

PhD Theses at IFF

2022

Robert Kuhrt

Charge Transfer in Organic Semiconductor Systems Probed by Photoemission Spectroscopy

Yaofeng Wang

Synthesis and isolation of metallofullerene-based single-molecule magnets

Felix Lucas Kern

Miniaturized Electron Optics based on Self-Assembled Micro Coils

Arthur Veyrat

Superconductivity and topology in trigonal-PtBi₂

Christoph Wellm

New Phenomena in Magnetically Frustrated Electron Systems Probed by Electron Spin Resonance Spectroscopy

2021

Francesco Scaravaggi

Electronic correlations and nematicity in 122 and 1111 Fe-based superconductors

Vasilii Dubrovin

Effects of non-covalent interactions on electronic structure and anisotropy in Ln-based SMMs: theoretical studies

Georgios Velkos

Magnetic studies on lanthanide-based endohedral metallofullerenes

Piotr Lepucki

Development of self-assembled, rolled-up microcoils for nuclear magnetic resonance spectroscopy

Aoyu Tan

Magneto-transport Properties of Antiferromagnetic Topological Insulators MnBi₂Te₄ and MnBi₄Te₇

Valentin Labracherie

Electrical transport in nanostructures of the Weyl semimetal WTe₂

Sebastian Schimmel

Aufbau und Performance eines 30mK-Rastertunnelmikroskops und Untersuchungen zum Einzelmolekülmagnet Dy₂ScN@C₈₀ auf Substratoberflächen

Sebastian Selter

Crystal Growth, Structure and Anisotropic Magnetic Properties of Quasi-2D Materials

Gizem Aslan-Cansever

Effect of Impurities, Off-Stoichiometry and Site-Disorder on Structural and Magnetic Properties of Transition Metal Oxides Induced by Different Synthesis Conditions

2020

Christoph Wuttke

Thermoelektrische Transportuntersuchungen an topologischen und korrelierten Elektronensystemen

Jose Maria Guevara Parra

Spectroscopic imaging of novel correlated electronic phases

Martin Grönke (BTU Cottbus-Senftenberg)

Synthesis and characterization of layered transition metal trihalides MCl_3 ($M = Ru, Mo, Ti, Cr$) and CrX_3 ($X = Cl, Br, I$).

Carsten Habenicht

Spectroscopic investigation of excitons and doping-induced semiconductor-to-metal transitions in transition metal dichalcogenides

Lukas Spree (TU Freiberg)

Synthesis, Isolation, Characterization, and Surface Deposition of Endohedral Fullerenes with Single-Electron Lanthanide-Lanthanide Bonds

Michael Vogl

Magnetic exchange interactions in Ir^{4+} -based double perovskites

Julian Zeisner

ESR-Spektroskopie an niedrigdimensionalen und magnetisch frustrierten Elektronensystemen

2019

Yevhen Kushnirenko

Details of 3D electronic structure of some Fe-based superconductors and their superconducting order parameters

Margarita Iakovleva

Magnetic Resonance Spectroscopy on Low-dimensional and Frustrated Magnets

Florian Kiebert

Flüssigkeits- und Partikelmanipulation in mikrofluidischen Oberflächenwellen-Systemen

Eric Haubold

Electronic structure of topological semimetals

Victoria Eckert

Wachstumsmechanismen und Oberflächeneigenschaften undotierter und N-dotierter Kohlenstoffnanoröhren

Rasha Ghunaim

Development of Intermetallic Filled Carbon Nanotube Sensors for Hyperthermia Applications

Maik Scholz

Chemische und thermische Modifizierung von Garnen aus Kohlenstoffnanoröhren

2018

Christin Schlesier

Synthese und magnetische Eigenschaften von Dysprosium-Nitrid-Clusterfullerenen

Ariane Brandenburg

Synthese und Derivatisierung endohedraler Clusterfullerene

Denis Krylov

Magnetic studies of endohedral fullerenes

Eric Müller

Electron energy-loss spectroscopy on transition-metal dichalcogenides and α - RuCl_3

Rhea Kappenberger

Das System LaFeAsO in Poly- und Einkristallen

Robert Fuge

Strukturelle und mechanische Eigenschaften von Kohlenstoffnanoröhren

2017

Stephan Fuchs

Elektronenspinresonanz an Iridaten in Doppelperowskitstrukturen

Pranab Kumar Nag

Unusual electronic properties in LiFeAs probed by low temperature scanning tunneling microscopy and spectroscopy

Uwe Gräfe

Investigation of the Superconducting and Magnetic Phase Diagram of Off-Stoichiometric LiFeAs

Florian Ruckerl

Photoemission Spectroscopy at Organic Semiconductor Systems

Nataliya Samoylova

Cluster-based redox activity in Endohedral Metallofullerenes: Electrochemical and EPR studies

Katrin Junghans

Clusterfullerensynthese mit Methan

Marcel Haft

Synthese intermetallischer Nanostrukturen in Kohlenstoffnanoröhren

Yannic Utz

The Effect of In-Chain Impurities on 1D Antiferromagnets - An NMR Study on Doped Cuprate Spin Chains

2016

Christian Nowka

Untersuchungen zu Gasphasentransporten in quasibinären Systemen von Bi_2Se_3 mit Bi_2Te_3 , Sb_2Se_3 , MnSe und FeSe zur Erzeugung von Nanokristallen

Stephan Zimmermann

Elektronenspinresonanz an niederdimensionalen und frustrierten magnetischen Systemen

Frederik Klein

Graphitisierung von tetraedischem amorphem Kohlenstoff mittels Elektronen im Rastertunnel und Rasterelektronenmikroskop

Christian David Salazar Enriques

Scanning tunneling microscopy on low dimensional systems: dinickel molecular complexes and iron nanostructures

Nadine Heming

Untersuchung der Volumen- und Oberflächeneigenschaften von Hexaboriden

Julia Körner

Gekoppelte Oszillatoren als neuartige Sensoren für Cantilever-Magnetometrien

Louis Veyrat

Quantum Transport Study of Spin-Helical Dirac Fermions in 3D Topological Insulator Nanostructures

Christopher Reiche

Novel sensors for scanning force microscopy based on carbon nanotube mechanical resonators

Alexander Fedorov

Electronic structure of doped 2D materials

Markus Gellesch

Statistical study of the effect of annealing treatments on assemblies of intermetallic magnetic nanoparticles related to the Heusler compound Co_2FeGa

Ahmad Omar

Disentangling the Intrinsic Attributes and the Physical Properties in Cobalt-based Quaternary Heusler Compounds

Wolf Schottenhamel

Aufbau eines hochauflösenden Dilatometers und einer hydrostatischen SQUID-Druckzelle sowie Untersuchungen an korrelierten Übergangsmetalloxiden

Steven Rodan

Nuclear magnetic resonance and specific heat studies of half-metallic ferromagnetic Heusler compounds

Azar Aliabadi

ESR and Magnetization Studies of Transition Metal Molecular Compounds

2015

Frank Steckel

Thermische und elektrische Transportuntersuchungen an niederdimensionalen korrelierten Elektronensystemen

Janek Maletz

Low-energy electronic structure of iron chalcogenide superconductors

Tobias Ritschel

Electronic self-organization in layered transition metal dichalcogenides

Martha Scheffler

Microscopic tunneling experiments on atomic impurities in graphene and on magnetic thin films

Rafael Gregorio Mendes

Synthesis, characterization and toxicological evaluation of carbon-based nanostructures

Uwe Treske

Valence changes at interfaces and surfaces investigated by X-ray spectroscopy

Sami Makharza

Graphene Oxide Nanohybrids as Platforms for Carboplatin Loading and Delivery

Benjamin Mahns

Elektronische Eigenschaften dotierter polyzyklischer aromatischer Kohlenwasserstoffe

2014**Dirk Bombor**

Transportmessungen an supraleitenden Eisenpniktiden und Heusler-Verbindungen

Maria Dimitrakopoulou

Investigations of Si-based and Heusler nanostructures

Abdelwahab Hassan

Electrical properties of different kinds of multi-walled carbon nanotubes, carbon nanofibers and nanocomposites materials

Susi Lindner

Charge transfer at phtalocyanine interfaces

Ashwin Mohan

Low-Dimensional Quantum Magnets: Single Crystal Growth and Heat Transport Studies

Sven Partzsch

Magnetoelectric Coupling Mechanisms in $YMn_{2-x}FeO_5$ and $NdFe_3(BO_3)_4$ Revealed by Resonant X-ray

Markus Schäpers

Exploring the Frustrated Spin-Chain Compound Linarite by NMR and Thermodynamic Investigations

Ronny Schlegel

Untersuchung der elektronischen Oberflächeneigenschaften des stöchiometrischen Supraleiters LiFeAs mittels Rastertunnelmikroskopie und -spetrokopie

Jan Trinckauf

An ARPES study of correlated electron materials on the verge of cooperative order

Raghunandan Ummethala

Growth and field emission characteristics of MWCNT's on different substrates

2013**Andreas König**

Charge-Density Waves and Collective Dynamics in the Transition-Metal Dichalcogenides: An Electron Energy-Loss Study

Oleg Mityashin

Magnetic heat transport in low-dimensional quantum spin systems

Giacomo Prando

Phase Diagrams of REFeAsO_{1-x}F_x Materials

Christian Rudisch

Nuclear Magnetic Resonance on Selected Lithium Based Compounds

Anna Svitova

Mixed-Metal Clusterfullerenes: New Structures and New Challenges

Uhland Weißker

Synthesis and mechanical properties of iron-filled carbon nanotubes

Yang Zhang

Metal Nitride Cluster as a Template to Tune the Electronic and Magnetic Properties of Rare-Earth Metal Containing Endohedral Fullerenes