

Deutsche
Forschungsgemeinschaft

DFG



International Workshop on Semiconductor Spintronics

Final Workshop of the homonymous DFG-Priority Program 1285

September 30th – October 2nd 2013

Würzburg, Germany

Toscanaaal der Würzburger Residenz
Residenzplatz 2a
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Monday, 30th September

Time	Title	
8.45 – 9.15	Registration	
9.15 – 9.20	Kießling / Oestreich	Welcome
9.20 – 10.00	Plenary 1: Kuemmeth, Ferdinand (University of Copenhagen)	Towards high-performance multi-electron spin qubits
10.00 – 10.25	Kießling, Tobias (Universität Würzburg)	The significance of hot carrier effects for optical spin diffusion studies in n-type GaAs
10.25 – 10.50	Wurstbauer, Ursula (TU München)	Spin excitations in two-dimensional charge carrier systems
10.50 – 11.20	Coffee Break	
11.20 – 12.00	Plenary 2: Fabian, Jaroslav (Universität Regensburg)	Spin relaxation in GaAs and Si quantum dots
12.00 – 12.25	Beschoten, Bernd (RWTH Aachen)	Spin dephasing of donor spins in ZnO
12.25 – 12.50	Opel, Matthias (WMI Garching)	Electrical spin transport and spin relaxation in zinc oxide
12.50- 14.30	Lunch	
14.30 – 15.10	Plenary 3: Nitta, Junsaku (Tohoku University)	Spin coherent transport in semiconductors
15.10 – 15.35	Akimov, Ilya (TU Dortmund)	Spin separation effect in ferromagnetic/-semiconductor hybrid structure
15.35 – 15.50	Shvarkov, Stephan (Universität Bochum)	Anomalous Hall-effect in paramagnetic GaN/AlGaN heterostructures
15.50 – 16.15	Ehlert, Markus (Universität Regensburg)	Spin-Hall effect in 3D- and 2D-hole systems
16.15 – 16.45	Coffee break	
16.45 – 17.15	Jan van Delft (LMU München)	0.7 anomaly in a quantum point contact
17.15 – 17.45	Poster flash 1	
17.45 – 18.45	Poster session 1	

Tuesday, 01st October

Time	Title	
9.00 – 9.40	Plenary 4: Marie, Xavier (Université de Toulouse)	Electrical control of spin lifetime in (111) QWs
9.40 – 10.05	Ganichev, Sergey (Universität Regensburg)	Realization of gate-controlled persistent spin helix state conditions in (In,Ga)As quantum wells
10.05 – 10.30	Yakovlev, Dmitri (Universität Dortmund)	Spin dynamics of negatively charged excitons in CdSe/CdS colloidal nanocrystals
10.30 – 10.55	Debus, Jörg (Universität Dortmund)	Spin dynamics of indirect excitons in indirect-band-gap InAlAs quantum dots
10.55 – 11.20	Coffee break	
11.20 – 12.00	Plenary 5: Shermann, Evgene (IKERBASQUE Bilbao)	Spin measurements with spin-orbit coupling
12.00 – 12.25	Trushin, Maxim (Universität Konstanz)	Theory of conductivity of chiral particles
12.25 – 12.50	Burkard, Guido (Universität Konstanz)	Spin and valley coherence in quantum dots
12.50- 14.30	Lunch	
14.30 – 15.10	Plenary 6: Glazov, Mikhail (Ioffe Institute, Saint Petersburg)	Spin noise of non-equilibrium electrons and excitons
15.10 – 15.35	Greilich, Alex (Universität Dortmund)	Optical spectroscopy of spin noise
15.35 – 15.55	Hübner, Jens (Universität Hannover)	Spin noise of a single quantum dot
15.55 – 16.20	Fischer, Saskia (Humboldt Universität Berlin)	Electron waveguide interferometers for spin-dependent transport experiments
16.20 – 16.45	Coffee break	
16.45 – 17.15	Poster flash 2	
17.15 – 18.45	Poster session 2	
19.00	Wine tasting at the Residenz	

Wednesday, 02nd October

Time	Title	
9.00 – 9.40	Plenary 7: Bayer, Manfred (Universität Dortmund)	Quantum information based on electron spins in InGaAs quantum dots? Achievements and Problems
9.40 – 10.00	Hernández-Mínguez, Alberto (Paul-Drude-Institut Berlin)	Control of spin-orbit interaction in GaAs (111) heterostructures
10.00 – 10.20	Zhukov, Evgeny (Universität Dortmund)	Electron spin coherence in highly doped ZnSe-based quantum wells
10.20 – 10.40	Kormanyos, Andor (Universität Konstanz)	Spin-orbit coupling, quantum dots, and qubits in transitional metal dichalcogenides
10.40 – 11.00	Kagalovsky, Victor (Shamoon College of Engineering, Israel)	Decoherence induced by magnetic impurities in quantum Hall systems
11.00 – 11.20	Coffee break	
11.20 – 12.00	Plenary 8: Aeschlimann, (TU Kaiserslautern)	Spin-dependent trapping of electrons at spinterfaces
12.00 – 12.25	Buhmann, Hartmut (Universität Würzburg)	Spin injection and spin detection using quantum spin Hall edge channels
12.25 – 12.50	König, Jürgen (Universität Duisburg Essen)	Spin pumping through quantum dots
12.50 – 13.00	Kießling /Oestreich	Closing

Posters, Monday Session

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| 1. Akimov, Ilya | Spin separation effect in ferromagnetic/semiconductor hybrid structure |
| 2. Beschoten, Bernd | Spin dephasing of donor spins in ZnO |
| 3. Bougeard, Dominique | Spin injection and detection in silicon based heterostructures |
| 4. Bratschitsch, Rudolf | Ultrafast spin dynamics in wide-bandgap non-magnetic and magnetic semiconductors |
| 5. Delft, von Jan | 0.7 anomaly in a quantum point contact |
| 6. Gmitra / Fabian | Spin-orbit coupling and spin relaxation in grapheme |
| 7. Gönnerwein, Sebastian | Spin currents |
| 8. Grundler / Wilde | Magnetization of semiconductor nanostructures with spin-orbit interaction |
| 9. Hägele, Daniel | Spin dynamics in GaN |
| 10. Heisterkamp, Fabian | Resonance spin amplification in bulk ZnSe:F |
| 11. Henneberger / Bacher | Current-induced control of the electron-nuclear system in semiconductors on a micrometer scale |
| 12. Marie, Xavier | Optical manipulation of the valley and spin degree of freedom in MoS2 monolayers |
| 13. Opel / Geprägs | Spintronics in ZnO thin films and heterostructures |
| 14. Ossau / Kiessling | Time and spatially resolved electron spin detection in semiconductor heterostructures |
| 15. Reuter / Wieck | Anomalous Hall-effect in paramagnetic GaN/AlGaNheterostructures |

Posters, Monday Session

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| 16. Rojek, Stephan | Adiabatic spin pumping through an interacting quantum dot with spin-orbit coupling |
| 17. Santos, Paulo | Control of spin-orbit interaction in (111) GaAs heterostructures |
| 18. Varwig, Steffen | Temperature dependence of hole spin coherence |
| 19. Weiss, Dieter | Spin-Hall effect in 3D- and 2D-hole system |

Posters, Tuesday Session

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| 1. Bayer, Manfred | Non-linear optical spectroscopy for studying carrier spins in quantum dots |
| 2. Belzig, Wolfgang | Theory of conductivity of chiral particles |
| 3. Chiatti, Olivio | Electrical and THz optical transport studies of laser-patterned nanostructures on InAs -based heterostructures |
| 4. Chudnovskiy, Alexander | Transport and magnetization dynamics in semimagnetic quantum dots |
| 5. Debus, Jörg | Spin-flip Raman scattering of electron and heavy-hole in CdTe/(Cd,Mg)Te quantum wells enabled by anisotropic exchange |
| 6. Glasenapp, Philipp | Polarimetric sensitivity in spin noise |
| 7. Gould, Charles | Zero field spin polarization through self-assembled quantum dots in two dimensional resonant tunneling devices |
| 8. Holleitner, Alexander | Optoelectronic detection of spin dynamics in mesoscopic circuits |
| 9. Kastl, Christoph | Ultrafast control of spin currents in topological insulators |
| 10. König, Jürgen | Spin pumping through quantum dots |
| 11. Langer, Lukas | Magnetic field induced oscillations of photon echo from localized trions |
| 12. Hübner / Oestreich | Spin noise spectroscopy |
| 13. Olbrich/Zoth/Ganichev | Cyclotron resonance assisted spin-polarized photocurrents in HgTe quantum wells |
| 14. Rancic, Marko | Spin-orbit effects on nuclear state preparation in GaAs double quantum dots |

Posters, Tuesday Session

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| 15. Rohling / Burkard | Tomography scheme for two spin-1/2 qubits in a double quantum dot |
| 16. Rothe / Hankiewicz | All-electric qubit control in heavy hole quantum dots via non-Abelian geometric phases |
| 17. Schüller / Korn | Ultrafast and time-resolved Raman spectroscopy of spin excitations in p-doped semiconductor heterostructures |
| 18. Schumacher / Pierz | Broadband inductive characterization of precessional dynamics of GaMnAs |
| 19. Wenderoth / Iffländer | Electronic and magnetic properties of the ideal Fe/GaAs(110) interface |
| 20. Yakovlev / Debus | Cooling and heating effects in Mn spin system in II-VI diluted magnetic semiconductors |

