



SPP1666 Status and Networking Meeting

14 – 16 September 2015

Bad Sooden-Allendorf

EKKOs Kultur- und Tagungshotel, Brunnenplatz 11, 37242 Bad Sooden-Allendorf

Final Program (as of 11 September 2015)

Monday 14 September 2015

From 12:00 Buffet lunch

13:45 Rader, Berlin: "Welcome and introduction to the priority program"

13:55 Reister, Bonn: "Information from DFG on application and assessment"

14:05 Time for questions

14:15 – 15:30 Strongly correlated topological insulators

14:15 Severing, Cologne: "Search for new strongly correlated topological insulators: a combined spectroscopic and ab-initio study"

14:40 Pentcheva, Duisburg: "Design of Mott and topological phases on buckled 3d-oxide honeycomb lattices"

15:05 Wirth, Dresden: "Scanning Tunneling Microscopy and Spectroscopy (STM/S) on correlated topological insulators"

15:30 – 16:00 Coffee

16:00 – 17:40 Growth

16:00 Mussler, Jülich: "Molecular-beam epitaxy of tailor-made $(\text{Bi,Sb})_2(\text{Te,Se})_3$ heterostructures with low bulk carrier concentrations"

16:25 Schulz, Essen: "New ALD precursors and deposition of tetradymite-type thin films"

16:50 Nielsch, Dresden: "Chalcogenide-type Nanostructures: Topological Insulator Nature versus Thermoelectric Performance "

17:15 Isaeva, Dresden: "New topological insulators in the bismuth-halogen systems: Synthesis and characterization"

18:00 Dinner **19:00 – 21:00 Poster session**

Tuesday 15 September 2015

8:50 – 10:30 Transport

- 8:50 Weiss, Regensburg: "Magnetotransport and magnetocapacitance in strained HgTe"
- 9:15 Beschoten, Aachen: "Phase-coherent transport in catalyst-free vapor phase deposited Bi₂Se₃ crystals"
- 9:40 Dufouleur, Dresden: "Quantum Transport in 3D Topological Insulator Nanostructures - Quantum confinement effect and interaction with the disorder"
- 10:05 Richter, Regensburg: "Two-dimensional topological insulator edge state backscattering by dephasing"

10:30 – 11:00 Coffee

11:00 – 12:40 Electronic properties

- 11:00 Morgenstern, Aachen: "Scanning tunneling spectroscopy: From weak topology to elusive Majoranas"
- 11:25 Rader, Berlin: "ARPES experiments on band gap opening"
- 11:50 Meyerheim, Halle: "Structure and related electronic properties of pristine and adsorbate covered Bi₂Se₃(0001)."
- 12:15 Toimil-Molares, Darmstadt: "NanoARPES of individual Bi₂Te₃ nanowires"

13:00 Lunch

14:15 – 15:30 3D Weyl semimetals

- 14:15 Felser, Dresden: "Topological insulators in Heusler and Weyl semimetals"
- 14:40 Lemmens, Braunschweig: "Screening and Low Energy Electron Dynamics of Dirac/Weyl Systems investigated using Raman scattering"
- 15:05 Pronin, Stuttgart: "Optical response of Dirac fermions in Cd₃As₂"

15:30 – 16:00 Coffee

16:00 – 17:40 Magnetic topological insulators

- 16:00 Minár, Munich: "Magnetically doped topological insulators: surface states, dimensionality and defect effects – Theory"
- 16:25 Tjeng, Dresden: "Interfacing superconductors and ferromagnets with topological insulators using all in-situ/ultra high vacuum processes"
- 16:50 Sessi, Würzburg: "Signatures of Dirac fermion-mediated magnetic order"
- 17:15 Eremin, Bochum: "Proximity effects at the interface between topological insulator and ferromagnet"

18:00 Dinner and **Poster Session (19:00 – 21:00)**

Wednesday 16 September 2015

8:50 – 10:30 New phases and devices

- 8:50 Henk, Halle: “New Topological Phases in Strained HgTe alloys”
- 9:15 Schäfer, Würzburg: “Evolution of the topological band situation for ultrathin and functionalized α -Sn layers”
- 9:40 Yan, Stuttgart: “Graphene based two dimensional topological insulator by proximity effect”
- 10:05 Ando, Cologne: “Efforts toward Topological Insulator Devices”

10:30 – 11:00 Coffee

11:00 - 12:40 Dynamics

- 11:00 Dantscher, Regensburg: “Cyclotron Resonance Induced Photocurrents in Surface States of a 3D Topological Insulator”
- 11:25 Münzenberg, Greifswald: “Ultrafast spin dynamics in three dimensional topological insulators”
- 11:50 Gütde, Marburg: “Direct optical excitation of the topological surface state in Sb_2Te_3 by mid-infrared laser pulses observed by time- and angle-resolved photoemission”
- 12:15 Holleitner, Garching: “Optoelectronics of topological insulators”
- 12:40 Closing remarks
- 13:00 Lunch and departure

(changes on 11 Sept: lunch added; changes relative to second draft: welcome specified, 2 titles updated; changes relative to first draft: Poster session repeated Tuesday night, titles added)

Poster Session (permanent)

Identical sessions on Mo/ Tu, 14/15 September 2015, Poster pinboards are 115 cm wide and 145 cm high meaning A0 landscape as well as portrait are OK

2D Topological insulators

1. Bihlmayer, Jülich: "Ab-initio calculations of 1D edge states of topological materials: electronic structure and transport properties"
2. Pfeffer, Würzburg: "GaSb/InAs 2D TI Materials and Devices"

TI interfaces

3. Rosenbach, Jülich: "Structural and electrical characterization of MBE-grown n-Bi₂Te₃/p-Sb₂Te₃ heterostructures"
4. Plucinski, Jülich: "Epitaxial Sb₂Te₃/Bi₂Te₃ heterostructures: a new (route to) topological p-n junction"
5. Veyrat, Dresden: "Band bending inversion in Bi₂Se₃ nanostructures"

Transport properties

6. Rüssmann, Jülich: "Ab-initio investigation of quasiparticle spin-interference on the topological insulator Bi₂Te₃"
7. Wiebe, Hamburg: "Response of the topological surface state to surface disorder in TlBiSe₂"
8. Voigtländer, Jülich: "Surface Transport on Topological Insulators using Multiprobe STM"
9. Jafarpisheh, Aachen: "Phase-coherent transport in catalyst-free vapor phase deposited Bi₂Se₃ crystals"
10. Essert, Regensburg: "Magneto transport in 2d and 3d topological insulators"
11. Krieg, Darmstadt: "Transport properties and NanoARPES of TI nanowires"

Novel TI materials

12. Fiedler, Regensburg: "Investigations on novel ternary candidates for TI"
13. Zhang, Darmstadt: "Topological properties of pyrochlore iridates: an LDA+DMFT study"
14. Freund, Augsburg: "Topological phases in honeycomb transition-metal oxides"
15. Roessler, Dresden: "SmB₆ viewed through a Scanning Tunneling Microscope"

Superconductor hybrids

16. Nogueira, Bochum: "Higgs Mechanism and Anomalous Hall Effect in Three-Dimensional Topological Superconductors"
17. Reiss, Bielefeld: "Thin film hybrid structures of topological insulators with superconductors and ferromagnets: experiment and theory"

Brunnenplatz 1
37242 Bad Sooden-Allendorf

Telefon: +49 (0)5652-5876-4000
Telefax: +49 (0)5652-5876-4999

E-Mail: rezeption@ekkos-hotel.de
Internet: www.ekkos-hotel.de

Die Anbindung des **Bahnhofs Bad Sooden-Allendorf** an die ICE-Linien erfolgt schnell und regelmäßig über die **Hauptbahnhöfe Göttingen, Kassel und Fulda**. Die nächstgelegenen internationalen **Flughäfen** sind **Hannover, Frankfurt am Main** und **Erfurt**.



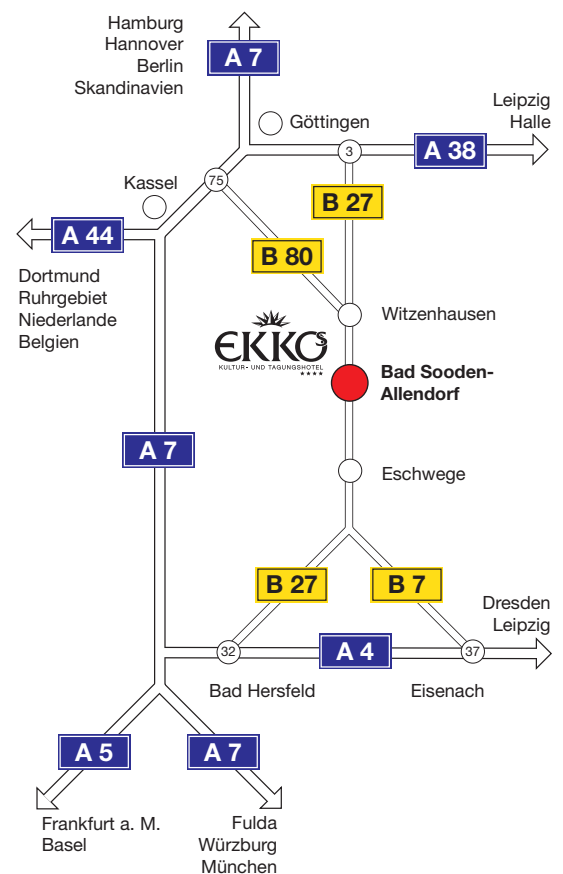
Mit dem PKW

aus Richtung Norden: A7 - Abfahrt Drammetal - auf die A 38 - Abfahrt B27 nach Bad Sooden-Allendorf

aus Richtung Süden: A7-Abfahrt Bad Hersfeld- auf die B27 Richtung Eschwege- Bad Sooden-Allendorf

aus Richtung Westen: A44 - bei Kassel auf die A7 - Abfahrt Hedemünden - Witzenhausen - B27- Bad Sooden-Allendorf

aus Richtung Osten: A38- Göttingen- Abfahrt B27 nach Bad Sooden-Allendorf



Im Ort

Bitte ignorieren Sie die Abfahrt Bad Sooden-Allendorf und fahren Sie bis zur Ausfahrt „Sooden“ (am OBI-Turm). Dort biegen Sie in Richtung Kultur- und Kongresszentrum/EKKOs Hotel ab. Folgen Sie dem Straßenverlauf (durch die Bahnunterführung), Sie werden über den Balzerbornweg geführt, nehmen im Kreisverkehr die erste Ausfahrt und fahren links in die Fußgängerzone. Diese Straße führt Sie über den Brunnenplatz rechter Hand befindet sich das EKKOs Hotel.