



school for
contacts in nanosystems

International Workshop

on

Contacts in Nanosystems: Interaction, Control, and Quantum Dynamics

Goslar, 5. – 7. 10. 2016

Hotel Hessenkopf: Hessenkopf 5, 38644 Goslar

Wednesday, 5. 10. 2016

13:30 - 14:00	Arrival and coffee
14:00 - 14:15	Opening
14:15 - 15:00	Prof. Pavesi (Trento) <i>Silicon nanocrystals for nonlinear optics and secure communications</i>
15:00 - 15:20	Daria Bezshlyakh (group A. Waag) <i>LED-based optical micromanipulation</i>
15:20 - 15:40	Baskar Singh (group D. Schaadt) <i>GaAs based Solar cell for efficiency enhancement</i>
15:40 – 16:00	Dennis Mauch (group A. Hangleiter) <i>Two-dimensional electron gases induced by polarization effects in AlGaIn/GaN heterostructures</i>
16:00 - 16:30	Coffee
16:30 - 17:15	Prof. Volz (Marburg) <i>Integration of III/V semiconductors on Si (001) substrates</i>
17:15 - 17:35	Waqas Saddique (group W. Daum) <i>Formation of a stable surface oxide layer at GaP(100) electrodes for increased durability in photoelectrochemical systems</i>
17:35 - 17:55	Davood Momeni Pakdehi (group H. Schumacher) <i>Vanishing resistance anisotropy of ultra-smooth epitaxial graphene on SiC</i>
18:30	Dinner
20:00	Get together

Thursday, 6. 10. 2016

9:00 - 9:45	Prof. Holleitner (TU München) <i>Low to high frequency contacts to nanosystems (from DC to THz)</i>
9:45 - 10:30	Prof. Ding (Hannover and Dresden) <i>Towards a semiconductor based quantum optics network</i>
10:30 – 11:00	Coffee
11:00 - 11:20	Pavel Sterin (group M. Oestreich) <i>Interferometrically Enhanced Spin Noise Spectroscopy of ^{87}Rb</i>
11:20 – 11:40	Benjamin Köhler (group W. Brenig) <i>Field Dependence of Magnonic Thermal Conductivity</i>
11:40 – 12:00	Daniel Borchert (group H. Frahm) <i>Anionic quasi-particles in 1d fermionic systems</i>
12:00 – 14:00	Lunch
14:00 – 14:45	Prof. Morgenstern (RWTH Aachen) <i>Weak Topology and Rashba Effect: the real space view</i>
14:45 – 15:05	Savutjan Sidik (group P. Lemmens) <i>The Preparation of the template-based plasmonic and magnetic nanostructures via electrochemical deposition</i>
15:05 – 15:25	Zamin Mamiyev (group H. Pfnür) <i>2D crossover and strong coupling of plasmon excitations in quasi-1D Au atomic wires</i>
15.30 – 16:00	Coffee
16:00 – 16:45	Prof. Trauzettel (Würzburg) <i>Exotic physics at the quantum spin Hall edge</i>
16:45 – 17:05	Jan-Moritz Bischoff (group E. Jeckelmann) <i>Conductance of a Quantum Wire derived by DDMRG</i>
18:30	Dinner
20:00 – 22:00	Poster session

Friday, 7. 10. 2016

9:00 – 9:45	Prof. Kroha (Uni. Bonn) <i>Kondo dimer contacts: Kondo destruction and Kondo enhancement</i>
9:45 – 10:30	Prof. Ihn (ETH Zürich) <i>Spin-orbit coupling at the level of a single electron</i>
10:30 – 11:00	Coffee
11:00 – 11:20	Johannes Bayer (group R. Haug) <i>Charge State Manipulation in Quantum Dot Arrays</i>
11:20 – 11:40	Simon Jahns (group G. Zwicknagl) <i>Renormalized Perturbation Theory for the Single Impurity Anderson Model</i>
11:40 – 12:00	Alexander Schuray (group P. Recher) <i>Fano resonances in networks of Majorana bound states</i>
12:00 – 12.15	Closing
12.15 - 13:30	Lunch
13:30 – 14:15	General meeting of graduate school
14:30 – 16:30	Excursion to the battery test center Goslar

Poster Session (Thursday 20:00 – 22:00)

- 1 **L. Abaspour**, et al. (group M. Oestreich)
Optical dispersion of a 1D graphene-dielectric photonic structure beyond Dirac cones approximation
- 2 **D. M. Pakdehi**, et al. (group H. Schumacher)
Vanishing resistance anisotropy of ultra-smooth epitaxial graphene on SiC
- 3 **T. Lichtenstein**, et al. (group H. Pfnür)
About the origin of 1D metallicity in Ag monolayer stripes on Si(557)
- 4 **F. Edler**, et al. (group H. Pfnür)
The effect of adsorbates on the transport characteristics of Au chains on vicinal Si(hhk) surfaces
- 5 **H. Kuhn**, et al. (group M. Oestreich)
Optical Experiments on Externally Stressed GaN/InGaN Quantum Wells
- 6 **Y. Ergün**, et al. (group E. Jeckelmann)
Ginzburg-Landau-Langevin for phase transition in In/Si(111)
- 7 **T. Wagner**, et al. (group R. Haug)
Single-electron feedback control in the limit of strong response
- 8 **J. Kühne**, et al. (group R. Haug)
Influence of Dimensionality on Tunneling into a Quantum Dot
- 9 **J. Bayer**, et al. (group R. Haug)
Charge State Manipulation in Quantum Dot Arrays
- 10 **B. Pogoda**, et al. (group A. Waag)
Self-heating element for gas sensing
- 11 **A. Pidatella**, et al. (group W. Brenig)
Thermal transport in Kitaev-Heisenberg systems
- 12 **P. Lemmens**, et al.
Spectroscopic studies of topological semiconductors and semimetals
- 13 **D. Westerfeld**, et al. (group H. Frahm)
The inverse problem for face models
- 14 **K. Hobus**, et al. (group H. Frahm)
Quasi momentum for staggered $U_q[sl(2|1)]$ superspin chains
- 15 **B. Liu**, et al. (group P. Lemmens)
Strong coupling of plasmons to molecular excitons of Aza-BODIPY: Evidence for plexcitonic behavior
- 16 **W. Saddique**, et al. (group W. Daum)
Formation of a stable surface oxide layer at n-GaP(100) photoanode for increased durability in photoelectrochemical systems
- 17 **E. P. Rugeramigabo**, et al. (group R. Haug/F. Ding)
Phase transition in a two-dimensional electron gas system in GaAs/AlGaAs quantum well with intentionally incorporated impurities
- 18 **A. Heine**, et al. (group R. Haug)
The influence of quantum Hall edge states on the Kondo screening of a quantum dot