



Max Planck Society &
University of British Columbia

International School on Quantum Materials

October 5 – 8, 2010 • Stuttgart (Germany)

Surface phenomena
Unconventional superconductivity
Topological states and excitations
Correlations at interfaces
Materials synthesis and spectroscopic characterization

The scientific focus of the Summer School encompasses phenomena in materials that are directly determined by the quantum nature of the constituent particles. This includes a large variety of collective quantum phenomena due to strong electron correlations, including unconventional superconductivity, spin, charge, and orbital order, as well as more exotic states such as electronic analogs of liquid crystals. Recent advances, driven in part by researchers at the participating institutions, have allowed the systematic investigation of electronic ordering phenomena not only in the bulk, but also at surfaces and hetero-interfaces of transition metal oxides. In particular, it has been shown that electronic reconstructions at interfaces can generate many-body states with physical properties qualitatively different from those of the constituent bulk materials. This opens up exciting new opportunities to create dense two-dimensional electron systems with controlled interactions.

More Information and Registration
www.imprs-am.mpg.de

Invited Speakers

D. Bonn, UBC (Vancouver)
A. Damascelli, UBC (Vancouver)
D. Elfimov, UBC (Vancouver)
M. Franz, UBC (Vancouver)
E. Goering, MPI-MF (Stuttgart)
Y. Grin, MPI-CPFS (Dresden)
S. Kirchner, MPI-PKS (Dresden)
G. Logvenov, MPI-FKF (Stuttgart)
A. MacFarlane, UBC (Vancouver)
D. Manske, MPI-FKF (Stuttgart)
R. Moessner, MPI-PKS (Dresden)
N. Nilius, FHI (Berlin)
M. Scheffler, FHI (Berlin)
A. Tennant, HZB (Berlin)
L. H. Tjeng, MPI-CPFS (Dresden)
P. Wahl, MPI-FKF (Stuttgart)

Organizers

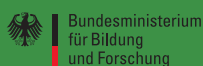
Prof. Dr. B. Keimer
MPI for Solid State Research
Stuttgart, Germany

Prof. Dr. G. Sawatzky
Department of Physics & Astronomy
University of British Columbia
Vancouver, Canada

Contact

International Max Planck Research School
for **A**dvanced **M**aterials

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