

Program



31. Workshop

on

Novel materials and superconductivity

BSFZ Obertraun

7. - 13. Feb. 2016

Sponsored by TU Wien

Location:	Bundessportheim und Freizeitzentrum BSFZ Obertraun Winkl 49 (Oberösterreich) A-4813 Obertraun Tel.: [+43] (6131) 239-0 international Fax: [+43] (6131) 239-423 international
Date:	Arrival: Sunday, February 9, 2014 Departure: Saturday, February 15, 2014

Chairman: **Univ.Prof. Karlheinz Schwarz**
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Programme committee:

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G.Rupprechter	K.Schwarz	P.Weinberger

World Wide Web: www.wien2k.at/theochem/obertraun/

Scientific Program

Monday, Feb.8, 2016 (Chair: Karlheinz Schwarz)

14:00	Karlheinz Schwarz (TU Wien): <i>Opening, 31th workshop</i>
14:10	Bertram Batlogg (ETH Zürich, Switzerland): <i>Microstructural crystals: studies of superconductors and electron-correlation materials</i>
15:10	Coffee Break
15:40	Roland Wiesendanger (Univ.Hamburg, Germany): <i>Chiral spin textures in ultrathin films: From fundamentals to potential applications</i>
16:40	Break
16:50	Rudi Hackl (Walther Meissner Institut, Garching, Germany): <i>Spin-driven nematicity and superconductivity in Fe-based superconductors</i>
18:30	Dinner <i>Evening session (chair: Günther Rupprechter)</i>
19:30	Markus Valtiner , H.-W.Cheng, B.Moeremans, F.U.Renner, M.A.Gebbie, J.N.Israelachivili (MPI Eisenforschung, Düsseldorf, Germany): <i>Vertices and local moments in quantum Monte Carlo for general interactions</i>
20:10	Johannes Bintinger , .Cernetic, S.Yang, H.Mikula, T.Kröber, W.Knoll, J.Fröhlich, A.Jen, I.Kymissis (TU Wien): <i>The chemist's guide to electronics: from printable organic semiconductors to self-assembled monolayer field-effect transistors for sensing applications</i>

Tuesday, Feb.9, 2016 (Chair: Ulrike Diebold)

14:00 Hans-Peter **Steinrück** (Univ.Erlangen, Germany):
In situ studies of surface reactions

15:00 **Coffee Break**

15:30 Johan **Gustavson** (Univ. Lund, Sweden):
Finally determining the active phase for CO oxidation over Rh

16:30 **Break**

16:45 Ulrike **Diebold** (TU Wien):
Surface science investigations on metal oxides

18:30 **Dinner**

Evening session (chair: Peter Weinberger)

19:30 Günther **Rupprechter** (TU Wien):
Cobalt oxides model catalysts

Wednesday, Feb.10, 2016 (Chair: Rudi Hackl)

14:00 Joel **Mesot** (Paul Scherrer Institut, Villingen, Switzerland):
Observation of Weyl nodes in TaAs

15:00 **Coffee Break**

15:30 Gaku **Eguchi** (TU Wien):
Electric-transport studies of chiral texture

16:30 **Break**

16:45 Silke **Bühler-Paschen** (TU Wien):
Quantum criticality in a material with quadrupolar order

18:30 **Dinner**

Evening session (chair: Peter Blaha)

19:30 **Micro Poster Presentation:** *Each poster can be briefly presented in 3 minutes
PowerPoint presentations need to be arranged with the organizer.*

20:00 **POSTER SESSION**

Thursday, Feb.11, 2016 (Chair: Helge Rosner)

14:00	Antonio Sanna (MPI Halle, Germany): <i>Superconductivity from ab initio calculations</i>
15:00	Coffee Break
15:30	Lilia Boeri (TU Graz): <i>High T_C conventional superconductors</i>
16:30	Break
16:45	Andrei Pimenov (TU Wien): <i>Directional optical anisotropy in multiferroic materials</i>
18:30	Dinner <i>Evening session (chair: Peter Knoll)</i>
19:30	Alexey Shuaev , V.Dziom, N.Mikhailov (TU Wien): <i>Optical doping of Dirac fermions</i>
20:10	Andrey Sidorenko , D.H.Nguyen, D.Geiger, C.Krellner, C.Geibl, E.Schuberth, G.Frosati, F.Steglich, S.Paschen (TU Wien): <i>The Vienna Microkelvin Laboratory: first experiments at sub-millikelvin temperature</i>

Friday, Feb.12, 2016 (Chair: Peter Blaha)

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| 14:00 | Valerio Olevano (CNRS, Grenoble, France):
<i>Excited state properties and spectroscopy in superconductors and novel materials by ab initio TDDFT</i> |
| 15:00 | Coffee Break |
| 15:30 | Jan Martin Tomczak (TU Wien):
<i>Simulations of oxides from bulk to films</i> |
| 16:30 | Break |
| 16:45 | Andreas Tröster (TU Wien):
<i>Fourier Monto Carlo approach to elastic fluctuations in crystalline membranes</i> |
| 18:30 | Dinner

<i>Evening session (chair: Karlheinz Schwarz)</i> |
| 19:30 | Peter Weinberger , D.Müller, C.Knoll, M.Seifried, G.Giester, M.Reissner (TU Wien):
<i>Zero- to three-dimensional iron(II) spin crossover coordination compounds:
From ligand design to tunable spin switching behavior</i> |

Posters

- Bernd **Aichner**, W.Lang, W.Slysz, R.Sobolewski (Univ. Wien)
Fluctuation paraconductivity and magnetoresistance in NbTiN thin films and NbTiN/NiCu bilayers
- Andreas **Baum**, D.Jost, A.Özkü, B.Muschler, F.Kretzschmar, T.Böhm, N.Chelwani, T.Tomic, R.Valenti, J.-H. Chu, I.R.Fisher, R.Hackl (Walther-Meissner-Institut, Garching)
Lattice dynamics in detwinned BaFe₂As₂ as observed via Raman scattering
- Magdalena **Bichler**, P.Blaha (TU Wien)
Structure optimization of 2H-MoSe₂ and 1T-MoSe₂
- Bernhard **Bloder**, M.Meyer, J.Reynvaan, P.Knoll, S.Surnev, K.Ettinger K.Krenn, C.Priegl, A.Hohenau (Univ.Graz)
Plasma enhanced deposition of carbon phases
- Christian **Knoll** (TU Wien)
Thermochemical energy storage materials – Earth alkali oxalate hydration/dehydration as a promising process
- M.Maier, A.Reyer, R.Wagner, D.Rettenwander, Maurizio **Musso**, G.Amthauer (Univ.Salzburg)
A Raman spectroscopic study on fast ionic conducting Li₇La₃Zr₂O₁₂ variants
- Metteo **Roiaz**, C.Rameshan, G.Rupprechter (TU Wien)
Roughening of copper (100) by high pressure carbon monoxide exposure
- S. Lebernegg, A.Tsirlin, O.Janson, J.Rousochatzkis, U.Rößler, J.van den Brink, J.Sichelschmidt, M.Baenitz, M.Schmidt, Helge **Rosner** (MPI Chemical Physics and Solids, Dresden, Germany)
Quantum magnetism meets natural beauty

Main SPEAKERS

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