CVD growth of carbon nanotubes
Jiangtao Wang

Th-P.016 MBE growth and properties of InAs/InAsSb heterostructure NWs
Dongdong Wei

Th-P.017 Lateral growth of composition graded atomic layer $\text{WS}_{2(1-x)}\text{Se}_{2x}$ nanosheets
Xueping Wu

Th-P.018 Shape transformation of nanoporous GaN by annealing: Mechanism and properties
Hongdi Xiao

Th-P.019 Strong second-harmonic generation in atomic layered GaSe
Xu Zhou

Th-P.020 The structural and optical properties of quaternary BeCdZnO films grown by pulsed laser deposition
Zhen Xu

Th-P.021 Conductance at 71° domain walls in BiFeO_3 thin films
Shuzhen Yang

Th-P.022 Morphology study of InGaN quantum dots grown by MOCVD
Di Yang

Th-P.023 The n-type conduction of indium-doped Cu_2O deposited by sputtering
Fan Ye

Th-P.024 Proton Irradiation Effects on p-type GeSn Epitaxy Layer on Ge Substrate
Yi Zhang

Th-P.025 Abnormal photoluminescence characteristics of single lattice-matched InGaAs/InAlAs/InP quantum well
Ying Wang

Th-P.026 Ferromagnetic Mn-implanted GaP: Microstructures vs. magnetic properties
Ye Yuan

Th-P.027 Self-catalyzed high-quality GaSP NWs on silicon and their applications
Yunyan Zhang

Th-P.028 Probing the intrinsic optical quality of CVD grown MoS_2
Amina Zafar

Th-P.029 Propagating, confined and interface acoustic phonon modes in $\text{Al}_x\text{Ga}_{1-x}\text{N}/\text{GaN}/\text{Al}_y\text{Ga}_{1-y}\text{N}$ quantum wells
Yuhai Zan

Th-P.030 Transport through a quantum dot coupled to two Majorana bound states
Qibo Zeng

Th-P.031 Novel Si-base horizontal InAs nanowire transistors
Wang Zhang

Th-P.032 Quasi-1D metal-insulator transitions in compound semiconductor surfaces
Jinzhu Zhao

Th-P.033 Development of 10 k Ω quantum hall array resistor
Qing Zhong

Th-P.034 Influence of optical phonons on the electronic mobility in $\text{Al}_2\text{O}_3/\text{AlGaNGaN}$ double heterojunctions
Xiaojuan Zhou

Th-P.035 Electron transfer between organic molecules and graphene for photovoltaic devices
Weiyi Lin

Th-P.036 Influence of bulk transverse optical phonons on the phonon modes and electronic mobility in $\text{Al}_x\text{Ga}_{1-x}\text{N}/\text{GaN}$ quantum wells
Zhuo Gu

Th-P.037 Interactions of photons with phonons: Raman scattering, laser cooling and biosensing
Jun Zhang

Th-P.038 Synthesis of CdS nanoparticles using SDS as surfactant in an ethanol/ethylene glycol system by wet chemical precipitation method at room temperature
Teeradech Senasu

Th-P.039 Surface effects on the thermoelectric properties of individual nanowires
S. F. Fischer

Wide-bandgap semiconductors

Th-P.040 Features of space charge distribution effects in GaN nanowires
Svetlana Vitusevich

Th-P.041 Modification of the yellow luminescence in gamma-ray irradiated GaN bulk single crystal
Kazuo Kuriyama

Th-P.042 High temperature annealing of MBE grown Mg-doped GaN
Sylvie Contreras

Th-P.043 Tellurium-nitrogen co-doping for the realization of p-type ZnO film
Kun Tang

Th-P.044 Internal quantum efficiency in amber light emitting AlGaIn-GaN heterostructures
Thi Huong Ngo

Th-P.045 Regulation of bandgap and magnetism for Fe-doped NaTaO_3 single-crystal nanocubes
Fang Wang

Th-P.046 Effect of Al-doping on nonlinear optical responses and carrier trapping dynamics in GaN single crystals
Wei Zhang

Th-P.047 AlN single crystal growth and properties
Wenjun Wang

Th-P.048 Pulsed laser deposited $\text{Be}_x\text{Zn}_{1-x}\text{O}_y\text{S}_{1-y}$ quaternary alloys: structural properties and bandgap bowing
Wuzhong Zhang

Th-P.049 The phenomenon of multi-core nucleation in SiC crystal growth
Xianglong Yang

Th-P.050 The growth of $\text{Al}_x\text{Ga}_{1-x}\text{N}$ nanowires
Xing-Min Cai

Th-P.051 The electronic and magnetic properties of transitional metal adsorbed armchair AlN nanoribbon: First-principles study
Xiujuan Du

Th-P.052 Comparison of Ga- and N-face GaN HEMTs on short-channel effects
Xu Huang

Th-P.053 Stress effects on the ZnO/h-BN
Xiaolan Yan

Th-P.054 The influence of heterojunction spacer and the sub-quantum well for resonant tunneling diodes
Yang Liu

Th-P.055 Simulation of the frequency characteristics of AlGaIn/GaN HEMT with deep acceptor-like traps in the buffer layer
Yang An

Th-P.056 Manipulating growth and physical properties of ZnO nanowires via interfacial doping strategy
Yiming Wu

Th-P.057 Structural characteristics of chemical vapor deposited SnO₂ films on c-sapphire
Yinmei Lu

Th-P.058 Field evaporation of wide-bandgap semiconductors: A first principles study
Yu Xia

Th-P.059 Development of ZnO-based UV photodetectors
Yu Ping

Th-P.060 Identification of different carrier-localization-center depths in green InGaIn/GaN multi-quantum-well by time-resolved photoluminescence
Yuchen Xing

Th-P.061 Breakthrough of the p-type doping bottleneck in ZnO by inserting ultrathin ZnX (X=S, Se and Te) layer doped with N_x or Ag_{Zn}
Jun-jie Shi

Narrow-bandgap semiconductors

Th-P.062 The structure and electrical properties of Se hyperdoped Si by ion implantation and short-time annealing
Fang Liu

Th-P.063 Electronic states of an InAs/GaSb quantum well in a perpendicular/parallel magnetic field
Xiaoguang Wu

Th-P.064 Surface orientation and external electric field effects on electronic structure of PbPdO₂ thin films
Yanmin Yang

Th-P.065 Angle-resolved photoemission spectroscopy of PbTe (111) thin film
Zhenyu Ye

Th-P.066 InGaAsBi alloy for short-wave infrared applications
Yi Gu

Th-P.067 Controlled growth of high quality InAs nanoribbons and their optoelectronic application
Xuehong Zhang

Th-P.068 Magnetic doping of PbPdO₂ for the spin gapless semiconductor: Theoretical and experimental study
Jian-Min Zhang

Th-P.069 Boosting hole mobility with coherent strain in <110>-oriented Ge-Si coreshell nanowires
Ang Li

Carbon: Nanotubes and Graphene

Th-P.070 Commensurability magnetoresistance due to ballistic transport in highmobility graphene antidot lattices made on h-BN
Ryuta Yagi

Th-P.071 A sensitive piezoresistive film based on graphene oxide and graphene bilayer structure
Shanbiao Liu

Th-P.072 Simultaneous electron- and hole-currents over the gate-controlled n ↔ p transition across the neutrality point in graphene
Ramesh Mani

Th-P.073 2D B-C-O alloy: a promising electronic material
Si Zhou

Th-P.074 Kondo physics in carbon nanotube quantum dots with spin-orbit interaction
Stanislaw Lipiński

Th-P.075 Low-temperature quantum transport in CVD-grown single crystal graphene
Stefan Heun

Th-P.076 Sublattice interference effect on anomalous kinks in the σ bands of graphene
Sung Won Jung

Th-P.077 Single quantum dot charging in suspended graphene nanoribbons in the quantum Hall regime
Szabolcs Csonka

Th-P.078 A new directly placement method for CNT and strongly-coupled coupled nanotube electromechanical resonators
Xinhe Wang

Th-P.079 Electron-phonon coupling constant of doped graphene, study ARPES
Woo Jong Shin

Th-P.080 Raman spectroscopy monitoring dopants in chemical substitutional doped single-walled carbon nanotubes
Muhong Wu

Th-P.081 In-situ imaging of nanoparticle deposition on SWCNTs using Rayleigh imaging microscopy
Wenyun Wu

Th-P.082 A simple method to tune graphene growth between monolayer and bilayer
Xiaozhi Xu

Th-P.083 Andreev reflection in graphene
Yanling Yang

Th-P.084 Growth of epitaxial graphene and metal intercalations
Yeongsup Sohn

Th-P.085 Electromagnetic wave absorption properties of Co_3O_4 based on reduced graphene oxide hybrid
Yi Ding

Th-P.086 Graphene based d-character Dirac systems
Yuanchang Li

Th-P.087 Three-dimensional flexible complementary metal-oxide-semiconductor logic circuits based on two-layer stacks of single-walled carbon nanotube networks
Yudan Zhao

Th-P.088 THz photoresponse in graphene p-n junctions
Yuri Vasilyev

Th-P.089 Transmitted diffraction and imaging of large area graphene with low energy electron beam
Zhao Wei

Th-P.090 Numerical study of giant nonlocal resistance in 2D spin orbital coupling system
Zibo Wang

Th-P.091 Highly sensitive hexagonal boron nitride encapsulated graphene hot electron bolometers with a Johnson noise readout
Dmitri Efetov

Th-P.092 Valley and orbital dependent Landau level evolution in mirror symmetry broken ABA-stacked trilayer graphene
Yuya Shimazaki

2D Materials beyond Graphene

Th-P.093 Room temperature strong light-exciton coupling in thin WS_2 flakes
Liaoxin Sun

Th-P.094 Ultrafast hot carrier photovoltaics of type-I monolayer heterojunctions in the broad optical ranges
Ji Ho Sung

Th-P.095 Weak localization in a black phosphorus naked quantum well
Thomas Szkopek

- Th-P.096 Spin-dependent optical properties for monolayers of transition-metal dichalcogenides
Wen-Yi Tong
- Th-P.097 Edge-state optical absorption in two-dimensional transition metal dichalcogenide flakes: An analytical model
Maxim Trushin
- Th-P.098 Non-collinear effective interactions of magnetic moments in transition metal dichalcogenides
Sergio Ulloa
- Th-P.099 The topography control of epitaxial MoS₂ crystals on graphene/SiO₂
Wen Wan
- Th-P.100 Electronic and thermal conductance of monolayer and bilayer black phosphorus
Weiliang Wang
- Th-P.101 Enhanced photo-response of epitaxial PbS nanoplates-graphene heterostructure via an edge contact
Yao Wen
- Th-P.102 Phonons in two-dimensional nanomaterials: A continuum model
L. C. Lew Yan Voon
- Th-P.103 Poisson's ratio in layered two-dimensional crystals
Sungjong Woo
- Th-P.104 First-principles explorations of phosphorene: moire superlattice, polymorph structures and multiferroics
Menghao Wu
- Th-P.105 The static and dynamic magnetic properties of monolayer iron dioxide and iron dichalcogenides (FeX₂ (X = O, S, Se, Te))
Gang Xiang
- Th-P.106 Broadband spatial self-phase modulation of black phosphorous
Si Xiao
- Th-P.107 Investigation of round-shaped MoS₂ grown by chemical vapor deposition
Xiaoyang Xiao
- Th-P.108 Electronic properties of IV-VI 2D materials
Jiamin Xue
- Th-P.109 Quantum dot devices based on exfoliated MoS₂ flakes
Jianhong Xue
- Th-P.110 Preparation and photoluminescence of MoS₂ films with different thickness
Li Xue
- Th-P.111 Angle- and spin-resolved photoemission spectroscopy study of monolayer semiconducting transition metal dichalcogenides
Wei Yao
- Th-P.112 Exciton valley dynamics in monolayer WSe₂ probed by the two-color ultrafast Kerr rotation
Jialiang Ye
- Th-P.113 Preparation of Au-MoS₂ electrochemical electrode and investigation on glucose detection characteristics
Yingjiao Zhai
- Th-P.114 Generalized Bloch theorem and its application to low dimensional materials
Dong-Bo Zhang
- Th-P.115 Interlayer shear and layer breathing vibrations in 2d layered materials
Xin Zhang
- Th-P.116 Lattice thermal conductivity of 2D group-IV materials
Hao Zhang
- Th-P.117 Preparation and characterization of graphene-MoS₂ composite: enhanced photoresponse and gas detection capability
Shaolin Zhang
- Th-P.118 Peeling energies of two-dimensional layered compounds
Xingang Zhao

Th-P.119 Fabrication and characterization of large-area 2D GaTe and its device prospective
Qinghua Zhao

Th-P.120 Landau levels and magneto-optical properties in black phosphorus
Xiaoying Zhou

Th-P.121 Electronic structure and transport property of atomic chains in monolayer 2D materials nanoribbons
Guanghui Zhou

Th-P.122 Tuning the Schottky barrier type of blue phosphorus-graphene heterojunction with interlay coupling effects
Jiadduo Zhu

Th-P.123 Out-of-plane Raman mode studies in few-layer MoSe₂
Malgorzata Zinkiewicz

Organic Semiconductors

Th-P.124 Space charge limited current study of highly ordered organic single crystal: A transport crossover from hopping to band-like
Jiawei Wang

Th-P.125 Resistive switching of polymer thin films embedded with TiO₂ nanorods deposited by vacuum spray method
Jianchang Li

Th-P.126 High conductive pentacene film on *h*-boron nitride
Ji Dong

Th-P.127 Excellent carrier transport of semiconductor/insulator polymer blends in both transistor and diode structures
Fapei Zhang

Th-P.128 Insight into switching mechanism of a polymer resistive memory based on poly(*o*-methoxyaniline)
Gang Chen

Topological states of matter, topological Insulators and Weyl semimetals

Th-P.129 Heat capacity of the topological crystalline insulator Pb_{1-x}Sn_xTe near the band inversion composition
Elena Rogacheva

Th-P.130 Cr doped topological insulator Bi₂Se₃ under external electric field: A firstprinciple study
Lian RuQian

Th-P.131 Emergence of dynamical energy gap in graphene with out-of-plane deformations
Nancy Sandler

Th-P.132 Weak antilocalization in 3D topological insulator, based on a strained HgTe film
Maxim Savchenko

Th-P.133 Chromium-induced ferromagnetism in topological crystalline insulator SnTe thin films
Shanshan Liu

Th-P.134 Parallel and series conduction model in topological insulators
Sourabh Singh

Th-P.135 Topological Anderson insulators in systems without time-reversal symmetry
Ying Su

Th-P.136 Strain engineering of topological edge states in nanoribbons of transition metal dichalcogenides with 1T' phase
Ha-Jun Sung

Th-P.137 Quantum transport in HgTe/CdTe Topological Insulator structures.
Candice Thomas

Th-P.138 The quantum oscillations of transition-metal pentatelluride ZrTe₅
Wei Wang

Th-P.139 Topological photonic crystal with equifrequency Weyl points
Luyang Wang

Th-P.140 Level statistics for disordered Weyl semimetals
Chen Wang

Th-P.141 Electronic properties of Bi_8Se_9 film prepared by pulsed laser deposition
Liang Yang

Th-P.142 Investigation of basic nonlinear optical response and saturable absorption for two-dimensional $\text{Bi}_2\text{Te}_x\text{Se}_{3-x}$ nanosheets
Yingwei Wang

Th-P.143 Statistical symmetry of universal conductance fluctuations in topological insulators
Zhang Shuai

Th-P.144 Novel resonant states confined within quantum corrals and nano-steps on the topological insulator surface
Zhen-Guo Fu

Th-P.145 Thermoelectric signature of the chiral anomaly in Cd_3As_2
Zhenzhao Jia

Th-P.146 Energy relaxation of hot carriers near the charge neutrality point in 2D topological insulator
Gennady Gusev

Th-P.147 Aharonov-Bohm effect in the 3D topological insulator HgTe
Johannes Ziegler

Th-P.148 Quantum Monte Carlo study of 2D interacting topological superconductor
Zixiang Li

Th-P.149 Superconducting-contact-induced resistance-anomalies in the 3D topological insulator Bi_2Te_3
Zhuo Wang

Transport in heterostructures

Th-P.150 Thickness dependences of anisotropic transport properties modified by electric field in (011)-LSMO/PMNPT multiferroic heterostructures
Haoliang Huang

Th-P.151 Insight into phonon scattering in Si nanowires through high-field hole transport:

Impacts of boundary condition and comparison with bulk phonon approximation
Hajime Tanaka

Th-P.152 Transient currents and charge pumping through a single molecular junction
Guo-Hui Ding

Th-P.153 Spin-polarized electron transport in hybrid graphene-BN nanoribbons
Wei Lu

Th-P.154 Electronic structure and transport properties of III-V core/shell nanowires
Florinda Vinas

Th-P.155 Channel blockade in a two-path triple-quantum-dot system
Fernando Gallego-Marcos

Th-P.156 Scattering due to alloy composition fluctuation in barrier layer on two dimensional electron gas in $\text{Al}_x\text{Ga}_{1-x}\text{N}/\text{GaN}$ heterostructure
Xiwen Liu

Th-P.157 Transport in vertically stacked hetero-structures from 2D materials
Fan Chen

Th-P.158 Improvement of solar cell efficiency by using vanadium oxide thin film as a hole transport layer
Gyujin Oh

Th-P.159 The 2DEG mobility enhancement for low- and high-electric fields in novel $\text{AlGaAs}/\text{InGaAs}$ heterostructures with donor-acceptor doping
Dmitry Gulyaev

Th-P.160 Ion trapping model: New understanding of the origin of two-dimensional electron gas at transition-metal perovskite oxide interface
Chengjian Li

Th-P.161 Effect of ligand charge transfer in the $\text{La}_{1-x}\text{Ca}_x\text{MnO}_3/\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$ heterostructure
M. J. Chen

Th-P.162 A novel method to extract $\text{In}_{0.18}\text{Al}_{0.82}\text{N}/\text{AlN}/\text{GaN}$ heterostructure Schottky

barrier heights from forward current-voltage characteristics
Bo Wang

Th-P.163 Temperature dependent nonlinear Hall effect in macroscopic Si-MOS antidot array
Alexander Kuntsevich

Th-P.164 Double-layer-gate architecture for GaAs quantum dots in the few hole regime
Oleh Klochan

Th-P.165 Conductivity and electron mobility of 2D massless Dirac fermions in HgTe quantum well
Alena Dobretcova

Th-P.166 Quantum phase transition in an interacting one-dimensional quantum wire
Abolfazl Bayat

Quantum Hall effects

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