

Monday

8:40 Opening

Two-dimensional materials and heterostructures 1 Chair: Sami Dzsaber (TU Wien - Institute of Solid State Physics)

- 9:00 **Magdalena Bichler** (TU Wien - Institute of Materials Chemistry)
The (012) surfaces of hematite and their interactions with water – a DFT study
- 9:30 **Bálint Szentpéteri** (Budapest University of Technology and Economics)
Study of spin-orbit coupling in Graphene/BiTeBr heterostructures
- 10:00 **Andrea Marchese** (High Field Magnet Laboratory - Radboud University)
Polarons in a two dimensional electron gas under extreme Far Infrared radiation power

Coffee break

Memristors Chair: Zoltán Scherübl (Budapest University of Technology and Economics)

- 10:45 **Dániel Molnár** (Budapest University of Technology and Economics)
Switching dynamics of nanometer-scale Nb₂O₅ memristor junctions
- 11:15 **Tímea Nóra Török** (Budapest University of Technology and Economics)
Study of conductance channels in atomic-sized Nb₂O₅ memristors
- 11:45 **Nóra Balogh** (Budapest University of Technology and Economics)
Ag₂S memristors as inorganic synapses
- 12:15 **Botond Sánta** (Budapest University of Technology and Economics)
Resistive switching in silver iodide point-contact devices

Lunch break

Two-dimensional materials and heterostructures 2 Chair: Botond Sánta (Budapest University of Technology and Economics)

- 14:00 **Zoran Rukelj** (University of Zagreb)
Excitons in two-dimensional hexagonal boron nitride
- 14:30 **Máté Kedves** (Budapest University of Technology and Economics)
Locally gated hBN/graphene heterostructures
- 15:00 **Agnieszka Grabarek** (Jagiellonian University - Institute of Physics)
Formation of self-assembled monolayers based on bioorganic molecules

Coffee break

Biophysics Chair: Ádám Butykai (Budapest University of Technology and Economics)

- 15:45 **Ágnes Orbán** (Budapest University of Technology and Economics)
A novel device for malaria diagnosis: the rotating-crystal magneto-optical method
- 16:15 **Petra Molnár** (Budapest University of Technology and Economics)
The RMOD as a laboratory and field diagnostic tool
- 16:45 **Szilvia Mucza** (Budapest University of Technology and Economics)
Magnetic collecting of malaria pigment crystals by magnetized thin films
- 17:15 **Katharina Preißinger** (University of Augsburg - Experimental Physics I)
The role of phase transitions for membrane processes

Tuesday

Optics and spectroscopy Chair: Ágnes Orbán (Budapest University of Technology and Economics)

- 9:00 **Jan Gospodarič** (TU Wien - Institute of Solid State Physics)
Investigation of 3D-printed phase waveplates for THz beam shaping
- 9:30 **Sebastian Pucher** (TU Wien - Atominstitut)
Spectroscopy of the $6S_{1/2} - 5D_{5/2}$ electric quadrupole transition of atomic cesium
- 10:00 **Daniel Reuter** (University of Augsburg - Experimental Physics V)
Dielectric Spectroscopy on Choline-Chloride Based Deep Eutectic Solvents
- 10:30 **Felix Hütt** (University of Stuttgart)
Optical Conductivity Studies of Topological Semimetals

Coffee break

Nanophysics 1 Chair: Zoltán Kovács-Krausz (Budapest University of Technology and Economics)

- 11:15 **Olivér Csaba Kürtössy** (Budapest University of Technology and Economics)
Characterization of InP barriers with different thickness in InAs nanowire heterostructures
- 11:45 **Gréta Mezei** (Budapest University of Technology and Economics)
Investigation of organic single-molecule nanowires at low temperature

Lunch break

Nanophysics 2 Chair: Zoltán Kovács-Krausz (Budapest University of Technology and Economics)

- 13:30 **Mátyás Kocsis** (Budapest University of Technology and Economics)
Electronic gating of a giant Rashba-type spin-orbit material, BiTeBr
- 14:00 **Brecht Donvil** (University of Helsinki)
Analysis of a Qubit-Calorimeter Model

Coffee break

From High- T_c to topology Chair: Péter Balla (Budapest University of Technology and Economics)

- 14:45 **Izabela Bialo** (AGH University of Science and Technology, Krakow & TU Wien)
Pulsed-field X-ray absorption spectroscopy study in High- T_c superconductors
- 15:15 **György Frank** (Budapest University of Technology and Economics)
Topologically protected degenerate ground states in two-spin systems
- 15:45 **Lara Ulčakar** (Jožef Stefan Institute)
Slow quenches in time-reversal symmetric insulators
- 16:15 **Sami Dzsaber** (TU Wien - Institute of Solid State Physics)
Crossover from Kondo insulator to semimetal by tuning spin-orbit coupling

Tuesday

17:00

Poster session

Joachim Deisenhofer (University of Augsburg)

Origin of the electric polarization in $FeCr_2S_4$

David Maluski (University of Cologne - II. Physikalisches Institut)

THz spectroscopy on chiral Ni_3TeO_6 in magnetic fields up to 8T

Philipp Warzanowski (University of Cologne - II. Physikalisches Institut)

Non-linear optical response in $SrCuO_2$

Juan Fernandez Afonso (TU Wien - Institute of Solid State Physics)

Theoretical investigation of excitonic magnetism in $LaSrCoO_4$

Péter Balla (Budapest University of Technology and Economics)

High temperature magneto-optical properties of $Sr_2CoSi_2O_7$

Ines Markulin (Institute of Physics, Zagreb)

2D and near-surface polarons

Andrea Marchese (High Field Magnet Laboratory - Radboud University)

Polarons in a two dimensional electron gas under extreme Far Infrared radiation power

Bruno Gudac (Faculty of Science, University of Zagreb)

*Synthesis, preparation and transport measurements of topological insulators $BiSbTe_2S$
 $BiSbTeSe_2$*

Zoltán Kovács-Krausz (Budapest University of Technology and Economics)

Surface proximity effects of $BiTeI/BiTeBr$ on graphene

Zoltán Scherübl (Budapest University of Technology and Economics)

Non-local probing of superconducting quantum dots via Yu-Shiba-Rusinov-state in Cooper pair splitter

Leila Kalantari (TU Wien)

Test and analysis of nonlocal van der Waals density functional for solids

Ana Najev (University of Zagreb - Department of Physics, Faculty of Science)

DTA of strongly underdoped LSCO

Elżbieta Gumieniczek-Chłopek (AGH University of Science and Technology, Faculty of Physics and Applied Computer Science)

Biopolymer Capsules with Magnetic Properties

Bence Bernáth (High Field Magnet Laboratory - Radboud University)

THz pump-probe setup for FELIX/HFML combination

Wednesday

Excursion day ([Palais Schönbrunn](#))

16:00 **Veronika Sunko** ([Max Planck Institute for Chemical Physics of Solids](#), Dresden, Germany; [University of St Andrews](#), St Andrews, UK):

[Achieving giant Rashba splitting in transition metal oxide surface states](#)

Location: Green building of the Institute of Solid State Physics, Wiedner Hauptstraße 8-10, seminar room on the 7th floor of the red area

Thursday

Spectroscopy on multiferroics Chair: Laur Peedu (National Institute of Chemical Physics and Biophysics, Tallinn, Estonia & Tallinn University of Technology)

09:00 **Kirill Amelin** (National Institute of Chemical Physics and Biophysics, Tallinn, Estonia & Tallinn University of Technology)

Study of magnetism-driven order by THz absorption spectroscopy

9:30 **Dániel Gergely Farkas** (Budapest University of Technology and Economics)

High-temperature directional dichroism in paramagnetic phase of $\text{Sr}_2\text{CoSi}_2\text{O}_7$

10:00 **Jakub Vít** (Budapest University of Technology and Economics)

Electric field control of the nonreciprocal light absorption in $\text{Ba}_2\text{CoGe}_2\text{O}_7$

Coffee break

Skymions Chair: Stephan Reschke (University of Augsburg - Experimental Physics V)

10:45 **László Balogh** (Budapest University of Technology and Economics)

Exploring the magnetic phase diagram of GaMo_4S_8 crystals with lacunar spinel structure

11:15 **Ádám Butykai** (Budapest University of Technology and Economics)

Reciprocal-space structure of the magnetic modulations in lacunar spinel GaMo_4S_8 studied by SANS

11:45 **Korbinian Geirhos** (University of Augsburg - Experimental Physics V)

Magnetic and polar properties of the lacunar spinel GaMo_4S_8

Lunch break

Spectroscopy on multiferroics 2 Chair: Jakub Vít (Budapest University of Technology and Economics)

13:30 **Lorenz Bergen** (TU Wien - Institute of Solid State Physics)

Far infrared studies on langasites

14:00 **Lukas Weymann** (TU Wien - Institute of Solid State Physics)

Magnetic excitations and high-order magnetoelectric effect in holmium langasite

14:30 **Laur Peedu** (National Institute of Chemical Physics and Biophysics, Tallinn, Estonia & Tallinn University of Technology)

Optical spin-wave excitations of multiferroic LiNiPO_4 in high magnetic fields

Coffee break

Spectroscopy Chair: Lorenz Bergen (TU Wien - Institute of Solid State Physics)

15:15 **Bence Bernáth** (High Field Magnet Laboratory - Radboud University)

THz and dilatometry studies of a magnetic field-induced lattice distortion in $\text{KEr}(\text{MoO}_4)_2$

15:45 **Maximilian Moser** (TU Wien - Institute of Solid State Physics)

Phonon Spectroscopy of V_3Al

16:15 **Stephan Reschke** (University of Augsburg - Experimental Physics V)

Optical spectroscopy on lacunar spinels

Thursday

17:00

Career Fair

Anna Pimenov (TU Wien - Institute of Solid State Physics)

Possibilities for an Erasmus-semester at the TU Wien

Prof. Andrei Pimenov (TU Wien - Institute of Solid State Physics)

Open PhD positions at the Institute of Solid State Physics

Prof. István Kézsmárki (University of Augsburg - Experimental Physics V)

Open PostDoc and PhD positions at the University of Augsburg

Prof. Ana Akrap (University of Fribourg)

Open PostDoc position at the University of Fribourg

Prof. András Pályi (Budapest University of Technology and Economics)

Open PostDoc position at the Budapest University of Technology and Economics

Prof. Neven Barišić (TU Wien - Institute of Solid State Physics)

Open positions in the group of Prof. Yoichi Ando (University of Cologne)

Prof. Qimiao Si (Rice University, USA)

Open positions at the Rice University

Prof. Danko Radić (Department of Physics, Faculty of Science, University of Zagreb)

Open positions at the University of Zagreb

Prof. Nikolina Novosel (Institute of Physics, Zagreb)

Open positions at the Institute of Physics in Zagreb

Prof. Suichi Murakami (Dept. Phys., Tokyo Tech., BTIES, Tokyo Tech., CCREST, JST, Japan)

Open positions in Japan

Friday

From Topology to Superconductivity Symposium

9:00-9:45

[Prof. András Pályi](#) (Budapest University of Technology and Economics, Hungary):

A simple model for a topological quantum memory

10:00-10:45

[Prof. Dmitry Abanin](#) (University of Geneva, Switzerland):

New topological phases of matter out of equilibrium

11:00-11:45

[Prof. Suichi Murakami](#) (Dept. Phys., Tokyo Tech., BTIES, Tokyo Tech., CCREST, JST, Japan):

[Topology and transport in inversion-asymmetric crystals](#)

13:00-13:45

[Prof. Yoichi Ando](#) (University of Cologne, Germany):

From Topological Superconductivity to Majorana Qubits

14:00-14:45

[Prof. Qimiao Si](#) (Rice University, USA):

[Magnetism and topology in strongly correlated metals](#)

15:00-15:45

[Prof. Milan Orlita](#) (Laboratoire National des Champs Magnétiques Intenses, France):

Magneto-optics of relativistic-like electrons in solids

16:00-16:45

[Prof. Ana Akrap](#) (University of Fribourg, Switzerland):

From topology to superconductivity: what can we learn from optics?

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