

Horiba International Conference

The 19th International Conference on the Application of High Magnetic Fields
in Semiconductor Physics and Nanotechnology (HMF-19)

HMF19
F U K U O K A



August 1-6 2010
Fukuoka, Japan

HMF-19 Time Table

	Monday (Aug 2)	Tuesday (Aug 3)	Wednesday (Aug 4)	Thursday (Aug 5)	Friday (Aug 6)
9:00	Registration Opening	Kawasaki	Kukushkin	Tarucha	8:30-10:00 Molenkamp
10:00	9:00-10:50 Andrei	Oxides and their heterostructures	Quantum Hall effect: spectroscopy	Kossacki	Quantum spin Hall and spin-orbit effects Murakami
11:00	Graphene: quantum Hall effect Shibata	Musfeldt	coffee break (10:10-10:40) Ito	Eaves	Nitta
12:00	Anaodo Montero	Roche	10:40-12:40 Orlita	Grelich	coffee break (10:00-10:30)
13:00	Poirier	Quantum Hall effect: edge transport	Graphene: spectroscopy	Ando	10:30-12:30 Feldman
14:00	11:20-12:30 Zudov	Chida	Koshino	Topological insulator and graphene	Graphene: correlated states MacDonald
15:00	14:00-15:50 Pan	Leicht	Henriksen	Hatsugai	Kim
16:00	Quantum Hall effect: fractional and correlated states	Kamata	Faugeras	Conference Photo	Closing
17:00	14:00-15:20 Dietsche	Lunch	Lunch		
18:00	15:00-17:40 Behnia	McCann	Lunch		
19:00	15:50-17:40 Dirac electrons and magneto-quantum oscillations	Folk	Lunch		
20:00	16:20-17:40 Imaging	Lundeberg	Lunch		
	16:00-17:40 First	coffee break (15:20-15:50)	Lunch		
	Hashimoto	15:50-17:40 Dirac electrons and magneto-quantum oscillations	Lunch		
	Kawano	Behnia	Lunch		
	Poster Session-I	Li	Lunch		
		Tajima	Lunch		
		Kang	Lunch		
		Poster Session-II	Lunch		
		Excursion	Lunch		
		Willet	Lunch		
		Quantum Hall effect: $\nu = 5/2$ state	Lunch		
		Stem	Lunch		
		Rhone	Lunch		
		Tiemann	Lunch		
		coffee break (15:30-16:00)	Lunch		
		Smimov	Lunch		
		Reitzenstein	Lunch		
		Ediger	Lunch		
		Jadczak	Lunch		
		Magneto-optics	Lunch		
		Poster Session-III	Lunch		
		Banquet	Lunch		

Extended invited talks:

40 min.

Invited talks:

30 min.

Contributed talks:

20 min.

Program

Oral Presentations

Monday, August 2

8:50-9:00 Opening

Session 1

Graphene: quantum Hall effect

9:00-9:40

Mo-1 (invited)

Eva Y. Andrei (Rutgers University, USA)

Probing Dirac fermions in graphene: from Landau level quantization to fractional quantum Hall effect

9:40-10:10

Mo-2 (invited)

Naokazu Shibata (Tohoku University, Japan)

DMRG study of fractional quantum Hall effect and valley skyrmions in graphene

10:10-10:30

Mo-3

Mario Amado Montero (Universidad de Salamanca, Spain), E. Diez, D. López-Romero, F. Rossella, J. M. Caridad, F. Dionigi, V. Bellani, and D. K. Maude

Plateau-insulator transition in graphene

10:30-10:50

Mo-4

J. Guignard, F. Schopfer, Wilfrid Poirier (LNE, France), and D. C. Glattli

Quantum Hall effect quantization tests in exfoliated bilayer and monolayer graphene for metrology

Session 2

Microwave and nonlinear effects

11:20-11:50

Mo-5 (invited)

Michael Zudov (University of Minnesota, USA)

Emergent nonlinear transport phenomena in very high Landau levels

11:50-12:10

Mo-6

Steffen Wiedmann (LNCMI-CNRS, France), G. M. Gusev, O. E. Raichev, A. K. Bakarov, and J. C. Portal

Zero-resistance states in bilayer electron systems induced by microwave irradiation

12:10-12:30

Mo-7

Ivan Dmitriev (Karlsruhe Institute of Technology, Germany)

Nonequilibrium magnetooscillations in quantum Hall systems: supersonic transport and photovoltaic effects

Session 3

Quantum Hall effect: fractional and correlated states

14:00-14:30

Mo-8 (invited)

Wei Pan (Sandia National Labs., USA)

Highly correlated electronic states in wide quantum wells and high Landau levels

14:30-14:50

Mo-9

Y. Yoon, L. Tiemann, S. Schmult, Werner Dietsche, and K. von Klitzing (Max-Planck-Institut für Festkörperforschung, Germany)

Tunneling and dissipation in the bilayer-excitonic condensate

14:50-15:10

Mo-10

F. Rossella, Vittorio Bellani (University of Pavia, Italy), F. Dionigi, M. Amado, E. Diez, K. Kowalik, G. Biasiol, and L. Sorba

Optical probing of quantum Hall effect of composite fermions and of the liquid-insulator transition

15:10-15:30

Mo-11

Kohei Sasaki (University of Tokyo, Japan), R. Masutomi, K. Toyama, K. Sawano, Y. Shiraki, and T. Okamoto

Pseudospin phase transitions during Landau level crossing in a Si quantum well

15:30-15:50

Mo-12

Jan Kunc (Grenoble High Magnetic Field Laboratory, France), K. Kowalik, F. J. Teran, P. Plochocka, D. K. Maude, G. Karczewski, T. Wojtowicz, and M. Potemski

Many-body enhancement of the spin gap in fully populated two-dimensional Landau levels

Session 4

Imaging

16:20-16:50

Mo-13 (invited)

Phillip N. First (Georgia Institute of Technology, USA)

Spectroscopy and mapping of Landau levels in graphene

16:50-17:20

Mo-14 (invited)

Katsushi Hashimoto (Tohoku University, Japan)

Real-space observation of quantum Hall transition

17:20-17:40

Mo-15

Yukio Kawano and K. Ishibashi (RIKEN, Japan)

Spatial mapping of potential fluctuation in GaAs/AlGaAs and graphene by a scanning nanoelectrometer

Tuesday, August 3

Session 1

Oxides and their heterostructures

8:30-9:00

Tu-1 (invited)

Masashi Kawasaki (Tohoku University, Japan)

Fractional quantum Hall effect at the (MgZn)O/ZnO interfaces

9:00-9:30

Tu-2 (invited)

Harold Y. Hwang (University of Tokyo, Japan)

Low-dimensional superconductivity in SrTiO₃ heterostructures

9:30-10:00

Tu-3 (invited)

Alexander Brinkman (University of Twente, The Netherlands)

Parallel electron-hole bilayer conductivity and magnetic effects at electronically reconstructed oxide interfaces

10:00-10:30

Tu-4 (invited)

Jan L. Musfeldt (University of Tennessee, USA)

Optical properties of iron oxides: the new iron age

Session 2

Quantum Hall effect: edge transport

11:00-11:30

Tu-5 (invited)

Patrice Roche (CEA Saclay, France)

Coherence length in the integer quantum Hall regime

11:30-11:50

Tu-6

Kensaku Chida (Kyoto University, Japan), M. Hashisaka, Y. Yamauchi, S. Nakamura, T. Arakawa, T. Machida, K. Kobayashi, and T. Ono

Shot noise measurement in a non-equilibrium quantum wire in the integer quantum Hall regime

11:50-12:10

Tu-7

Christoph Leicht (Physikalisch-Technische Bundesanstalt, Germany), B. Kaestner, P. Mirovsky, E. V. Kurganova, U. Zeitler, K. Pierz, and H. W. Schumacher

Controlled emission of single electrons and holes into quantum Hall edge states

12:10-12:30

Tu-8

Hiroshi Kamata (NTT Corporation/Tokyo Tech, Japan), N. Kumada, M. Hashisaka, K. Muraki, and T. Fujisawa

Voltage-controlled resonator for edge magnetoplasmons

Session 3

Graphene: coherent transport

14:00-14:30

Tu-9 (invited)

Edward McCann (Lancaster University, UK)

Weak localisation and spin-orbit coupling in graphene

14:30-15:00

Tu-10 (invited)

Joshua Folk (University of British Columbia, Canada)

Spin-resolved quantum interference in graphene

15:00-15:20

Tu-11

Mark Lundberg (University of British Columbia, Canada) and J. Folk

Measuring the effects of a random vector potential

Session 4

Dirac electrons and magneto-quantum oscillations

15:50-16:20

Tu-12 (invited)

Kamran Behnia (UPMC-CNRS, France)

Phase diagram of bismuth in the extreme quantum limit

16:20-16:50

Tu-13 (invited)

Lu Li (Princeton University, USA)

Phase transitions of Dirac electrons in bismuth

16:50-17:20

Tu-14 (invited)

Naoya Tajima (RIKEN, Japan)

Spin- and valley-splittings in multi-layer massless Dirac fermions system

17:20-17:40

Tu-15

Woun Kang (Ewha Womans University, Korea)

Coherence peak and stereographic angular magnetoresistance study

Wednesday, August 4

Session 1

Quantum Hall effect: spectroscopy

8:30-9:00

We-1 (invited)

Igor Kukushkin (Max-Planck-Institute for Solid State Research, Germany)

Dispersion of collective excitations of the fractional quantum Hall states

9:00-9:30

We-2 (invited)

Oliver Dial (MIT, USA)

Signatures of composite Fermions in the tunneling spectrum of a 2D electron gas

9:30-9:50

We-3

P. Plochocka, J. M. Schneider, Duncan K. Maude (CNRS, France), M. Potemski, V. Umansky,

I. Bar-Joseph, J. G. Groshaus, Y. Gallais, and A. Pinczuk

The surprisingly fragile quantum Hall ferromagnet at filling factor $\nu = 1$

9:50-10:10

We-4

Hironori Ito (Chiba University, Japan), D. Fukuoka, K. Oto, K. Muro, Y. Hirayama, and N. Kumada

High sensitive measurement of spin polarization by Kerr rotation in a quantum Hall system

Session 2

Graphene: spectroscopy

10:40-11:10

We-5 (invited)

Milan Orlita (CNRS, France)

Magneto-optical spectroscopy of Dirac fermions in graphene-based systems

11:10-11:40

We-6 (invited)

Mikito Koshino (Tokyo Institute of Technology, Japan)

Landau-level structure and orbital diamagnetism of multilayer graphenes

11:40-12:10

We-7 (invited)

Erik A. Henriksen (California Institute of Technology, USA)

Measurement of the electronic compressibility of bilayer graphene

12:10-12:40

We-8 (invited)

Clément Faugeras (CNRS, France)

Elementary excitations in graphite and graphene: magneto-Raman studies

12:40-18:30

Excursion

18:50-20:30

Banquet (start at 19:00)

Thursday, August 5

Session 1

Quantum dots

8:30-9:00

Th-1 (invited)

Seigo Tarucha (The University of Tokyo, Japan)

Magnetic-field control of electron and nuclear spins in quantum dots

9:00-9:30

Th-2 (invited)

Piotr Kossacki (University of Warsaw, Poland)

Optical manipulation of a single Mn spin in a CdTe-based quantum dot

9:30-10:00

Th-3 (invited)

Laurence Eaves (University of Nottingham, UK)

The electronic energy levels, wavefunctions and potential landscape of nanostructures probed by magneto-tunneling spectroscopy

10:00-10:30

Th-4 (invited)

Alex Greilich (TU Dortmund University, Germany)

Ultrafast optical rotations of electron spins in quantum dots

Session 2

Topological insulator and graphene

11:00-11:30

Th-5 (invited)

Yoichi Ando (Osaka University, Japan)

Unusual quantum magnetotransport in a topological insulator $Bi_{1-x}Sb_x$

11:30-12:00

Th-6 (invited)

Xi Chen (Tsinghua University, China)

STM study of topological insulators grown by MBE

12:00-12:30

Th-7 (invited)

Yasuhiro Hatsugai (University of Tsukuba, Japan)

Topological aspect of graphene physics

Session 3

Quantum Hall effect: $\nu = 5/2$ state

14:00-14:30

Th-8 (invited)

Robert L. Willett (Alcatel-Lucent, USA)

Alternation and interchange of $e/4$ and $e/2$ period interference oscillations as evidence for filling factor $5/2$ non-Abelian quasiparticles

14:30-14:50

Th-9

Michael Stern (Weizmann Institute of Science, Israel), P. Plochocka, V. Umansky, D. Maude, M. Potemski, and I. Bar-Joseph

Optical probing of the spin polarization of the $\nu = 5/2$ quantum Hall state

14:50-15:10

Th-10

Trevor D. Rhone (Columbia University, USA), J. Yan, Y. Gallais, A. Pinczuk, L. Pfeiffer, and K. West

The hunt for spin properties in the second Landau level

15:10-15:30

Th-11

Lars Tiemann (NTT Corporation/ERATO-JST, Japan), G. Gamez, N. Kumada, and K. Muraki

Probing the spin polarization at filling factor $\nu = 5/2$

Session 4

Magneto-optics

16:00-16:30

Th-12 (invited)

Dmitry Smirnov (National High Magnetic Field Laboratory, USA)

Low frequency, high temperature operation of THz quantum cascade lasers

16:30-17:00

Th-13 (invited)

Stephan Reitzenstein (University of Würzburg, Germany)

Magneto-optical cavity quantum electrodynamics effects in quantum dot - micropillar systems

17:00-17:20

Th-14

Matthias Ediger (University of Cambridge, UK), A. M. Wilson, I. M. Piper, R. T. Phillips, M. Hugues, and M. Hopkinson

3D g-factor mapping: fine structure effects in single quantum dots

17:20-17:40

Th-15

J. Jadczak (Wroclaw University of Technology, Poland), L. Bryja, A. Wojs, G. Bartsch, D. R. Yakovlev, M. Bayer, P. Plochocka, and M. Potemski

Temperature induced exciton delocalization observed in magneto-photoluminescence of a two-dimensional hole gas

Friday, August 6

Session 1

Quantum spin Hall and spin-orbit effects

8:30-9:10

Fr-1 (invited)

Laurens W. Molenkamp (Würzburg University, Germany)

Dirac fermions in HgTe quantum wells

9:10-9:40

Fr-2 (invited)

Shuichi Murakami (Tokyo Institute of Technology, Japan)

Edge-state transport in two-dimensional topological insulators

9:40-10:00

Fr-3

J. Takagi, S. Moulis, M. Kohda, and Junsaku Nitta (Tohoku University, Japan)

Spin transport affected by competition between spin orbit interaction and Zeeman effect in InGaAs based wire and ring structures

Session 2

Graphene: correlated states

10:30-11:00

Fr-4 (invited)

Benjamin E. Feldman (Harvard University, USA)

Electronic transport and compressibility measurements of correlated states in suspended bilayer graphene

11:00-11:20

Fr-5

H. J. van Elferen, E. V. Kurganova, A. McCollam, A. J. M. Giesbers, Uli Zeitler, and J. C. Maan (High Field Magnet Laboratory, The Netherlands)

Recent high-field experiments in bilayer graphene at HFML Nijmegen

11:20-11:50

Fr-6 (invited)

Allan H. MacDonald (University of Texas at Austin, USA)

Quantum Hall effects in graphene and graphene bilayers

11:50-12:30

Fr-7 (invited)

Philip Kim (Columbia University, USA)

Electron interactions in graphene at high magnetic fields

12:30- Closing

Program

Poster Presentations

Poster Session-I

Monday, August 2

MoP-1

A. A. Greshnov, O. I. Utesov, and G. G. Zegrya
(Ioffe Physico-Technical Institute RAS, Russia)
Crossover between weak field and strong field magnetoresistance

MoP-2

A. Aparecido-Ferreira, G. M. Ribeiro, E. S. Alves, and J. F. Sampaio
(Universidade Federal de Minas Gerais, Brazil)
Magnetoresistance in carbon-black samples with variable range hopping conduction regime

MoP-3

Manuel Torres and Alejandro Kunold
(Universidad Nacional Autónoma de México, Mexico)
Symmetry breaking as the origin of zero-differential resistance states of a 2DEG in strong magnetic fields

MoP-4

J. Könemann, C. Leicht, F. J. Ahlers, E. Pesel, K. Pierz, and H. W. Schumacher
(Physikalisch-Technische Bundesanstalt, Germany)
Quantum Hall series arrays investigated for quantum resistance standards

MoP-5

Akira Endo, Naokazu Shibata, and Yasuhiro Iye
(University of Tokyo, Japan)
Modulation induced stripe phase at fractional fillings

MoP-6

F. Rossella, V. Bellani, F. Dionigi, M. Amado, E. Diez, K. Kowalik, G. Biasiol, and L. Sorba
(University of Pavia, Italy)
Optical probing of quantum Hall effect of composite fermions and of the liquid-insulator transition

MoP-7

B. A. Piot, J. Kunc, M. Potemski, D. K. Maude, G. Karczewski and T. Wojtowicz
(CNRS-UJF-UPS-INSA, France)
Fractional quantum Hall effect under relatively high intrinsic Zeeman energy: 2D electron gas in high mobility CdTe quantum wells

MoP-8

Gerardo Gamez and Koji Muraki
(NTT Corporation, Japan)
Observation of a well-developed $\nu = 5/2$ fractional quantum Hall state in a low-mobility 2DEG: different roles of disorder

MoP-9

Keiko Takase and Koji Muraki
(NTT Corporation, Japan)

Density-imbalance stability diagram of the $\nu_T = 1$ bilayer electron system at full spin polarization

MoP-10

S. Wiedmann, G. M. Gusev, O. E. Raichev, A. K. Bakarov, and J. C. Portal
(LNCMI-CNRS, France)

A new kind of magnetoresistance oscillations in wide quantum well bilayers

MoP-11

A. Fukuda, T. Sekikawa, K. Iwata, Y. Ogasawara, Y. D. Zheng, T. Morikawa, S. Tsuda, T. Arai, Z. F. Ezawa, and A. Sawada
(Hyogo College of Medicine, Japan)

Activation study of the $\nu = 1/3$ bilayer quantum Hall states in the vicinity of single layer limit

MoP-12

S. Tsuda, A. Fukuda, Y. D. Zheng, T. Morikawa, T. Arai, and A. Sawada
(Kyoto University, Japan)

Comparison of the magnetoresistance hysteresis between bilayer $\nu = 4/3$ and monolayer $\nu = 2/3$ quantum Hall states

MoP-13

Michael V. Yakunin, Alexey V. Suslov, Sergey M. Podgornykh, Ivan Yu. Smirnov, Sergey A. Dvoretzky, and Nikolay N. Mikhailov
(Institut of Metal Physics, Russia)

Interlevel hybridization phenomena in the coincidence effect under quantum Hall regime in a HgTe quantum Well

MoP-14

K. F. Yang, H. W. Liu, T. D. Mishima, M. B. Santos, and Y. Hirayama
(ERATO-JST, Japan)

Resistively detected NMR with dispersive lineshape in single InSb quantum wells

MoP-15

M. Kawamura, M. Ono, Y. Hashimoto, S. Katsumoto, and T. Machida
(RIKEN Advanced Science Institute, Japan)

Dynamic nuclear polarization induced by breakdown of integer and fractional quantum Hall effect

MoP-16

Tatsuya Yamashita, Minoru Kawamura, Satoru Masubuchi, Rai Moriya, Yoshiaki Hashimoto, Shingo Katsumoto, and Tomoki Machida
(University of Tokyo, Japan)

Dynamic nuclear polarization induced by breakdown of even-integer quantum Hall states

MoP-17

Keita Kishigi, Kai Ueno, Eriko Miyamoto, and Yasumasa Hasegawa
(Kumamoto University, Japan)

Dirac cones on the generalized honeycomb lattice

MoP-18

Masao Arai and Yasuhiro Hatsugai
(National Institute for Materials Science, Japan)

Numerical study of electronic structure under uniform magnetic field and quantized Hall conductance for multi-band tight-binding models

MoP-19

Haruki Watanabe, Yasuhiro Hatsugai, and Hideo Aoki
(University of Tokyo, Japan)

Manipulation of the Dirac cones and the anomaly in the graphene related quantum Hall effect

MoP-20

Takahiro Morimoto, Yshai Avishai, and Hideo Aoki
(University of Tokyo, Japan)

Dynamical scaling analysis of the optical Hall conductivity in the graphene quantum Hall system with various types of disorder

MoP-21

S. Masubuchi, K. Suga, K. Kindo, S. Takeyama, and T. Machida
(University of Tokyo, Japan)

Observation of quantum Hall effect in single-layer and bi-layer graphene using pulse magnet

MoP-22

Jean-Marie Poumirol, Walter Escoffier, Amit Kumar, Michel Goiran, Bertrand Raquet,
and Jean-Marc Broto
(Universit de Toulouse, France)

Electron-hole coexistence in disordered graphene probed by high field magneto-transport

MoP-23

Kentaro Nomura, Shinsei Ryu, and Dung-Hai Lee
(RIKEN Advanced Science Institute, Japan)

Field-induced bond-ordered phase and confinement-deconfinement transition in graphene

MoP-24

T. Yoshida and K. Oto
(Chiba University, Japan)

High-field magneto-transport at charge neutrality point in monolayer graphene

MoP-25

Akira Tsukuda, Hiromu Okunaga, Daisuke Nakahara, Kazuhito Uchida, Takako Konoike,
and Toshihito Osada
(University of Tokyo, Japan)

Quantum Hall transport across monolayer-bilayer boundary in graphene

MoP-26

A. McCollam, V. K. Guduru, A. J. M. Giesbers, U. Zeitler, J. C. Maan, M. K. Kruijze, M. Huijben,
H. J. A. Molegraaf, S. Wenderich, A. Brinkman, G. Koster, G. Rijnders, D. H. A. Blank,
and H. Hilgenkamp
(Radboud University Nijmegen, The Netherlands)

Magneto-quantum oscillations in high-mobility two-dimensional electron systems formed in oxide heterostructures

MoP-27

Chih-Han Chen, Chien-Yuan Lu, Sheng-Po Chang, Tsung-Hsun Chiang, and Shoou-Jinn Chang
(National Cheng Kung University, Taiwan)

Electroluminescence from n-ZnO nanowires/p-GaN heterostructure light emitting diodes

MoP-28

Chih-Han Chen, Sheng-Po Chang, Chien-Yuan Lu, and Shoou-Jinn Chang
(National Cheng Kung University, Taiwan)

Optoelectronic characteristics of UV photodetector based on ZnO nanoparticles thin films

Poster Session-II

Tuesday, August 3

TuP-1

Y. Kim, I. Kalichava, N. G. Kalugin, L. Ren, J. Kono, Z. Sun, Z. Yan, Z. Jin, J. M. Tour, A. C. Ferrari, and D. Smirnov
(National High Magnetic Field Laboratory, USA)
Magneto-Raman spectroscopy of graphene and graphite

TuP-2

M. Hagiwara, H. Yamaguchi, H. Tsugeno, V. L. J. Joly, K. Takai, and T. Enoki
(Osaka University, Japan)
ESR in a disordered network of nanographene sheets

TuP-3

Junichi Wakabayashi and Tomoya Sano
(Chuo University, Japan)
Magnetoresistance of rippled graphene in a parallel magnetic field

TuP-4

Mitsuhiro Arikawa, Hideo Aoki, and Yasuhiro Hatsugai
(University of Tsukuba, Japan)
Edge states in graphene quantum Hall system with bond vs potential disorder

TuP-5

Kenichi Asano and Tsuneya Ando
(Osaka University, Japan)
Spectral lineshapes of cyclotron resonance in monolayer and bilayer graphene

TuP-6

K. Shizuya
(Kyoto University, Japan)
Many-body corrections to cyclotron resonance in graphene and its bilayer

TuP-7

V.E. Bisti
(Institute of Solid State Physics RAS, Russia)
Electron-hole asymmetry in cyclotron resonance of bilayer graphene in high magnetic field

TuP-8

S. A. Mikhailov
(University of Augsburg, Germany)
Cyclotron resonance of massless quasiparticles in graphene

TuP-9

Toshihito Osada
(University of Tokyo, Japan)
Magnetotransport of massless Dirac fermions in multilayer organic conductors

TuP-10

R. Masutomi, K. Sasaki, I. Yasuda, A. Sekine, K. Sawano, Y. Shiraki, and T. Okamoto
(University of Tokyo, Japan)
Cyclotron resonance in the two-dimensional metallic phase of Si quantum wells

TuP-11

K. Sasaki, I. Yasuda, R. Masutomi, K. Sawano, Y. Shiraki, and T. Okamoto
(University of Tokyo, Japan)

Relationship between valley splitting and well width in Si quantum wells

TuP-12

G. M. Gusev, S. Wiedmann, N. C. Mamani, A. K. Bakarov, and J. C. Portal
(Instituto de Física da Universidade de São Paulo, Brazil)

Charge transfer in trilayer electron systems in a strong magnetic field

TuP-13

S. Wiedmann, G. M. Gusev, A. K. Bakarov, and J. C. Portal
(LNCMI-CNRS, France)

Emergent fractional quantum Hall effect at even denominator $3/2$ in a triple quantum well in tilted magnetic fields

TuP-14

Norio Kumada, Hiroshi Kamata, Koji Muraki, and Toshimasa Fujisawa
(NTT Corporation, Japan)

Field dependence of edge magnetoplasmon transport in a quantum Hall System

TuP-15

Yuji Hamamoto, Thibaut Jonckheere, Takeo Kato, and Thierry Martin
(University of Tokyo, Japan)

Quantum phase transition of dynamical resistance in a mesoscopic capacitor

TuP-16

H. Akeru
(Hokkaido University, Japan)

Hall-potential distribution in AC quantum Hall effect

TuP-17

J. Oswald, C. Uiberacker, and C. Stecher
(University of Leoben, Austria)

A numerical study of non-local magneto transport effects in quantum Hall device structures

TuP-18

Abdullah Öztürk, Ahmet Emre Kavruk, Teoman Öztürk, Ülfet Atav, and Hüseyin Yüksel
(Selcuk University, Turkey)

Calculation of the edge channels in the integer quantum Hall regime

TuP-19

A. E. Kavruk, T. Öztürk, A. Öztürk, Ü. Atav, and H. Yükseli
(Selcuk University, Turkey)

The self consistent calculation of the edge states in bilayer quantum Hall bar

TuP-20

T. Öztürk, A. E. Kavruk, A. Öztürk, Ü. Atav, and H. Yüksel
(Selcuk University, Turkey)

Edge channels in an Aharonov-Bohm electron interferometer in the integer quantum Hall regime

TuP-21

K. Y. Chen, L.-H. Lin, C.-T. Liang, D. R. Hang, C. F. Huang, Y. H. Chang, Chih-Ying Huang, Tzu-Lun Lin, and K. A. Cheng
(National Taiwan University, Taiwan)

On the coexistence of quantum Hall liquid and semiclassical transport

TuP-22

Shun-Tsung Lo, Chiashain Chuang, Sheng-Di Lin, Kuang Yao Chen, C.-T. Liang, S. W. Lin, Jau-Yang Wu, and M. R. Yeh
(National Taiwan University, Taiwan)

Magnetotransport in an aluminum nanofilm on GaAs grown by molecular beam epitaxy

TuP-23

Dong-Sheng Luo, Li-Hung Lin, Yi-Chun Su, Yi-Ting Wang, Zai Fong Peng, Shun-Tsung Lo, Kuang Yao Chen, Y. H. Chang, Jau-Yang Wu, Yiping Lin, Sheng-Di Lin, J. C. Chen, C. F. Huang, and C.-T. Liang
(National Tsinghua University, Taiwan)

Magnetotransport in a delta-doped GaAs single quantum well with additional modulation doping

TuP-24

Sheng Kai Su, Liang Chen Li, Yuen Wu Suen, Jau Yang Wu, Hong Rong Kuo, Yu Tai Sung, and Chien Ping Lee
(National Chiao Tung University, Taiwan)

Ellipsometer system for low temperature and high magnetic field

TuP-25

T. Sakurai, N. Takahashi, S. Okubo, and H. Ohta
(Kobe University, Japan)

Development of high-field ESR using SQUID magnetometer

TuP-26

A. Miyata, E. Kojima, H. Ueda, Y. Ueda, Y. Motome, and S. Takeyama
(University of Tokyo, Japan)

Magnetization measurements of a geometrically frustrated magnet, $ZnCr_2O_4$, by the Faraday rotation measurements up to 600 T

TuP-27

Takehito Nakano, Duong Thi Hanh, Akira Matsuo, Ryuichi Suehiro, Teruo Goto, Koichi Kindo, and Yasuo Nozue
(Osaka University, Japan)

High-field magnetization of ferrimagnetic Na-K clusters incorporated in regular nanospace of low-silica X zeolite

TuP-28

Shigeki Nimori and Giyuu Kido
(National Institute for Materials Science, Japan)

Fundamental reform of the hybrid magnet system of NIMS

Poster Session-III

Thursday, August 5

ThP-1 (invited poster)

Erik Henriksen

(Columbia University, USA)

Interaction effects in the cyclotron resonance of monolayer graphene

ThP-2

Arkadiusz Wójs, Gunnar Möller, and Nigel R. Cooper

(University of Cambridge, UK)

Search for non-Abelian statistics in half-filled Landau levels of graphene

ThP-3

Maxim P. Telenkov, Yury A. Mityagin, and Petr F. Kartsev

(P. N. Lebedev Physical Institute of RAS, Russia)

Intersubband population inversion and stimulated terahertz transitions between Landau levels in resonant tunneling multiple quantum well structures

ThP-4

Takashi Oka and Hideo Aoki

(University of Tokyo, Japan)

All optical measurement proposed for the photovoltaic Hall effect

ThP-5

Y. H. Matsuda, G. A. Khodaparast, R. Shen, S. Takeyama, M. Bhowmick, X. Liu, J. Furdyna, and B. W. Wessels

(University of Tokyo, Japan)

Cyclotron resonance in InMnAs and InMnSb ferromagnetic films

ThP-6

Shojiro Takeyama, Hiroaki Suzuki, Hiroyuki Yokoi, Yoichi Murakami, and Shigeo Maruyama

(University of Tokyo, Japan)

Aharonov-Bohm exciton splittings in carbon nanotubes in ultra-high magnetic fields

ThP-7

H. Yokoi, M. Effendi, N. Minami, and S. Takeyama

(Kumamoto University, Japan)

Near-infrared magneto-optical study of excitonic states in single-walled carbon nanotubes under ultra-high magnetic fields

ThP-8

R. Shen, R. Akimoto, and S. Takeyama

(University of Tokyo, Japan)

Photo induced cyclotron resonance in ZnSe/BeTe type-II quantum wells

ThP-9

H. Saito, R. Akimoto, and S. Takeyama

(University of Tokyo, Japan)

Photoluminescence anomalies of indirect excitons localized at interfaces in CdS/ZnSe MQWs in very high magnetic fields

ThP-10

D. A. Kozlov, Z. D. Kvon, A. E. Plotnikov, and A. V. Latyshev

(Institute of Semiconductor Physics, Russia)

Semiclassical and quantum transport in the two-dimensional electron gas in an antidot lattices with periods of 180 nm and 80 nm

ThP-11

J. Sierra-Ortega, R. A. Escorcía, and I. D. Mikhailov

(Universidad del Magdalena, Colombia)

Spectrum of an exciton in type-II non-uniform quantum ring

ThP-12

G. Elizabeth Escorcía-Salas, J. M. García-Díaz, and J. Sierra-Ortega

(Universidad del Magdalena, Colombia)

Exciton trapped in vertically coupled nanorings under threaded magnetic field flux

ThP-13

Olga Rancova, Egidijus Anisimovas, and Tadas Varanavičius

(Vilnius University, Lithuania)

Structural changes in classical 2D quantum dots

ThP-14

Norman J. Morgenstern Horing and Makoto Sawamura

(Stevens Institute of Technology, USA and NIMS-MANA, Japan)

Landau quantization of a coupled double quantum dot system

ThP-15

L. Villegas-Lelovsky, Fanyao Qu, V. López-Richard, and G. E. Marques

(Universidade Federal de São Carlos, Brazil)

Engineering the sp-d exchange interaction in single Mn-doped vertical quantum dot molecules

ThP-16

Fanyao Qu, D. R. Santos Jr., V. López-Richard, G. E. Marques, and P. C. Morais

(University of Brasília, Brazil)

Tunable nanomagnetism in lateral quantum dot molecules: the roles of electric field and spin-orbit interaction

ThP-17

J. Gómez, F. Perez, B. Jusserand, G. Karczewski, and T. Wojtowicz

(CNRS/Université Paris VI Campus Boucicaut, France)

Damping of propagating spin waves, intrinsic q^2 contribution

ThP-18

Yasutaka Imanaka, Tadashi Takamasu, Shunsaku Nitta, and Syoji Yamada

(National Institute for Materials Science, Japan)

Cyclotron resonance of two dimensional Rashba systems in InGaAs

ThP-19

Syoji Yamada, Shunsaku Nitta, Hiiuma Iwase, Masashi Akabori, Yasutaka Imanaka, and Tadashi Takamasu
(CNMT JAIST, Japan)

Magnetic field dependency of spin-splitting in $In_{0.75}Ga_{0.25}As/In_{0.75}Al_{0.25}As$ two dimensional electron gas with strong Rashba spin-orbit coupling

ThP-20

Kyoichi Suzuki, Yuichi Harada, Koji Onomitsu, and Koji Muraki
(NTT Corporation, Japan)

Gate operation of GaSb/InAs electron-hole systems with an ALD insulating layer

ThP-21

M. Arai, S. Masubuchi, T. Yamaguchi, and T. Machida
(University of Tokyo, Japan)

Observation of single electron switching in graphene parallel double quantum dots

ThP-22

T. Yamaguchi, S. Masubuchi, R. Moriya, M. Arai, and T. Machida
(University of Tokyo, Japan)

Spin transport in graphene spin-valve devices with Al_2O_3 barrier

ThP-23

Rai Moriya, Hiroyuki Kobayashi, Eriko Ikenaga, Kenji Shibata, Satoru Masubuchi, Kazuhiko Hirakawa, Satomi Ishida, Yasuhiko Arakawa, and Tomoki Machida
(University of Tokyo, Japan)

Demonstration of a single-electron transistor composed of a self-assembled quantum dot and nanogap electrode fabricated by atomic force microscope local oxidation

ThP-24

Rai Moriya, Tomoki Machida, and Sayeef Salahuddin
(University of Tokyo, Japan)

Uni-polar current induced switching in magnetic nano-pillar using spin transfer torque

ThP-25

L. F. dos Santos, Y. G. Gobato, D. F. Cesar, V. López-Richard, G. E. Marques, M. J. S. P. Brasil, M. Orlita, J. Kunc, M. Henini, and R. J. Airey
(Federal University of São Carlos, Brazil)

Spin polarization of carriers in a resonant tunneling diode

ThP-26

L. M. Kai, H. Kim, and N. Kim
(Dongguk University, Korea)

Spin polarized current through a hybrid resonant tunneling diode: spin splitting size and temperature effect

ThP-27

Ikuzo Kanazawa
(Tokyo Gakugei University, Japan)

The large magnetoresistance mechanism and correlated magnetic solitons in diluted magnetic semiconductors