

8.5 Publications over the last three years

The following lists cover the period from July 1st, 2005 to March 31st, 2008:

1. Scientific articles in journals with peer review
2. Scientific articles in journals without peer review
3. Books and scientific articles in anthologies

The lists are sorted by the name of the group leaders, and the most important publications are outlined by a red mark.

8.5.1 Scientific articles in journals with peer review

Group of Ph. Aebi

C. BATTAGLIA, H. CERCELLIER, L. DESPONT, C. MONNEY, M. PRESTER, H. BERGER, L. FORRÓ, M. G. GARNIER, AND P. AEBI
Non-uniform doping across the Fermi surface of NbS₂ intercalates

The European Physical Journal B **57**, 385 (2007).

Groups: Aebi, Margaritondo, Forró / Projects: 1, 3

C. BATTAGLIA, H. CERCELLIER, C. MONNEY, M. G. GARNIER, AND P. AEBI
Stabilization of silicon honeycomb chains by trivalent adsorbates

Europhysics Letters **77**, 36003 (2007).

Group: Aebi / Project: 5

- ▶ H. CERCELLIER, C. MONNEY, F. CLERC, C. BATTAGLIA, L. DESPONT, M. G. GARNIER, H. BECK, P. AEBI, L. PATTHEY, H. BERGER, AND L. FORRÓ
Evidence for an Excitonic Insulator Phase in 1T-TaS₂

Physical Review Letters **99**, 146403 (2007).

Groups: Aebi, Margaritondo, Forró / Projects: 1, 3

F. CLERC, C. BATTAGLIA, H. CERCELLIER, C. MONNEY, H. BERGER, L. DESPONT, M. G. GARNIER, AND P. AEBI
Fermi surface of layered compounds and bulk charge density wave systems

Journal of Physics: Condensed Matter **19**, 335002 (2007).

Groups: Aebi, Margaritondo / Projects: 1, 3

- ▶ D. HOFSTETTER, L. DESPONT, M. G. GARNIER, E. BAUMANN, F. R. GIORGETTA, P. AEBI, L. KIRSTE, H. LU, AND W. J. SCHAFF
Structural investigations of epitaxial InN by x-ray photoelectron diffraction and x-ray diffraction

Applied Physics Letters **90**, 191912 (2007).

Group: Aebi / Project: 5

- ▶ C. LICHTENSTEIGER, M. DAWBER, N. STUCKI, J.-M. TRISCONE, J. HOFFMAN, J.-B. YAU, C. H. AHN, L. DESPONT, AND P. AEBI
Monodomain to polydomain transition in ferroelectric PbTiO₃ thin films with La_{0.67}Sr_{0.33}MnO₃ electrodes

Applied Physics Letters **90**, 052907 (2007).

Groups: Aebi, Triscone / Project: 5

P. STAROWICZ, C. BATTAGLIA, F. CLERC, L. DESPONT, A. PRODAN, H. J. P. VAN MIDDEN, U. SZERER, A. SZYTULA, M. G. GARNIER, AND P. AEBI
Electronic structure of ZrTe₃

Journal of Alloys and Compounds **442**, 268 (2007).

Group: Aebi / Project: 1

F. CLERC, C. BATTAGLIA, M. BOVET, L. DESPONT, C. MONNEY, H. CERCELLIER, M. GARNIER, P. AEBI, H. BERGER, AND L. FORRÓ
Lattice-distortion-enhanced electron-phonon coupling and Fermi surface nesting in 1T-TaS₂

Physical Review B **74**, 155114 (2006).

Groups: Margaritondo, Aebi, Forró / Projects: 1, 2, 3

L. DESPONT, F. CLERC, M. G. GARNIER, H. BERGER, L. FORRÓ, AND P. AEBI
Multiple scattering investigation of the 1T-TaS₂ surface termination

The European Physical Journal B **52**, 421 (2006).

Groups: Aebi, Margaritondo, Forró / Projects: 3, 5

- ▶ L. DESPONT, C. KOITZSCH, F. CLERC, M. G. GARNIER, P. AEBI, C. LICHTENSTEIGER, J.-M. TRISCONE, F. J. GARCIA DE ABAJO, E. BOUSQUET, AND P. GHOSEZ

Direct evidence for ferroelectric polar distortion in ultrathin lead titanate perovskite films

Physical Review B **73**, 094110 (2006).

Groups: Aebi, Triscone / Project: 5

L. DESPONT, C. LICHTENSTEIGER, F. CLERC, M. G. GARNIER, F. J. GARCIA DE ABAJO, M. A. VAN HOVE, J.-M. TRISCONÉ, AND P. AEBI

X-ray photoelectron diffraction study of ultrathin PbTiO₃ films

The European Physical Journal B **49**, 141 (2006).

Groups: Aebi, Triscone / Project: 5

L. DESPONT, D. NAUMOVIC, F. CLERC, C. KOITZSCH, M. G. GARNIER, F. J. GARCIA DE ABAJO, M. A. VAN HOVE, AND P. AEBI

X-ray photoelectron diffraction study of Cu(111): Multiple scattering investigation

Surface Science **600**, 380 (2006).

Group: Aebi / Project: 5

C. BATTAGLIA, H. CERCELLIER, F. CLERC, L. DESPONT, M. G. GARNIER, C. KOITZSCH, P. AEBI, H. BERGER, L. FORRÓ, AND C. AMBROSCH-DRAXL

Fermi surface induced lattice distortion in NbTe₂

Physical Review B **72**, 195114 (2005).

Groups: Margaritondo, Aebi, Forró / Projects: 1, 3

▶ C. KOITZSCH, C. BATTAGLIA, F. CLERC, L. DESPONT, M. G. GARNIER, AND P. AEBI

Photoemission of a Quantum Cavity with a Nonmagnetic Spin Separator

Physical Review Letters **95**, 126401 (2005).

Group: Aebi / Project: 1

D. POPOVIC, M. BOVET, H. BERGER, AND P. AEBI

Fingerprinting substitution sites in Pb, Dy-Bi₂Sr₂Ca₁Cu₂O_{8+δ} using X-ray Photoelectron Diffraction

The European Physical Journal – Applied Physics **30**, 171 (2005).

Groups: Aebi, Margaritondo / Projects: 2, 3

Group of D. Baeriswyl

D. BAERISWYL, D. EICHENBERGER, AND B. GUT

Superconductivity in the two-dimensional Hubbard model?

Physica Status Solidi (b) **244**, 2299 (2007).

Group: Baeriswyl / Project: 2

D. EICHENBERGER AND D. BAERISWYL

Superconducting ground state of the two-dimensional Hubbard model: A variational study

Physica C **460-462**, 1153 (2007).

Group: Baeriswyl / Project: 2

D. EICHENBERGER AND D. BAERISWYL

Superconductivity and antiferromagnetism in the two-dimensional Hubbard model: A variational study

Physical Review B **76**, 180504(R) (2007).

Group: Baeriswyl / Project: 2

▶ G. I. JAPARIDZE, R. M. NOACK, D. BAERISWYL, AND L. TINCANI

Phases and phase transitions in the half-filled $t-t'$ Hubbard chain

Physical Review B **76**, 115118 (2007).

Group: Baeriswyl / Project: 1

Group of Ch. Bernhard

C. BERNHARD, L. YU, A. DUBROKA, K. W. KIM, M. RÖSSLE, D. MUNZAR, J. CHALOUKKA, C. T. LIN, AND T. WOLF

Broad-band infrared ellipsometry measurements of the c-axis response of underdoped YBa₂Cu₃O₇: Spectroscopic distinction between the normal state pseudogap and the superconducting gap

to be published in Journal of the Physics and Chemistry of Solids (2008).

Group: Bernhard / Project: 2

▶ V. HINKOV, D. HAUG, P. BOURGES, B. FAUQUÉ, Y. SIDIS, A. IVANOV, C. BERNHARD, B. KEIMER, AND C. T. LIN

Electronic Liquid Crystal State in the High-Temperature Superconductor YBa₂Cu₃O_{6.45}

Science **319**, 597 (2008).

Group: Bernhard / Project: 2

C. BERNHARD, C. NIEDERMAYER, A. DREW, G. KHALIULLIN, S. BAYRAKCI, J. STREMPFER, R. K. KREMER, D. P. CHEN, C. T. LIN, AND B. KEIMER

Muon-spin rotation study of magnetism in Na_xCoO₂ single crystals with $0.78 \leq x \leq 0.97$

Europhysics Letters **80**, 27005 (2007).

Group: Bernhard / Project: 2

N. N. KOVALEVA, A. V. BORIS, P. YORDANOV, A. MALJUK, E. BRÜCHER, J. STREMPFER, M. KONUMA, I. ZEGKINOGLU, C. BERNHARD, A. M. STONEHAM, AND B. KEIMER

Optical response of ferromagnetic YTiO₃ studied by spectral ellipsometry

Physical Review B **76**, 155125 (2007).

Group: Bernhard / Project: 2

- S. S. A. SEO, W. S. CHOI, H. N. LEE, L. YU, K. W. KIM, C. BERNHARD, AND T. W. NOH
Optical Study of the Free Carrier Response of LaTiO₃/SrTiO₃ superlattices
Physical Review Letters **99**, 266801 (2007).
Group: Bernhard / Project: 2
- P. ADLER, A. LEBON, V. DAMLJANOVIĆ, C. ULRICH, C. BERNHARD, A. V. BORIS, A. MALJUK, C. T. LIN, AND B. KEIMER
Magnetoresistance effects in SrFeO_{3-δ}: Dependence on phase composition and relation to magnetic and charge order
Physical Review B **73**, 094451 (2006).
Group: Bernhard / Project: 2
- J. CHAKHALIAN, J. W. FREELAND, G. SRAJER, J. STREMPFER, G. KHALIULLIN, J. C. CEZAR, T. CHARLTON, R. DALGLIESH, C. BERNHARD, G. CRISTIANI, H.-U. HABERMEIER, AND B. KEIMER
Magnetism at the interface between ferromagnetic and superconducting oxides
Nature Physics **2**, 244 (2006).
Group: Bernhard / Project: 2
- Y. KROCKENBERGER, I. FRITSCH, G. CRISTIANI, H.-U. HABERMEIER, L. YU, C. BERNHARD, B. KEIMER, AND L. ALFF
Superconductivity in epitaxial thin films of Na_xCoO₂.yD₂O
Applied Physics Letters **88**, 162501 (2006).
Group: Bernhard / Project: 2
- H. E. MOHOTTALA, B. O. WELLS, J. I. BUDNICK, W. A. HINES, C. NIEDERMAYER, L. UDBY, C. BERNHARD, A. R. MOODENBAUGH, AND F. C. CHOU
Phase separation in superoxygenated La_{2-x}Sr_xCuO_{4+y}
Nature Materials **5**, 377 (2006).
Groups: Bernhard, Mesot / Projects: 1, 2, 3, 6
- A. TRAJNEROWICZ, A. GOLNIK, C. BERNHARD, L. MACHTOUB, C. ULRICH, J. L. TALLON, AND M. CARDONA
Isotope effect on the optical phonons of YBa₂Cu₄O₈ studied by far-infrared ellipsometry and Raman scattering
Physical Review B **74**, 104513 (2006).
Group: Bernhard / Project: 2
- A. V. PIMENOV, A. V. BORIS, L. YU, V. HINKOV, T. WOLF, J. L. TALLON, B. KEIMER, AND C. BERNHARD
Nickel Impurity-Induced Enhancement of the Pseudogap of Cuprate High-T_c Superconductors
Physical Review Letters **94**, 227003 (2005).
Group: Bernhard / Project: 2
- J. STAHN, J. CHAKHALIAN, C. NIEDERMAYER, J. HOPPLER, T. GUTBERLET, J. VOIGT, F. TREUBEL, H.-U. HABERMEIER, G. CRISTIANI, B. KEIMER, AND C. BERNHARD
Magnetic proximity effect in Perovskite Superconductor/Ferromagnet Multilayers
Physical Review B **71**, R140509 (2005).
Group: Bernhard / Project: 2
- Group of G. Blatter**
- V. DOTSENKO, L. B. IOFFE, V. B. GESHKENBEIN, S. E. KORSHUNOV, AND G. BLATTER
Joint Free-Energy Distribution in the Random Directed Polymer Problem
Physical Review Letters **100**, 050601 (2008).
Group: Blatter / Project: 1
- S. D. HUBER, B. THEILER, E. ALTMAN, AND G. BLATTER
Amplitude Mode in the Quantum Phase Model
Physical Review Letters **100**, 050404 (2008).
Group: Blatter / Project: 1
- A. U. THOMANN, V. B. GESHKENBEIN, AND G. BLATTER
The dynamically asymmetric SQUID: M nchhausen effect
Physica C (2008).
Group: Blatter / Project: 1
- A. DE COL, G. I. MENON, AND G. BLATTER
Density functional theory of vortex lattice melting in layered superconductors: A mean-field substrate approach
Physical Review B **75**, 014518 (2007).
Group: Blatter / Project: 1
- A. DE COL, G. I. MENON, V. B. GESHKENBEIN, AND G. BLATTER
Surface melting of the vortex lattice in layered superconductors: Density functional theory
Physical Review B **75**, 184532 (2007).
Group: Blatter / Project: 1
- S. D. HUBER, E. ALTMAN, H. P. B CHLER, AND G. BLATTER
Dynamical properties of ultracold bosons in an optical lattice
Physical Review B **75**, 085106 (2007).
Group: Blatter / Project: 1
- A. DE COL, G. I. MENON, V. B. GESHKENBEIN, AND G. BLATTER
Surface Melting of the Vortex Lattice

Physical Review Letters **96**, 177001 (2006).

Group: Blatter / Project: 1

T. SHIBAUCHI, L. KRUSIN-ELBAUM, Y. KASAHARA, Y. SHIMONO, Y. MATSUDA, R. D. McDONALD, C. H. MIELKE, S. YONEZAWA, Z. HIROI, M. ARAI, T. KITA, G. BLATTER, AND M. SIGRIST

Uncommonly high upper critical field of the pyrochlore superconductor KOs_2O_6 below the enhanced paramagnetic limit

Physical Review B **74**, 220506 (2006).

Groups: Rice, Sigrist, Blatter / Project: 2

- ▶ H. P. BÜCHLER, M. HERMELE, S. D. HUBER, M. P. A. FISHER, AND P. ZOLLER
Atomic Quantum Simulator for Lattice Gauge Theories and Ring Exchange Models

Physical Review Letters **95**, 040402 (2005).

Group: Blatter / Project: 1

Group of M. Büttiker

- ▶ M. MOSKALETS, P. SAMUELSSON, AND M. BÜTTIKER

Quantized Dynamics of a Coherent Capacitor

Physical Review Letters **100**, 086601 (2008).

Group: Büttiker / Project: 1

- ▶ S. E. NIGG AND M. BÜTTIKER
Quantum to Classical Transition of the Charge Relaxation Resistance of a Mesoscopic Capacitor

Physical Review B **77**, 085312 (2008).

Group: Büttiker / Project: 1

M. BÜTTIKER AND S. E. NIGG
Mesoscopic Capacitance Oscillations

Nanotechnology **18**, 044029 (2007).

Group: Büttiker / Project: 1

M. BÜTTIKER AND P. SAMUELSSON
Interference of independently emitted electrons in quantum shot noise

Annalen der Physik (Leipzig) **16**, 751 (2007).

Group: Büttiker / Project: 1

H. FÖRSTER, P. SAMUELSSON, S. PILGRAM, AND M. BÜTTIKER
Voltage and dephasing probes in mesoscopic conductors: A study of full-counting statistics

Physical Review B **75**, 035340 (2007).

Group: Büttiker / Project: 1

- ▶ A. N. JORDAN, A. N. KOROTKOV, AND M. BÜTTIKER
Leggett-Garg Inequality with a Kicked Quantum Pump

Physical Review Letters **97**, 026805 (2006).

Group: Büttiker / Project: 1

- ▶ S. E. NIGG, R. LÓPEZ, AND M. BÜTTIKER
Mesoscopic Charge Relaxation

Physical Review Letters **97**, 206804 (2006).

Group: Büttiker / Project: 1

- ▶ S. PILGRAM, P. SAMUELSSON, H. FÖRSTER, AND M. BÜTTIKER
Full-Counting Statistics for Voltage and Dephasing Probes

Physical Review Letters **97**, 066801 (2006).

Group: Büttiker / Project: 1

- ▶ P. SAMUELSSON AND M. BÜTTIKER
Quantum state tomography with quantum shot noise

Physical Review B **73**, 041305 (2006).

Group: Büttiker / Project: 1

Group of L. Degiorgi

- ▶ F. PFUNER, L. DEGIORGI, H. R. OTT, A. BIANCHI, AND Z. FISK

Magneto-optical behavior of $EuIn_2P_2$

Physical Review B **77**, 024417 (2008).

Groups: Degiorgi, Ott / Project: 1

D. PACILÉ, M. PAPAGNO, M. LAVAGNINI, H. BERGER, L. DEGIORGI, AND M. GRIONI
Photoemission and optical studies of $ZrSe_3$, $HfSe_3$, and ZrS_3

Physical Review B **76**, 155406 (2007).

Groups: Margaritondo, Degiorgi, Grioni / Projects: 1, 3

- ▶ A. SACCHETTI, E. ARCANGELETTI, A. PERUCCHI, P. POSTORINO, S. LUPI, N. RU, I. R. FISHER, AND L. DEGIORGI

Pressure Dependence of the Charge-Density-Wave Gap in Rare-Earth Tritellurides

Physical Review Letters **98**, 026401 (2007).

Group: Degiorgi / Project: 1

G. CAIMI, L. DEGIORGI, H. BERGER, AND L. FORRÓ

Optical evidence for a magnetically driven structural transition in the spin web Cu_3TeO_6

Europhysics Letters **75**, 496 (2006).

Groups: Margaritondo, Degiorgi, Forró / Projects: 1, 3

G. CAIMI, L. DEGIORGI, H. BERGER, AND L. FORRÓ

Phonon analysis of the $S = 1$ quantum spin systems $Ni_5Te_4O_{12}X_2$ ($X = Cl$ and Br)

Journal of Physics: Condensed Matter **18**, 4065 (2006).

Groups: Margaritondo, Degiorgi, Forró / Projects: 1, 3

- G. CAIMI, A. PERUCCHI, L. DEGIORGI, H. R. OTT, V. M. PEREIRA, A. H. CASTRO NETO, A. D. BIANCHI, AND Z. FISK
Magneto-Optical Evidence of Double Exchange in a Percolating Lattice
Physical Review Letters **96**, 016403 (2006).
Groups: Degiorgi, Ott / Project: 1
- L. DEGIORGI
The Drude model in correlated systems
Annalen der Physik **15**, 571 (2006).
Group: Degiorgi / Project: 1
- L. DEGIORGI AND D. JEROME
Transport and Optics in Quasi-One-Dimensional Organic Conductors
Journal of the Physical Society of Japan **75**, 051004 (2006).
Group: Degiorgi / Project: 1
- M. PAPAGNO, D. PACILÉ, G. CAIMI, H. BERGER, L. DEGIORGI, AND M. GRIONI
Electronic structure of one-dimensional copper oxide chains in LiCu_2O_2 from angle-resolved photoemission and optical spectroscopy
Physical Review B **73**, 115120 (2006).
Groups: Margaritondo, Degiorgi, Grioni / Projects: 1, 3
- A. PERUCCHI, L. DEGIORGI, R. HU, C. PETROVIC, AND V. F. MITROVIC
Optical investigation of the metal-insulator transition in FeSb_2
The European Physical Journal B **54**, 175 (2006).
Group: Degiorgi / Project: 1
- A. SACCHETTI, L. DEGIORGI, T. GIAMARCHI, N. RU, AND I. R. FISHER
Chemical pressure and hidden one-dimensional behavior in rare-earth tri-telluride charge-density wave compounds
Physical Review B **74**, 125115 (2006).
Groups: Degiorgi, Giamarchi / Project: 1
- C. DALLERA, E. ANNESE, J.-P. RUEFF, M. GRIONI, G. VANKO, L. BRAICOVICH, A. BARLA, J.-P. SANCHEZ, R. GUSMEROLI, A. PALENZONA, L. DEGIORGI, AND G. LAPERTOT
Intermediate valence behaviour under pressure: how precisely can we probe it by means of resonant inelastic x-ray emission?
Journal of Physics: Condensed Matter **17**, S849 (2005).
Groups: Degiorgi, Grioni / Project: 1
- A. PERUCCHI, L. DEGIORGI, AND H. BERGER
Infrared signature of the charge-density-wave gap in ZrTe_3
The European Physical Journal B **48**, 489 (2005).
Groups: Margaritondo, Degiorgi / Project: 3
- Group of Ø. Fischer**
- A. P. PETROVIĆ, R. LORTZ, G. SANTI, M. DECROUX, H. MONNARD, Ø. FISCHER, L. BOERI, O. ANDERSEN, J. KORTUS, D. SALLOUM, P. GOUGEON, AND M. POTEL
Phonon Mode Spectroscopy and Electron-Phonon Coupling in the Quasi-One-Dimensional $\text{M}_2\text{Mo}_6\text{Se}_6$ family: Competing Instabilities, Ultra-Strong Coupling and "Phonon-Boosted" Superconductivity
submitted to Physical Review B (2008).
Group: Fischer / Projects: 1, 2
- A. PIRIOU, Y. FASANO, E. GIANNINI, AND O. FISCHER
Effect of oxygen-doping on $\text{Bi}_2\text{Sr}_2\text{Ca}_2\text{Cu}_3\text{O}_{10+\delta}$ vortex matter: Crossover from electromagnetic to Josephson interlayer coupling
submitted to Physical Review B (2008).
Groups: Fischer, van der Marel / Projects: 2, 5
- S. SEIRO, Y. FASANO, I. MAGGIO-APRILE, E. KOLLER, O. KUFFER, AND Ø. FISCHER
Polaronic signature in the metallic phase of $\text{La}_{0.7}\text{Ca}_{0.3}\text{MnO}_3$ films detected by scanning tunneling spectroscopy
Physical Review B **77**, 020407(R) (2008).
Group: Fischer / Project: 1
- L. ANTOGNAZZA, M. DECROUX, M. THERASSE, M. ABPLANALP, J. DURON, B. DUTOIT, AND Ø. FISCHER
Thermally Assisted Transition in Thin Film Based FCL: A Way to Speed Up the Normal Transition Across the Wafer
IEEE Transactions on Applied Superconductivity **17**, 3463 (2007).
Groups: Fischer, Hasler / Project: 6
- C. DUBOIS, A. P. PETROVIĆ, G. SANTI, C. BERTHOD, A. A. MANUEL, M. DECROUX, Ø. FISCHER, M. POTEL, AND R. CHEVREL
Node-like excitations in superconducting PbMo_6S_8 probed by scanning tunneling spectroscopy
Physical Review B **75**, 104501 (2007).
Groups: Fischer, Giamarchi / Projects: 1, 2
- J. DURON, F. GRILLI, L. ANTOGNAZZA, M. DECROUX, B. DUTOIT, AND Ø. FISCHER
Finite-element modelling of YBCO fault current limiter with temperature dependent parameters

- Superconductor Science & Technology **20**, 338 (2007).
Groups: Hasler, Fischer / Project: 6
- J. DURON, B. DUTOIT, F. GRILLI, M. DECROUX, L. ANTOGNAZZA, AND Ø. FISCHER
Computer Modeling of YBCO Fault Current Limiter Strips Lines in Over-Critical Regime With Temperature Dependent Parameters
IEEE Transactions on Applied Superconductivity **17**, 1839 (2007).
Groups: Hasler, Fischer / Project: 6
- Y. FASANO, I. MAGGIO-APRILE, J. KARPINSKI, AND Ø. FISCHER
Tunneling and pseudo point-contact spectroscopy on $YBa_2Cu_4O_8$
Physica C **460-462**, 958 (2007).
Groups: Fischer, Karpinski / Projects: 2, 3, 4
- Ø. FISCHER, M. KUGLER, I. MAGGIO-APRILE, C. BERTHOD, AND C. RENNER
Scanning tunneling spectroscopy of high-temperature superconductors
Reviews of Modern Physics **79**, 353 (2007).
Groups: Fischer, Giamarchi / Project: 2
- A. P. PETROVIĆ, Y. FASANO, R. LORTZ, M. DECROUX, M. POTEL, R. CHEVREL, AND Ø. FISCHER
Unconventional resistive transitions in the extreme type-II superconductor $Tl_2Mo_6Se_6$
Physica C **460-462**, 702 (2007).
Groups: Fischer, Triscone, van der Marel / Projects: 1, 2
- A. PIRIOU, Y. FASANO, E. GIANNINI, AND Ø. FISCHER
Doping-dependence of the vortex phase diagram of $Bi_2Sr_2Ca_2Cu_3O_{10+\delta}$
Physica C **460-462**, 408 (2007).
Groups: Fischer, van der Marel / Projects: 2, 3, 5
- S. SEIRO, Y. FASANO, I. MAGGIO-APRILE, O. KUFFER, AND Ø. FISCHER
Homogeneous Spectroscopic Properties in Manganite Films
Journal of Magnetism and Magnetic Materials **310**, e243 (2007).
Group: Fischer / Project: 1
- S. SEIRO, E. KOLLER, Y. FASANO, AND Ø. FISCHER
Homogeneous strain-relaxation effects in $La_{0.67}Ca_{0.33}MnO_3$ films grown on $NdGaO_3$
Applied Physics Letters **91**, 091913 (2007).
Group: Fischer / Projects: 1, 5
- D. SHALTIEL, H.-A. K. VON NIDDA, B. Y. SHAPIRO, I. SHAPIRO, A. LOIDL, T. KURZ, B. BOGOSLAVSKY, T. TAMAGAI, Ø. FISCHER, A. PIRIOU, E. GIANNINI, T. WATANABE, T. FUJII, AND A. MATSUDA, B. ROSENSTEIN
Interaction of AC magnetic field with Josephson vortices in high anisotropy superconductors $Bi2212$ and $Bi2223$
Physica C **460-462**, 1238 (2007).
Groups: van der Marel, Fischer / Project: 3
- C. DUBOIS, P. E. BISSON, A. A. MANUEL, Ø. FISCHER, AND S. REYMOND
Compact design of a low temperature XY stage scanning tunneling microscope
Review of Scientific Instruments **77**, 043712 (2006).
Group: Fischer / Project: 2
- C. DUBOIS, N. JENKINS, A. A. MANUEL, N. D. ZHIGADLO, J. KARPINSKI, AND Ø. FISCHER
Crystal-edge scanning tunnelling spectroscopy on aluminium-doped magnesium diboride
Superconductor Science & Technology **19**, 695 (2006).
Groups: Fischer, Karpinski / Projects: 2, 3, 4
- J. DURON, F. GRILLI, L. ANTOGNAZZA, M. DECROUX, S. STAVREV, B. DUTOIT, AND Ø. FISCHER
Finite-element modeling of superconductors in over-critical regime with temperature dependent resistivity.
Journal of Physics: Conference Series **43**, 1076 (2006).
Groups: Fischer, Hasler / Project: 6
- M. KUGLER, G. L. DE CASTRO, E. GIANNINI, A. PIRIOU, A. A. MANUEL, C. HESS, AND Ø. FISCHER
Scanning tunneling spectroscopy on $Bi_2Sr_2Ca_2Cu_3O_{10+\delta}$ single crystals
Journal of the Physics and Chemistry of Solids **67**, 353 (2006).
Groups: van der Marel, Fischer / Project: 3
- L. ANTOGNAZZA, M. DECROUX, M. THERASSE, M. ABPLANALP, AND Ø. FISCHER
Test of YBCO thin films based Fault Current Limiters with a newly designed meander.
IEEE Transactions on Applied Superconductivity **15**, 1990 (2005).
Group: Fischer / Project: 6
- J. DURON, L. ANTOGNAZZA, M. DECROUX, F. GRILLI, S. STAVREV, B. DUTOIT, AND Ø. FISCHER
3D finite element Simulations of strip lines in a YBCO/Au fault current limiter.
IEEE Transactions on Applied Superconductivity

ity **15**, 1998 (2005).

Groups: Fischer, Hasler / Project: 6

J. DURON, L. ANTOGNAZZA, M. DECROUX, F. GRILLI, S. STAVREV, B. DUTOIT, AND Ø. FISCHER

3-D finite element Simulations of strip lines in a YBCO/Au fault current limiter

in *IEEE, Applied Superconductivity Conference 2004* (2005), vol. 15, pp. 1998–2002.

Groups: Hasler, Fischer / Project: 6

O. KUFFER AND Ø. FISCHER

Low temperature growth of pseudocubic perovskites by off-axis rf magnetron sputtering for the realization of epitaxial ferroelectric-based heterostructures

Journal of Applied Physics **97**, 014103 (2005).

Group: Fischer / Project: 5

► O. KUFFER, I. MAGGIO-APRILE, AND Ø. FISCHER

Nanoscale ferroelectric field-effect writing and reading using scanning tunneling spectroscopy

Nature Materials **4**, 378 (2005).

Group: Fischer / Project: 5

Group of R. Flükiger

R. FLÜKIGER, C. SENATORE, M. CESARETTI, F. BUTA, D. UGLIETTI, AND B. SEEBER

Optimization of Nb₃Sn and MgB₂ wires

to be published in *Superconductor Science & Technology* (2008).

Group: Flükiger / Project: 6

E. GIANNINI, R. GLADYSHEVSKII, N. CLAYTONA, N. MUSOLINO, V. GARNIER, A. PIRIOU, AND R. FLÜKIGER

Growth, structure and physical properties of single crystals of pure and Pb-doped Bi-based high-T_c superconductors

Current Applied Physics **8**, 115 (2008).

Groups: Flükiger, van der Marel / Project: 3

C. SENATORE AND R. FLÜKIGER

Relaxation rates of Y-123 and Bi-based tapes compared to low T_c and MgB₂ superconductors in view of persistent mode high field magnets

to be published in *Superconductor Science & Technology* (2008).

Group: Flükiger / Project: 6

V. ABÄCHERLI, F. BUTA, D. UGLIETTI, C. SENATORE, B. SEEBER, AND R. FLÜKIGER

Investigation on the Effect of Ta Additions on J_c and n of (Nb, Ti)₃Sn Bronze Processed Multifilamentary Wires at High Magnetic Fields

IEEE Transactions on Applied Superconductivity **17**, 2564 (2007).

Group: Flükiger / Project: 6

M. G. ADESSO, R. FLÜKIGER, D. UGLIETTI, M. POLOCHETTI, AND S. PACE

Influence of grain boundaries and Sn distribution on the H-T phase diagram of Nb₃Sn

IEEE Transactions on Applied Superconductivity **17**, 2619 (2007).

Group: Flükiger / Project: 6

M. G. ADESSO, M. POLOCHETTI, D. ZOLA, S. PACE, D. UGLIETTI, AND R. FLÜKIGER

Effect of the amplitude of the AC magnetic field on the vortex dynamics: a quantitative analysis in Nb and NbTi polycrystalline samples

Physica C **460**, 1286 (2007).

Group: Flükiger / Project: 6

S. X. DOU, O. SHCHERBAKOVA, W. K. YEOH, J. H. KIM, S. SOLTANIAN, X. L. WANG, C. SENATORE, R. FLÜKIGER, M. DHALLE, O. HUSNJAK, AND E. BABIC

Mechanism of enhancement in electromagnetic properties of MgB₂ by nano SiC doping

Physical Review Letters **98**, 097002 (2007).

Group: Flükiger / Project: 6

R. FLÜKIGER, P. LEZZA, M. CESARETTI, C. SENATORE, AND R. GLADYSHEVSKI

Simultaneous Addition of B₄C+SiC to MgB₂ wires and consequences for J_c and B_{irr}

IEEE Transactions on Applied Superconductivity **17**, 2846 (2007).

Group: Flükiger / Project: 6

P. LEZZA, C. SENATORE, R. GLADYSHEVSKII, AND R. FLÜKIGER

Critical Current Anisotropy and Texture Gradients in ex situ MgB₂/Fe Tapes

IEEE Transactions on Applied Superconductivity **17**, 2834 (2007).

Group: Flükiger / Project: 6

S. OH, C. LEE, K. W. CHO, K. KIM, D. UGLIETTI, AND R. FLÜKIGER

Field dependence of the n-value and its relation with the critical current of Nb₃Sn strands

Superconductor Science & Technology **20**, 851 (2007).

Group: Flükiger / Project: 6

B. SEEBER, A. FERREIRA, V. ABÄCHERLI, T. BOUTBOUL, L. OBERLI, AND R. FLÜKIGER

Transport Properties up to 1000 A of Nb₃Sn Wires Under Transverse Compressive Stress

IEEE Transactions on Applied Superconductivity **17**, 2643 (2007).

Group: Flükiger / Project: 6

- B. SEEBER, A. FERREIRA, V. ABÄCHERLI, AND R. FLÜKIGER
Critical current of a Nb₃Sn bronze route conductor under uniaxial tensile and transverse compressive stress
 Superconductor Science & Technology **20**, S184 (2007).
 Group: Flükiger / Project: 6
- C. SENATORE, V. ABÄCHERLI, D. CANTONI, AND R. FLÜKIGER
Distribution of T_c from calorimetry and the determination of Sn gradients in Bronze Route Nb₃Sn wires with internal and external Ti source
 Superconductor Science & Technology **20**, S217 (2007).
 Group: Flükiger / Project: 6
- C. SENATORE, P. LEZZA, R. LORTZ, O. SHCHERBAKOVA, W. K. YEOH, S. X. DOU, AND R. FLÜKIGER
Specific heat and magnetic relaxation analysis of MgB₂ bulk samples with and without additives
 IEEE Transactions on Applied Superconductivity **17**, 2941 (2007).
 Group: Flükiger / Project: 6
- C. SENATORE, D. UGLIETTI, V. ABÄCHERLI, A. JUNOD, AND R. FLÜKIGER
Specific heat, a method to determine the T_c distribution in industrial Nb₃Sn wires prepared by various techniques
 IEEE Transactions on Applied Superconductivity **17**, 2611 (2007).
 Group: Flükiger / Project: 6
- D. UGLIETTI, V. ABÄCHERLI, M. CANTONI, AND R. FLÜKIGER
Grain growth, Morphology and Composition Profiles in Industrial Nb₃Sn wires
 IEEE Transactions on Applied Superconductivity **17**, 2615 (2007).
 Group: Flükiger / Project: 6
- M. G. ADESSO, D. UGLIETTI, V. ABÄCHERLI, R. FLÜKIGER, M. POLICETTI, AND S. PACE
Investigations of magnetic behaviour in various type of Nb₃Sn multifilamentary wires by means of the 1st and 3rd harmonics of the AC magnetic susceptibility
 IEEE Transactions on Applied Superconductivity **16**, 1241 (2006).
 Group: Flükiger / Project: 6
- M. G. ADESSO, D. UGLIETTI, R. FLÜKIGER, P. M., AND S. PACE
Phase Transition between the Bragg Glass and a Disordered Phase in Nb₃Sn, as detected by 3rd harmonics of the AC magnetic susceptibility
 Physical Review B **73**, 092513 (2006).
 Group: Flükiger / Project: 6
- M. G. ADESSO, D. UGLIETTI, R. FLÜKIGER, AND S. PACE
Nb₃Sn single crystals, polycrystals and multifilamentary wires: common and different features in the magnetic response
 Journal of Physics: Conference Series **43**, 22 (2006).
 Group: Flükiger / Project: 6
- M. G. ADESSO, D. UGLIETTI, N. MUSOLINO, R. FLÜKIGER, AND S. PACE
H(T) Phase Diagram in Nb₃Sn: A Different Behavior in Single Crystals, Polycrystalline Samples and Multifilamentary Wires
 Advances in Cryogenic Engineering **52**, 473 (2006).
 Group: Flükiger / Project: 6
- P. LEZZA, R. GLADYSHEVSKII, V. ABÄCHERLI, AND R. FLÜKIGER
Texture gradients in Fe-sheathed ex situ MgB₂ tapes
 Superconductor Science & Technology **19**, 286 (2006).
 Group: Flükiger / Project: 6
- P. LEZZA, C. SENATORE, AND R. FLÜKIGER
Improved critical current densities in B₄C doped MgB₂ based wires
 Superconductor Science & Technology **19**, 1030 (2006).
 Group: Flükiger / Project: 6
- C. SENATORE, P. LEZZA, AND R. FLÜKIGER
Critical Current Anisotropy, Pinning Properties and Relaxation Rate of ex situ MgB₂/Fe Tapes
 Advances in Cryogenic Engineering **824**, 654 (2006).
 Group: Flükiger / Project: 6
- C. SENATORE, P. LEZZA, AND R. FLÜKIGER
Determination of the texturing gradient in ex situ MgB₂/Fe tapes examined by X ray diffraction and its effects on the pinning force
 Journal of Applied Physics **100**, 113913 (2006).
 Group: Flükiger / Project: 6
- D. UGLIETTI, V. ABÄCHERLI, B. SEEBER, AND R. FLÜKIGER
The effect of Ti addition on critical Parameters and Transport Properties of Quaternary (Nb, Ta, Ti)₃Sn Wires
 Superconductor Science & Technology **19**, 1185

(2006).

Group: Flükiger / Project: 6

D. UGLIETTI, B. SEEBER, V. ABÄCHERLI,
M. CANTONI, AND R. FLÜKIGER*Strain and Field Scaling Laws for Internal Sn
and Bronze Route Nb₃Sn Wires up to 21 T*Advances in Cryogenic Engineering **824**, 528
(2006).

Group: Flükiger / Project: 6

D. UGLIETTI, B. SEEBER, AND R. FLÜKIGER
*Critical Currents versus Applied Strain for In-
dustrial Y-123 Coated Conductors at Various
Temperatures and Magnetic Fields up to 19 T*Superconductor Science & Technology **19**, 869
(2006).

Group: Flükiger / Project: 6

J. WANG, J. L. JORDA, A. PISCH, AND
R. FLÜKIGER*Experimental Study of the CeNi₅-CeCu₅ Sys-
tem*Intermetallics **14**, 869 (2006).

Group: Flükiger / Project: 6

Y. WANG, C. SENATORE, V. ABÄCHERLI,
D. UGLIETTI, AND R. FLÜKIGER*Specific Heat of Nb₃Sn Wires*Superconductor Science & Technology **19**, 2030
(2006).

Group: Flükiger / Project: 6

V. ABÄCHERLI, D. UGLIETTI, P. LEZZA,
B. SEEBER, R. FLÜKIGER, M. CANTONI, AND
P.-A. BUFFAT*The Influence of Ti doping Methods on the High
Field Performance of (Nb, Ta, Ti)₃Sn Multifila-
mentary Wires Using Ospray Bronze*IEEE Transactions on Applied Superconductiv-
ity **15**, 3482 (2005).

Group: Flükiger / Project: 6

N. BANNO, D. UGLIETTI, B. SEEBER,
T. TAKEUCHI, AND R. FLÜKIGER*Field and strain dependence of critical current
in technical Nb₃Al superconductors*Superconductor Science & Technology **18**, S338
(2005).

Group: Flükiger / Project: 6

N. BANNO, D. UGLIETTI, B. SEEBER,
T. TAKEUCHI, AND R. FLÜKIGER*Strain dependence of superconducting charac-
teristics in technical Nb₃Al superconductors*Superconductor Science & Technology **18**, 284
(2005).

Group: Flükiger / Project: 6

R. FLÜKIGER, D. UGLIETTI, V. ABÄCHERLI,
AND B. SEEBER*Asymmetric Behaviour of J_c(ϵ) in Nb₃Sn Wires
and correlation with the stress induced elastic
tetragonal distortion*Superconductor Science & Technology **18**, S416
(2005).

Group: Flükiger / Project: 6

E. GIANNINI, N. CLAYTON, N. MU-
SOLINO, A. PIRIOU, R. GLADYSHEVSKII,
AND R. FLÜKIGER*Growth and superconducting properties of Pb-
free and Pb-doped Bi-2223 crystals*IEEE Transactions on Applied Superconductiv-
ity **15**, 3102 (2005).

Groups: van der Marel, Flükiger / Project: 3

P. LEZZA, R. GLADYSHEVSKII, H. L. SUO,
AND R. FLÜKIGER*Quantitative study of the inhomogeneous dis-
tribution of phases in Fe-sheathed ex situ MgB₂
tapes*Superconductor Science & Technology **18**, 753
(2005).

Group: Flükiger / Project: 6

B. SEEBER, D. UGLIETTI, V. ABÄCHERLI, P. A.
BOVIER, D. ECKERT, G. KÜBLER, P. LEZZA,
A. POLLINI, AND R. FLÜKIGER*Critical Current vs. Strain Measurement up to
21 T and 1'000 A of Long Length Supercon-
ducting Wires and Tapes*Review of Scientific Instruments **76**, 093901
(2005).

Group: Flükiger / Project: 6

X. SU, E. GIANNINI, AND R. FLÜKIGER

*Improvement of the critical current density of
Bi-2223 tapes by introducing Ag Layers inside
individual filaments*Superconductor Science & Technology **18**, 830
(2005).

Groups: Flükiger, van der Marel / Project: 6

Group of L. ForróA. AKRAP, N. BARIŠIĆ, L. FORRÓ, D. MAN-
DRUS, AND B. C. SALES*High-pressure resistivity and thermoelectric
power in Yb₁₄MnSb₁₁*Physical Review B **76**, 085203 (2007).

Group: Forró / Project: 1

A. AKRAP, N. BARIŠIĆ, R. GAAL, AND
L. FORRÓ*Pressure-induced tuning of phase transition
and role of disorder in electrical transport prop-
erties of β -Sr_xV₆O₁₅*

- Physical Review B **76**, 235111 (2007).
Group: Forró / Project: 1
- A. AKRAP, E. TUTIŠ, S. M. KAZAKOV, N. D. ZHIGADLO, J. KARPINSKI, AND L. FORRÓ
Manifestations of fine features of the density of states in the transport properties of KOs_2O_6
Physical Review B **75**, 172501 (2007).
Groups: Forró, Karpinski / Projects: 1, 3, 4
- A. AKRAP, T. WELLER, M. ELLERBY, S. S. SAXENA, G. CSÁNYI, AND L. FORRÓ
 C_6Yb and graphite: A comparative high-pressure transport study
Physical Review B **76**, 045426 (2007).
Group: Forró / Project: 1
- C. BATTAGLIA, H. CERCELLIER, L. DESPONT, C. MONNEY, M. PRESTER, H. BERGER, L. FORRÓ, M. G. GARNIER, AND P. AEBI
Non-uniform doping across the Fermi surface of NbS_2 intercalates
The European Physical Journal B **57**, 385 (2007).
Groups: Aebi, Margaritondo, Forró / Projects: 1, 3
- ▶ H. CERCELLIER, C. MONNEY, F. CLERC, C. BATTAGLIA, L. DESPONT, M. G. GARNIER, H. BECK, P. AEBI, L. PATTHEY, H. BERGER, AND L. FORRÓ
Evidence for an Excitonic Insulator Phase in $1T-TiSe_2$
Physical Review Letters **99**, 146403 (2007).
Groups: Aebi, Margaritondo, Forró / Projects: 1, 3
- P. FAZEKAS, N. BARISIC, I. KEZSMARKI, L. DEMKO, H. BERGER, L. FORRÓ, AND G. MIHALY
Magnetic-field-induced transition in $BaVS_3$
Physical Review B **75**, 035128 (2007).
Groups: Margaritondo, Forró / Projects: 1, 3
- P. FAZEKAS, K. PENC, K. RADNÓCZI, N. BARIŠIĆ, H. BERGER, L. FORRÓ, S. MITROVIĆ, A. GAUZZI, L. DEMKÓ, I. KÉZSMÁRKI, AND G. MIHALY
The electronic structure and the phases of $BaVS_3$
Journal of Magnetism and Magnetic Materials **310**, 928 (2007).
Groups: Margaritondo, Forró / Project: 3
- L. V. GASPAROV, K.-Y. CHOI, G. GÜNTHERODT, H. BERGER, AND L. FORRÓ
Electronic Raman scattering in magnetite
Journal of Applied Physics **101**, 09G108 (2007).
Groups: Margaritondo, Forró / Project: 3
- I. KÉZSMÁRKI, R. GAÁL, C. C. HOMES, B. SÍPOS, H. BERGER, S. BORDÁCS, G. MIHALY, AND L. FORRÓ
High-pressure infrared spectroscopy: tuning of the low-energy excitations in correlated electron systems
Physical Review B **76**, 205114 (2007).
Groups: Margaritondo, Forró / Projects: 1, 3
- S. MITROVIC, P. FAZEKAS, C. SÖNDERGAARD, D. ARIOSA, N. BARISIC, H. BERGER, D. CLOETTA, L. FORRÓ, H. HÖCHST, I. KUPCIC, D. PAVUNA, AND G. MARGARITONDO
Experimental electronic structure and Fermi-surface instability of the correlated 3d sulphide $BaVS_3$: High-resolution angle-resolved photoemission spectroscopy
Physical Review B **75**, 153103 (2007).
Groups: Margaritondo, Forró / Projects: 1, 3
- F. SIMON, F. MURÁNYI, T. FEHÉR, A. JÁNOSSY, L. FORRÓ, C. PETROVIC, S. L. BUD'KO, AND P. C. CANFIELD
Spin-lattice relaxation time of conduction electrons in MgB_2
Physical Review B **76**, 024519 (2007).
Group: Forró / Project: 1
- B. SIPOS, N. BARISIC, R. GAAL, L. FORRÓ, J. KARPINSKI, AND F. RULLIER-ALBENQUE
Matthiessen's rule in MgB_2 : Resistivity and T_c as a function of point defect concentration
Physical Review B **76**, 132504 (2007).
Groups: Forró, Karpinski / Projects: 1, 3, 4
- G. CAIMI, L. DEGIORGI, H. BERGER, AND L. FORRÓ
Optical evidence for a magnetically driven structural transition in the spin web Cu_3TeO_6
Europhysics Letters **75**, 496 (2006).
Groups: Margaritondo, Degiorgi, Forró / Projects: 1, 3
- G. CAIMI, L. DEGIORGI, H. BERGER, AND L. FORRÓ
Phonon analysis of the $S = 1$ quantum spin systems $Ni_5Te_4O_{12}X_2$ ($X = Cl$ and Br)
Journal of Physics: Condensed Matter **18**, 4065 (2006).
Groups: Margaritondo, Degiorgi, Forró / Projects: 1, 3
- F. CLERC, C. BATTAGLIA, M. BOVET, L. DESPONT, C. MONNEY, H. CERCELLIER, M. GARNIER, P. AEBI, H. BERGER, AND L. FORRÓ
Lattice-distortion-enhanced electron-phonon coupling and Fermi surface nesting in $1T-TaS_2$
Physical Review B **74**, 155114 (2006).
Groups: Margaritondo, Aebi, Forró / Projects: 1, 2, 3
- L. DESPONT, F. CLERC, M. G. GARNIER, H. BERGER, L. FORRÓ, AND P. AEBI

Multiple scattering investigation of the 1T-TaS₂ surface termination

The European Physical Journal B **52**, 421 (2006).

Groups: Aebi, Margaritondo, Forró / Projects: 3, 5

- ▶ I. KÉZSMÁRKI, G. MIHÁLY, R. GAÁL, N. BARIŠIĆ, A. AKRAP, H. BERGER, L. FORRÓ, C. C. HOMES, AND L. MIHÁLY

Separation of orbital contributions to the optical conductivity of BaVS₃

Physical Review Letters **96**, 186402 (2006).

Groups: Margaritondo, Forró / Projects: 1, 3

H. L. LIU, M. QUIJADA, D. B. ROMERO, D. B. TANNER, A. ZIBOLD, G. L. CARR, H. BERGER, L. FORRÓ, L. MIHALY, G. CAO, B.-H. O, J. T. MARKERT, J. P. RICE, M. J. BURNS, AND K. A. DELIN

Drude behavior in the far-infrared conductivity of cuprate superconductors

Annalen der Physik **15**, 606 (2006).

Groups: Margaritondo, Forró / Project: 3

P. MATUS, H. ALLOUL, G. KRIZA, V. BROUET, P. M. SINGER, S. GARAJ, AND L. FORRÓ

Influence of local fullerene orientation on the electronic properties of Na₂AC₆₀ (A = Cs, Rb, K) compounds

Physical Review B **74**, 214509 (2006).

Group: Forró / Project: 1

L. MIHÁLY, T. FEHÉR, B. DÓRA, B. NÁFRÁDI, H. BERGER, AND L. FORRÓ

Spin resonance in the ordered magnetic state of Ni₅(TeO₃)₄Cl₂

Physical Review B **74**, 174403 (2006).

Groups: Margaritondo, Forró / Projects: 1, 3

- ▶ L. MIHÁLY, B. DÓRA, A. VÁNYOLOS, H. BERGER, AND L. FORRÓ

Spin-Lattice Interaction in the Quasi-One-Dimensional Helimagnet LiCu₂O₂

Physical Review Letters **97**, 067206 (2006).

Groups: Margaritondo, Forró / Projects: 1, 3

- ▶ F. SIMON, H. KUZMANY, B. NÁFRÁDI, T. FEHÉR, L. FORRÓ, F. FÜLÖP, A. JÁNOSSY, L. KORECZ, A. ROCKENBAUER, F. HAUKE, AND A. HIRSCH

Magnetic Fullerenes inside Single-Wall Carbon Nanotubes

Physical Review Letters **97**, 136801 (2006).

Group: Forró / Project: 1

R. P. SMITH, A. KUSMARTSEVA, Y. T. C. KO, S. S. SAXENA, A. AKRAP, L. FORRÓ, M. LAAD, T. E. WELLER, M. ELLERBY, AND N. T. SKIPPER

Pressure dependence of the superconducting transition temperature in C₆Yb and C₆Ca

Physical Review B **74**, 024505 (2006).

Group: Forró / Project: 1

C. BATTAGLIA, H. CERCELLIER, F. CLERC, L. DESPONT, M. G. GARNIER, C. KOITZSCH, P. AEBI, H. BERGER, L. FORRÓ, AND C. AMBROSCH-DRAXL

Fermi surface induced lattice distortion in NbTe₂

Physical Review B **72**, 195114 (2005).

Groups: Margaritondo, Aebi, Forró / Projects: 1, 3

L. V. GASPAROV, D. ARENAS, K.-Y. CHOI, G. GÜNTHERODT, H. BERGER, L. FORRÓ, G. MARGARITONDO, V. V. STRUZHKIN, AND R. HEMLEY

Magnetite: Raman study of the high-pressure and low-temperature effects

Journal of Applied Physics **97**, 10A922 (2005).

Groups: Margaritondo, Forró / Project: 3

I. KÉZSMÁRKI, G. MIHÁLY, R. GAÁL, N. BARIŠIĆ, H. BERGER, L. FORRÓ, C. C. HOMES, AND L. MIHÁLY

Pressure-induced suppression of the spin-gapped insulator phase in BaVS₃: An infrared optical study

Physical Review B **71**, 193103 (2005).

Groups: Margaritondo, Forró / Project: 3

J.-P. SALVETAT, T. FEHÉR, C. L'HUILLIER, F. BEUNEU, AND L. FORRÓ

Anomalous electron spin resonance behavior of single-walled carbon nanotubes

Physical Review B **72**, 075440 (2005).

Group: Forró / Project: 1

F. SIMON, A. JÁNOSSY, T. FEHÉR, F. MURÁNYI, S. GARAJ, L. FORRÓ, C. PETROVIC, S. BUD'KO, R. A. RIBEIRO, AND P. C. CANFIELD

Magnetic-field-induced density of states in MgB₂: Spin susceptibility measured by conduction-electron spin resonance

Physical Review B **72**, 012511 (2005).

Group: Forró / Project: 1

Group of T. Giamarchi

L. BENFATTO, C. CASTELLANI, AND T. GIAMARCHI

Doping dependence of the vortex-core energy in bilayer films of cuprates

Physical Review B **77**, 100506(R) (2008).

Group: Giamarchi / Project: 2

T. GIAMARCHI, C. RÜEGG, AND O. TCHERNYSHYOV

- Bose-Einstein Condensation in Magnetic Insulators*
Nature Physics **4**, 198 (2008).
Groups: Giamarchi, Mesot / Project: 1
- A. KLEINE, C. KOLLATH, I. P. MCCULLOCH, T. GIAMARCHI, AND U. SCHOLLWÖCK
Excitations in two-component Bose-gases to be published in New Journal of Physics (2008).
Group: Giamarchi / Project: 1
- ▶ C. KOLLATH, J. S. MEYER, AND T. GIAMARCHI
Dipolar bosons in a planar array of one-dimensional tubes
to be published in Physical Review Letters (2008), accepted in Phys. Rev. Lett. (2008).
Group: Giamarchi / Project: 1
- ▶ L. BENFATTO, C. CASTELLANI, AND T. GIAMARCHI
Kosterlitz-Thouless Behavior in Layered Superconductors: The Role of the Vortex Core Energy
Physical Review Letters **98**, 117008 (2007).
Group: Giamarchi / Project: 2
- ▶ L. BENFATTO, C. CASTELLANI, AND T. GIAMARCHI
Sine-Gordon Description of Beresinskii-Kosterlitz-Thouless Vortices in Superconductors Immersed in an External Magnetic Field
Physical Review Letters **99**, 207002 (2007).
Group: Giamarchi / Project: 2
- M. A. CAZALILLA, A. IUCCI, AND T. GIAMARCHI
Competition between vortex unbinding and tunneling in an optical lattice
Physical Review A **75**, 051603(R) (2007).
Group: Giamarchi / Project: 1
- ▶ P. CHUDZINSKI, M. GABAY, AND T. GIAMARCHI
Phase diagram of hole doped two-leg Cu-O ladders
Physical Review B **76**, 161101(R) (2007).
Group: Giamarchi / Project: 2
- M. CORTI, F. CARBONE, M. FILIBIAN, T. JARLBORG, A. A. NUGROHO, AND P. CARRETTA
Spin dynamics in a weakly itinerant magnet from ^{29}Si NMR in MnSi
Physical Review B **75**, 115111 (2007).
Group: Giamarchi / Project: 1
- ▶ C. DUBOIS, A. P. PETROVIĆ, G. SANTI, C. BERTHOD, A. A. MANUEL, M. DECROUX, Ø. FISCHER, M. POTEL, AND R. CHEVREL
Node-like excitations in superconducting PbMo_6S_8 probed by scanning tunneling spectroscopy
Physical Review B **75**, 104501 (2007).
Groups: Fischer, Giamarchi / Projects: 1, 2
- ▶ Ø. FISCHER, M. KUGLER, I. MAGGIO-APRILE, C. BERTHOD, AND C. RENNER
Scanning tunneling spectroscopy of high-temperature superconductors
Reviews of Modern Physics **79**, 353 (2007).
Groups: Fischer, Giamarchi / Project: 2
- ▶ V. GURITANU, D. VAN DER MAREL, J. TEYSSIER, T. JARLBORG, H. WILHELM, M. SCHMIDT, AND F. STEGLICH
Optical evidence for heavy charge carriers in FeGe
Physical Review B **75**, 155114 (2007).
Groups: Giamarchi, van der Marel / Project: 1
- A. IUCCI, G. A. FIETE, AND T. GIAMARCHI
Fourier transform of the $2k_F$ Luttinger liquid density correlation function with different spin and charge velocities
Physical Review B **75**, 205116 (2007).
Group: Giamarchi / Project: 1
- T. JARLBORG
Effects of spin-phonon interaction within the CuO plane of high- T_c superconductors
Physica C **454**, 5 (2007).
Group: Giamarchi / Project: 1
- T. JARLBORG
Importance of thermal disorder and electronic occupation for temperature dependence of optical conductivity in FeSi and MnSi
Physical Review B **76**, 205105 (2007).
Group: Giamarchi / Project: 1
- T. JARLBORG
Properties of high- T_c copper oxides from the nearly-free-electron model
Physical Review B **76**, 140504(R) (2007).
Group: Giamarchi / Project: 1
- T. JEONG AND T. JARLBORG
Varying Cu-Ti hybridization near the Fermi energy in Cu_xTiSe_2 : Results from supercell calculations
Physical Review B **76**, 153103 (2007).
Group: Giamarchi / Project: 1
- A. KLEINE, C. KOLLATH, I. P. MCCULLOCH, T. GIAMARCHI, AND U. SCHOLLWÖCK
Spin-charge separation in two-component Bose gases
Physical Review A **77**, 013607 (2007).
Group: Giamarchi / Project: 1

- C. KOLLATH, M. KÖHL, AND T. GIAMARCHI
Scanning tunneling microscopy for ultracold atoms
Physical Review A **76**, 063602 (2007).
Group: Giamarchi / Project: 1
- C. KOLLATH, A. M. LÄUCHLI, AND E. ALTMAN
Quench Dynamics and Nonequilibrium Phase Diagram of the Bose-Hubbard Model
Physical Review Letters **98**, 180601 (2007).
Group: Giamarchi / Project: 1
- G. LEÓN, C. BERTHOD, AND T. GIAMARCHI
Hall effect in strongly correlated low-dimensional systems
Physical Review B **75**, 195123 (2007).
Group: Giamarchi / Project: 1
- E. ORIGNAC, R. CITRO, AND T. GIAMARCHI
Critical properties and Bose-Einstein condensation in dimer spin systems
Physical Review B **75**, 140403(R) (2007).
Group: Giamarchi / Project: 1
- P. PEDRAZZINI, H. WILHELM, D. JACCARD, T. JARLBORG, M. SCHMIDT, M. HANFLAND, L. AKSELRUD, H. Q. YUAN, U. SCHWARZ, Y. GRIN, AND F. STEGLICH
Metallic State in Cubic FeGe Beyond Its Quantum Phase Transition
Physical Review Letters **98**, 047204 (2007).
Group: Giamarchi / Project: 1
- M. B. ZVONAREV, V. V. CHEIANOV, AND T. GIAMARCHI
Spin Dynamics in a One-Dimensional Ferromagnetic Bose Gas
Physical Review Letters **99**, 240404 (2007).
Group: Giamarchi / Project: 1
- C. BERTHOD, T. GIAMARCHI, S. BIERMANN, AND A. GEORGES
Breakup of the Fermi Surface Near the Mott Transition in Low-Dimensional Systems
Physical Review Letters **97**, 136401 (2006).
Group: Giamarchi / Project: 1
- M. A. CAZALILLA, A. F. HO, AND T. GIAMARCHI
Interacting Bose gases in quasi-one-dimensional optical lattices
New Journal of Physics **8**, 158 (2006).
Group: Giamarchi / Project: 1
- L. F. CUGLIANDOLO, T. GIAMARCHI, AND P. LE DOUSSAL
Dynamic Compressibility and Aging in Wigner Crystals and Quantum Glasses
Physical Review Letters **96**, 217203 (2006).
Group: Giamarchi / Project: 1
- A. IUCCI, M. A. CAZALILLA, A. F. HO, AND T. GIAMARCHI
Energy absorption of a Bose gas in a periodically modulated optical lattice
Physical Review A **73**, 041608 (2006).
Group: Giamarchi / Project: 1
- C. KOLLATH, A. IUCCI, T. GIAMARCHI, W. HOFSTETTER, AND U. SCHOLLWÖCK
Spectroscopy of Ultracold Atoms by Periodic Lattice Modulations
Physical Review Letters **97**, 050402 (2006).
Group: Giamarchi / Project: 1
- C. KOLLATH, A. IUCCI, I. P. MCCULLOCH, AND T. GIAMARCHI
Modulation spectroscopy with ultracold fermions in an optical lattice
Physical Review A **74**, 041604(R) (2006).
Group: Giamarchi / Project: 1
- U. LONDON, T. GIAMARCHI, AND D. ORGAD
Disorder effects in fluctuating one-dimensional interacting systems
Physical Review B **73**, 134201 (2006).
Group: Giamarchi / Project: 2
- E. ORIGNAC, A. ROSSO, R. CHITRA, AND T. GIAMARCHI
Coulomb disorder in periodic systems: Effect of unscreened charged impurities
Physical Review B **73**, 035112 (2006).
Group: Giamarchi / Project: 1
- P. PARUCH, T. GIAMARCHI, T. TYBELL, AND J.-M. TRISCONE
Nanoscale studies of domain wall motion in epitaxial ferroelectric thin films
Journal of Applied Physics **100**, 051608 (2006).
Groups: Triscone, Giamarchi / Project: 5
- A. SACCHETTI, L. DEGIORGI, T. GIAMARCHI, N. RU, AND I. R. FISHER
Chemical pressure and hidden one-dimensional behavior in rare-earth tri-telluride charge-density wave compounds
Physical Review B **74**, 125115 (2006).
Groups: Degiorgi, Giamarchi / Project: 1
- C. WEBER, A. LÄUCHLI, F. MILA, AND T. GIAMARCHI
Magnetism and superconductivity of strongly correlated electrons on the triangular lattice
Physical Review B **73**, 014519 (2006).
Groups: Mila, Giamarchi / Project: 1

- M. A. CAZALILLA, A. F. HO, AND T. GIAMARCHI
Two-Component Fermi Gas on Internal-State-Dependent Optical Lattices
Physical Review Letters **95**, 226402 (2005).
Group: Giamarchi / Project: 1
- P. PARUCH, T. GIAMARCHI, AND J.-M. TRISCONI
Domain Wall Roughness in Epitaxial Ferroelectric PbZr_{0.2}Ti_{0.8}O₃ Thin Films
Physical Review Letters **94**, 197601 (2005).
Groups: Triscone, Giamarchi / Project: 5
- Group of M. Grioni**
- C. R. AST, J. HENK, A. ERNST, L. MORESCHINI, M. C. FALUB, D. PACILÉ, P. BRUNO, K. KERN, AND M. GRIONI
Giant Spin Splitting through Surface Alloying
Physical Review Letters **98**, 186807 (2007).
Group: Grioni / Project: 1
- C. R. AST, G. WITTICH, P. WAHL, R. VOGELGESANG, D. PACILÉ, M. C. FALUB, L. MORESCHINI, M. PAPAGNO, M. GRIONI, AND K. KERN
Local detection of spin-orbit splitting by scanning tunneling spectroscopy
Physical Review B **75**, 201401(R) (2007).
Group: Grioni / Project: 1
- L. MORESCHINI, C. DALLERA, J. J. JOYCE, J. L. SARRAO, E. D. BAUER, V. FRITSCH, S. BOBEV, E. CARPENE, S. HUOTARI, G. VANKÓ, G. MONACO, P. LACOVIG, G. PANACCIONE, A. FONDACARO, G. PAOLICELLI, P. TORELLI, AND M. GRIONI
Comparison of bulk-sensitive spectroscopic probes of Yb valence in Kondo systems
Physical Review B **75**, 035113 (2007).
Group: Grioni / Project: 1
- D. PACILÉ, M. PAPAGNO, M. LAVAGNINI, H. BERGER, L. DEGIORGI, AND M. GRIONI
Photoemission and optical studies of ZrSe₃, HfSe₃, and ZrS₃
Physical Review B **76**, 155406 (2007).
Groups: Margaritondo, Degiorgi, Grioni / Projects: 1, 3
- X. WANG, H. MICHOR, AND M. GRIONI
Probing the nature of the Ce 4f states in CeX₉Si₄ (X=Ni, Co) by high-energy electron spectroscopies
Physical Review B **75**, 035127 (2007).
Group: Grioni / Project: 1
- C. R. AST, D. PACILÉ, M. PAPAGNO, T. GLOOR, F. MILA, S. FEDRIGO, G. WITTICH, K. KERN, H. BRUNE, AND M. GRIONI
Orbital selective overlayer-substrate hybridization in a Pb monolayer on Ag(111)
Physical Review B **73**, 245428 (2006).
Groups: Grioni, Mila / Project: 1
- S. G. CHIUZBĂIAN, G. GHIRINGHELLI, C. DALLERA, M. GRIONI, P. AMANN, X. WANG, L. BRAICOVICH, AND L. PATTHEY
Localized Electronic Excitations in NiO Studied with Resonant Inelastic X-Ray Scattering at the Ni M Threshold: Evidence of Spin Flip
Physical Review Letters **95**, 197402 (2006).
Group: Grioni / Project: 1
- S. COLONNA, F. RONCI, A. CRICENTI, L. PERFETTI, H. BERGER, AND M. GRIONI
Scanning tunneling microscopy observation of a mott-insulator phase at the 1T-TaSe₂ surface
Japanese Journal of Applied Physics **45**, 1950 (2006).
Groups: Margaritondo, Grioni / Projects: 1, 3
- C. DALLERA, O. WESSELY, M. COLARIETI-TOSTI, O. ERIKSSON, R. AHUJA, B. JOHANSSON, M. I. KATSNELSON, E. ANNESE, J.-P. RUFFE, G. VANKÓ, L. BRAICOVICH, AND M. GRIONI
Understanding mixed valent materials: Effects of dynamical core-hole screening in high-pressure x-ray spectroscopy
Physical Review B **74**, 081101(R) (2006).
Group: Grioni / Project: 1
- G. GHIRINGHELLI, A. PIAZZALUNGA, C. DALLERA, G. TREZZI, L. BRAICOVICH, T. SCHMITT, V. N. STROCOV, R. BETEMPS, L. PATTHEY, X. WANG, AND M. GRIONI
SAXES, a high resolution spectrometer for resonant x-ray emission in the 400–1600 eV energy range
Review of Scientific Instruments **77**, 113108 (2006).
Group: Grioni / Project: 1
- M. MEDARDE, C. DALLERA, M. GRIONI, J. VOIGT, A. PODLESNYAK, E. POMJAKUSHINA, K. CONDER, T. NEISIUS, O. TJERNBERG, AND S. BARILO
Low-temperature spin-state transition in LaCoO₃ investigated using resonant x-ray absorption at the Co K edge
Physical Review B **73**, 054424 (2006).
Groups: Mesot, Grioni / Projects: 1, 3
- D. PACILÉ, C. R. AST, M. PAPAGNO, C. DA SILVA, L. MORESCHINI, M. FALUB, A. P. SEITSONEN, AND M. GRIONI

Electronic structure of an ordered Pb/Ag(111) surface alloy: Theory and experiment

Physical Review B **73**, 245429 (2006).

Group: Grioni / Project: 1

M. PAPAGNO, D. PACILÉ, G. CAIMI, H. BERGER, L. DEGIORGI, AND M. GRIONI

Electronic structure of one-dimensional copper oxide chains in LiCu₂O₂ from angle-resolved photoemission and optical spectroscopy

Physical Review B **73**, 115120 (2006).

Groups: Margaritondo, Degiorgi, Grioni / Projects: 1, 3

► S. COLONNA, F. RONCI, A. CRICENTI, L. PERFETTI, H. BERGER, AND M. GRIONI

Mott phase at the surface of 1T-TaSe₂ observed by scanning tunneling microscopy

Physical Review Letters **94**, 036405 (2005).

Groups: Margaritondo, Grioni / Project: 3

C. DALLERA, E. ANNESE, J.-P. RUEFF, M. GRIONI, G. VANKO, L. BRAICOVICH, A. BARLA, J.-P. SANCHEZ, R. GUSMEROLI, A. PALENZONA, L. DEGIORGI, AND G. LAPERTOT

Intermediate valence behaviour under pressure: how precisely can we probe it by means of resonant inelastic x-ray emission?

Journal of Physics: Condensed Matter **17**, S849 (2005).

Groups: Degiorgi, Grioni / Project: 1

M. GRIONI, C. R. AST, D. PACILE, M. PAPAGNO, H. BERGER, AND L. PERFETTI

Photoemission as a probe of coexisting and conflicting periodicities in low-dimensional solids

New Journal of Physics **7**, 106 (2005).

Groups: Margaritondo, Grioni / Projects: 1, 3

N. KOCH, F. JÄCKEL, J. GHIJSEN, M. C. ROJAS, M. GRIONI, J. P. RABE, R. L. JOHNSON, A. KAHN, AND J.-J. PIREAUX

Observation of filled states at the Fermi-level in alkali-metal intercalated organic films: dependence on substrate work function

Journal of Electron Spectroscopy and Related Phenomena **144-147**, 495 (2005).

Group: Grioni / Project: 1

G. PANACCIONE, G. CAUTERO, M. CAUTERO, A. FONDACARO, M. GRIONI, P. LACOVIG, G. MONACO, F. OFFI, G. PAOLICELLI, M. SACCHI, N. STOJIĆ, G. STEFANI, R. TOMMASINI, AND P. TORELLI

High-energy photoemission in silver: resolving d and sp contributions in valence band spectra

Journal of Physics: Condensed Matter **17**, 2671 (2005).

Group: Grioni / Project: 1

G. PAOLICELLI, A. FONDACARO, F. OFFI, G. STEFANI, G. CAUTERO, M. CAUTERO, B. KRASTANOV, P. LACOVIG, P. PITTANA, R. SERGO, R. TOMMASINI, P. TORELLI, M. SACCHI, M. GRIONI, G. MONACO, AND G. PANACCIONE

Bulk sensitive photoemission: first results of VOLPE project at ESRF

Journal of Electron Spectroscopy and Related Phenomena **144-147**, 963 (2005).

Group: Grioni / Project: 1

L. PERFETTI, T. A. GLOOR, F. MILA, H. BERGER, AND M. GRIONI

Unexpected periodicity in the quasi-two-dimensional Mott insulator 1T-TaS₂ revealed by angle-resolved photoemission

Physical Review B **71**, 153101 (2005).

Groups: Margaritondo, Mila, Grioni / Projects: 1, 3

M. SACCHI, F. OFFI, P. TORELLI, A. FONDACARO, C. SPEZZANI, M. CAUTERO, G. CAUTERO, S. HUOTARI, M. GRIONI, R. DELAUNAY, M. FABRIZIOLI, G. VANKÓ, G. MONACO, G. PAOLICELLI, G. STEFANI, AND G. PANACCIONE

Quantifying the effective attenuation length in high energy photoemission experiments

Physical Review B **71**, 155117 (2005).

Group: Grioni / Project: 1

Group of M. Hasler

F. ROY, B. DUTOIT, F. GRILLI, AND F. SIROIS

Magneto-thermal finite element modeling of 2nd generation HTS for FCL design purposes

in *8th European Conference on Applied Superconductivity* (2008), Conference Series.

Group: Hasler / Project: 6

► F. ROY, B. DUTOIT, F. GRILLI, AND F. SIROIS

Magneto-Thermal Modeling of Second-Generation HTS for Resistive Fault Current Limiter Design Purposes

IEEE Transactions on Applied Superconductivity **18**, 29 (2008).

Group: Hasler / Project: 6

F. SIROIS, D. MOUHAMADOU, F. ROY, F. GRILLI, AND B. DUTOIT

Evaluation of two commercial finite element packages for calculating AC losses in 2-D high temperature superconducting strips

in *8th European Conference on Applied Superconductivity* (2008), Conference Series.

Group: Hasler / Project: 6

L. ANTOGNAZZA, M. DECROUX, M. THERASSE, M. ABPLANALP, J. DURON,

- B. DUTOIT, AND Ø. FISCHER
Thermally Assisted Transition in Thin Film Based FCL: A Way to Speed Up the Normal Transition Across the Wafer
IEEE Transactions on Applied Superconductivity **17**, 3463 (2007).
Groups: Fischer, Hasler / Project: 6
- ▶ J. DURON, F. GRILLI, L. ANTOGNAZZA, M. DECROUX, B. DUTOIT, AND Ø. FISCHER
Finite-element modelling of YBCO fault current limiter with temperature dependent parameters
Superconductor Science & Technology **20**, 338 (2007).
Groups: Hasler, Fischer / Project: 6
- ▶ J. DURON, B. DUTOIT, F. GRILLI, M. DECROUX, L. ANTOGNAZZA, AND Ø. FISCHER
Computer Modeling of YBCO Fault Current Limiter Strips Lines in Over-Critical Regime With Temperature Dependent Parameters
IEEE Transactions on Applied Superconductivity **17**, 1839 (2007).
Groups: Hasler, Fischer / Project: 6
- ▶ F. SIROIS AND F. ROY
Computation of 2-D Current Distribution in Superconductors of Arbitrary Shapes Using a New Semi-Analytical Method
IEEE Transactions on Applied Superconductivity **17**, 3836 (2007).
Group: Hasler / Project: 6
- ▶ J. DURON, F. GRILLI, L. ANTOGNAZZA, M. DECROUX, S. STAVREV, B. DUTOIT, AND Ø. FISCHER
Finite-element modeling of superconductors in over-critical regime with temperature dependent resistivity.
Journal of Physics: Conference Series **43**, 1076 (2006).
Groups: Fischer, Hasler / Project: 6
- S. STAVREV, F. GRILLI, B. DUTOIT, AND S. ASHWORTH
Finite-element analysis and comparison of the AC loss performance of BSCCO and YBCO conductors
in *7th European Conference on Applied Superconductivity* (2006), vol. 43 of *J. Phys.: Conf. Ser.*, p. 581.
Group: Hasler / Project: 6
- J. DURON, L. ANTOGNAZZA, M. DECROUX, F. GRILLI, S. STAVREV, B. DUTOIT, AND Ø. FISCHER
3D finite element Simulations of strip lines in a YBCO/Au fault current limiter.
IEEE Transactions on Applied Superconductivity **15**, 1998 (2005).
Groups: Fischer, Hasler / Project: 6
- J. DURON, L. ANTOGNAZZA, M. DECROUX, F. GRILLI, S. STAVREV, B. DUTOIT, AND Ø. FISCHER
3-D finite element Simulations of strip lines in a YBCO/Au fault current limiter
in *IEEE, Applied Superconductivity Conference 2004* (2005), vol. 15, pp. 1998–2002.
Groups: Hasler, Fischer / Project: 6
- B. DUTOIT, J. DURON, S. STAVREV, AND F. GRILLI
Dynamic field mapping for obtaining the current distribution in high-temperature superconducting tapes
in *IEEE, Applied Superconductivity Conference 2004* (2005), vol. 15, pp. 3644–3647.
Group: Hasler / Project: 6
- F. GRILLI, L. MARTINI, B. DUTOIT, S. STAVREV, AND R. BRAMBILLA
Analysis of magnetic field and geometry effects for the design of HTS devices for AC power applications
in *IEEE, Applied Superconductivity Conference 2004* (2005), vol. 15, pp. 2074–2077.
Group: Hasler / Project: 6
- ▶ S. STAVREV, F. GRILLI, B. DUTOIT, AND S. P. ASHWORTH
Comparison of the AC losses of BSCCO and YBCO conductors by means of numerical analysis
Superconductor Science & Technology **18**, 1300 (2005).
Group: Hasler / Project: 6
- Group of J. Hulliger**
- I. L. LANDAU, J. B. WILLEMS, AND J. HULLIGER
Detailed magnetization study of superconducting properties of $YBa_2Cu_3O_{7-x}$ ceramic spheres
Journal of Physics: Condensed Matter **20**, 095222 (2008).
Group: Hulliger / Project: 4
- G. COUDERC, J. B. WILLEMS, B. TRUSCH, AND J. HULLIGER
Optical recognition of local reaction products in ceramic combinatorial syntheses
Materials Research Bulletin **42**, 1845 (2007).
Group: Hulliger / Project: 4

- L. DESSAUGES, J. B. WILLEMS, D. FAVRE, C. BOHRER, F. HELBLING, AND J. HULLIGER
Theory of high gradient attractive magnetic separation of superconducting materials and its experimental verification by $YBa_2Cu_3O_x$ particles
Superconductor Science & Technology **19**, 748 (2006).
Group: Hulliger / Project: 4
- J. HULLIGER, L. DESSAUGES, AND T. A. SAMTLEBEN
Analysis of Compositional Distributions for Exploring the Phase Space by the Single Sample Concept in Ceramic Combinatorial Chemistry
Journal of the American Ceramic Society **89**, 1072 (2006).
Group: Hulliger / Project: 4
- J. HULLIGER AND M. A. AWAN
Single Sample Concept: Theoretical Model for a Combinatorial Approach to Solid-State Inorganic Materials
Journal of Combinatorial Chemistry **7**, 73 (2005).
Group: Hulliger / Project: 4
- J. HULLIGER, M. A. AWAN, B. TRUSCH, AND T. A. SAMTLEBEN
Chemical Diversity in View of Property Generation by a New Combinatorial Approach
Zeitschrift für Anorganische und Allgemeine Chemie **631**, 1255 (2005).
Group: Hulliger / Project: 4
- Group of J. Karpinski**
- D. DAGHERO, D. DELAUDE, A. CALZOLARI, M. TORTELLO, G. A. UMMARINO, R. GONNELLI, V. STEPANOV, N. ZHIGADLO, S. KATRYCH, AND J. KARPINSKI
Point-contact Andreev-reflection spectroscopy in segregation-free $Mg_{1-x}Al_xB_2$ single crystals up to $x = 0.32$
Journal of Physics: Condensed Matter **20**, 085225 (2008).
Group: Karpinski / Projects: 3, 4
- R. KHASANOV, A. SHENGELAYA, A. BUSSMAN-HOLDER, J. KARPINSKI, H. KELLER, AND K. A. MÜLLER
s-wave Symmetry Along the c-axis and s + d In-plane Superconductivity in Bulk $YBa_2Cu_4O_8$
Journal of Superconductivity **21**, 81 (2008).
Groups: Karpinski, Keller / Projects: 3, 4
- R. KHASANOV, A. SHENGELAYA, J. KARPINSKI, A. BUSSMANN-HOLDER, H. KELLER, AND K. A. MÜLLER
s-wave symmetry along the c-axis and s + d in-plane superconductivity in bulk $YBa_2Cu_4O_8$
Journal of Superconductivity and Novel Magnetism **21**, 81 (2008).
Groups: Keller, Karpinski / Project: 2
- K. ROGACKI, G. SCHUCK, Z. BUKOWSKI, N. D. ZHIGADLO, AND J. KARPINSKI
Structural and superconducting properties of $RbOs_2O_6$ single crystals
Physical Review B (2008).
Group: Karpinski / Projects: 3, 4
- S. WEYENETH, T. SCHNEIDER, N. ZHIGADLO, J. KARPINSKI, AND H. KELLER
Probing Superconductivity in MgB_2 confined to magnetic field tuned cylinders by means of critical fluctuations
Journal of Physics: Condensed Matter **20**, 135208 (2008).
Groups: Karpinski, Keller / Projects: 3, 4
- M. D'ASTUTO, M. CALANDRA, S. REICH, A. SHUKLA, M. LAZZERI, F. MAURI, J. KARPINSKI, N. D. ZHIGADLO, A. BOSSAK, AND M. KRISCH
Weak anharmonic effects in MgB_2 : A comparative inelastic x-ray scattering and Raman study
Physical Review B **75**, 174508 (2007).
Group: Karpinski / Projects: 3, 4
- A. AKRAP, E. TUTIŠ, S. M. KAZAKOV, N. D. ZHIGADLO, J. KARPINSKI, AND L. FORRÓ
Manifestations of fine features of the density of states in the transport properties of KOs_2O_6
Physical Review B **75**, 172501 (2007).
Groups: Forró, Karpinski / Projects: 1, 3, 4
- G. BLUMBERG, A. MIALITSIN, B. S. DENNIS, M. V. KLEIN, N. D. ZHIGADLO, AND J. KARPINSKI
Observation of Leggett's Collective Mode in a Multiband MgB_2 Superconductor
Physical Review Letters **99**, 227002 (2007).
Group: Karpinski / Projects: 3, 4
- G. BLUMBERG, A. MIALITSIN, B. S. DENNIS, N. D. ZHIGADLO, AND J. KARPINSKI
Multi-gap superconductivity in MgB_2 : Magneto-Raman spectroscopy
Physica C **456**, 75 (2007).
Group: Karpinski / Projects: 3, 4
- M. BRÜHWILER, T. SCHULZE, S. M. KAZAKOV, Z. BUKOWSKI, R. PUZNIAK, N. D. ZHIGADLO, J. KARPINSKI, AND B. BATLOGG
Superconductivity in the β -pyrochlore osmates
Physica C **460**, 62 (2007).
Group: Karpinski / Projects: 3, 4

- D. DAGHERO, A. CALZOLARI, D. DELAUDE, R. S. GONNELLI, M. TORTELLO, G. A. UMMARINO, V. A. STEPANOV, N. D. ZHIGADLO, J. KARPINSKI, AND M. PUTTI
Point-contact study of the role of non-magnetic impurities and disorder in the superconductivity of MgB₂
Physica C **460**, 975 (2007).
Group: Karpinski / Projects: 3, 4
- D. DAGHERO, A. CALZOLARI, M. TORTELLO, G. A. UMMARINO, R. S. GONNELLI, V. A. STEPANOV, N. D. ZHIGADLO, K. ROGACKI, AND J. KARPINSKI
Point-Contact Spectroscopy in Mn-Doped MgB₂ Single Crystals: Effects of Magnetic Impurities in a Two-Band Superconductor
Journal of Superconductivity **20**, 523 (2007).
Group: Karpinski / Projects: 3, 4
- M. EISTERER, C. KRUTZLER, M. ZEHETMAYER, H. W. WEBER, S. M. KAZAKOV, AND J. KARPINSKI
Influence of carbon doping on the reversible magnetization of MgB₂ single crystals
Physica C **460**, 606 (2007).
Group: Karpinski / Projects: 3, 4
- Y. FASANO, I. MAGGIO-APRILE, J. KARPINSKI, AND Ø. FISCHER
Tunneling and pseudo point-contact spectroscopy on YBa₂Cu₄O₈
Physica C **460-462**, 958 (2007).
Groups: Fischer, Karpinski / Projects: 2, 3, 4
- F. GIUBILEO, F. BOBBA, A. SCARFATO, A. M. CUCOLO, A. KOHEN, D. RODITCHEV, N. D. ZHIGADLO, AND J. KARPINSKI
Local tunneling study of three-dimensional order parameter in the π band of Al-doped MgB₂ single crystals
Physical Review B **76**, 024507 (2007).
Group: Karpinski / Projects: 3, 4
- F. GIUBILEO, F. BOBBA, A. SCARFATO, D. RODITCHEV, N. ZHIGADLO, J. KARPINSKI, AND A. M. CUCOLO
Nanoscale spatial non-homogeneity of 3D in Δ_{π} Mg_{0.9}Al_{0.1}B₂ single crystals
Physica C **460**, 585 (2007).
Group: Karpinski / Projects: 3, 4
- R. S. GONNELLI, A. CALZOLARI, D. DAGHERO, D. DELAUDE, M. TORTELLO, G. A. UMMARINO, V. A. STEPANOV, N. D. ZHIGADLO, J. KARPINSKI, AND P. MANFRINETTI
Effect of Heavy Al Doping on MgB₂: A Point-Contact Study of Crystals and Polycrystals
Journal of Superconductivity **20**, 555 (2007).
Group: Karpinski / Projects: 3, 4
- R. S. GONNELLI, D. DAGHERO, G. A. UMMARINO, M. TORTELLO, D. DELAUDE, V. A. STEPANOV, AND J. KARPINSKI
Point-contact Andreev-reflection spectroscopy in MgB₂: The role of substitutions
Physica C **456**, 134 (2007).
Group: Karpinski / Projects: 3, 4
- J. KARPINSKI, N. D. ZHIGADLO, S. KATRYCH, R. PUZNIAK, K. ROGACKI, AND R. GONNELLI
Single crystals of MgB₂: Synthesis, substitutions and properties
Physica C **456**, 3 (2007).
Group: Karpinski / Projects: 3, 4
- ▶ R. KHASANOV, A. SHENGELEYA, D. DI CASTRO, D. G. ESHCHENKO, I. M. SAVIĆ, K. CONDER, E. POMJAKUSHINA, J. KARPINSKI, S. KAZAKOV, AND H. KELLER
Magnetic-field dependence of the oxygen isotope effect on the magnetic penetration depth of hole-doped cuprate superconductors
Physical Review B **75**, 060505 (2007).
Groups: Keller, Karpinski / Projects: 2, 3, 4
- ▶ R. KHASANOV, N. D. ZHIGADLO, J. KARPINSKI, AND H. KELLER
In-plane magnetic penetration depth λ_{ab} in Ca_{2-x}Na_xCuO₂Cl₂: Role of the apical sites
Physical Review B **76**, 094505 (2007).
Groups: Keller, Karpinski / Projects: 2, 3, 4
- ▶ T. KONDO, R. KHASANOV, J. KARPINSKI, S. M. KAZAKOV, N. D. ZHIGADLO, T. OHTA, H. M. FRETWELL, A. D. PALCZEWSKI, J. D. KOLL, J. MESOT, E. ROTENBERG, H. KELLER, AND A. KAMINSKI
Dual character of the electronic structure of YBa₂Cu₄O₈: The conduction bands of CuO₂ planes and CuO chains
Physical Review Letters **98**, 157002 (2007).
Groups: Keller, Karpinski, Mesot / Projects: 2, 3, 4
- C. KRUTZLER, M. ZEHETMAYER, M. EISTERER, H. W. WEBER, N. D. ZHIGADLO, AND J. KARPINSKI
Comparative study of neutron irradiation and carbon doping in MgB₂ single crystals
Physical Review B **75**, 224510 (2007).
Group: Karpinski / Projects: 3, 4
- C. KRUTZLER, M. ZEHETMAYER, M. EISTERER, H. W. WEBER, N. D. ZHIGADLO, AND J. KARPINSKI
Modification of the defect structure in MgB₂ single crystals by carbon doping and neutron irradiation

- Physica C **460**, 555 (2007).
Group: Karpinski / Projects: 3, 4
- A. MIALITSIN, B. S. DENNIS, N. D. ZHIGADLO, J. KARPINSKI, AND G. BLUMBERG
Anharmonicity and self-energy effects of the E_{2g} phonon in MgB_2
Physical Review B **75**, 020509 (2007).
Group: Karpinski / Projects: 3, 4
- P. PARISIADES, D. LAMPAKIS, D. PALLES, E. LIAROKAPIS, AND J. KARPINSKI
The relation of the broad band with the E_{2g} phonon and superconductivity in the $Mg(B_{1-x}C_x)_2$ compound
Journal of Magnetism and Magnetic Materials **310**, E110 (2007).
Group: Karpinski / Projects: 3, 4
- B. PEDRINI, S. WESSEL, J. L. GAVILANO, H. R. OTT, S. M. KAZAKOV, AND J. KARPINSKI
Quenching of the Haldane gap in $LiVSi_2O_6$ and related compounds
The European Physical Journal B **55**, 219 (2007).
Groups: Karpinski, Ott / Projects: 1, 3, 4
- M. PISSAS, D. STAMOPOULOS, N. ZHIGADLO, AND J. KARPINSKI
Influence of aluminum substitution on the vortex matter properties of MgB_2
Physical Review B **75**, 184533 (2007).
Group: Karpinski / Projects: 3, 4
- R. PUZNIAK, A. WISNIEWSKI, A. SZEWCZYK, K. KAPCIA, J. JUN, N. D. ZHIGADLO, S. M. KAZAKOV, AND J. KARPINSKI
Anisotropic upper critical field of chemically substituted MgB_2 single crystals studied by torque magnetometry
Physica C **460**, 616 (2007).
Group: Karpinski / Projects: 3, 4
- B. SIPOS, N. BARISIC, R. GAAL, L. FORRÓ, J. KARPINSKI, AND F. RULLIER-ALBENQUE
Matthiessen's rule in MgB_2 : Resistivity and T_c as a function of point defect concentration
Physical Review B **76**, 132504 (2007).
Groups: Forró, Karpinski / Projects: 1, 3, 4
- S. STRÄSSLE, J. ROOS, M. MALI, H. KELLER, AND J. KARPINSKI
 ^{11}B NMR study of single-crystal MgB_2 in the normal conducting phase
Physica C **466**, 168 (2007).
Groups: Keller, Karpinski / Projects: 2, 3, 4
- A. WISNIEWSKI, R. PUZNIAK, A. BIENIAS, M. BARAN, J. JUN, N. D. ZHIGADLO, AND J. KARPINSKI
Anisotropy of the lower and of the upper critical fields in $Mg_{1-x}Al_xB_2$ single crystals
Physica C **460**, 614 (2007).
Group: Karpinski / Projects: 3, 4
- A. WISNIEWSKI, R. PUZNIAK, J. JUDEK, C. KRUTZLER, M. EISTERER, H. W. WEBER, J. JUN, S. M. KAZAKOV, AND J. KARPINSKI
Comparison of the influence of carbon substitution and neutron-induced defects on the upper critical field and flux pinning in MgB_2 single crystals
Superconductor Science & Technology **20**, 256 (2007).
Group: Karpinski / Projects: 3, 4
- S. WU, P. GEISER, J. JUN, J. KARPINSKI, AND R. SOBOLEWSKI
Femtosecond optical generation and detection of coherent acoustic phonons in GaN single crystals
Physical Review B **76**, 085210 (2007).
Group: Karpinski / Projects: 3, 4
- S. WU, P. GEISER, J. JUN, J. KARPINSKI, D. WANG, AND R. SOBOLEWSKIA
Time-resolved intervalley transitions in GaN single crystals
Journal of Applied Physics **101**, 043701 (2007).
Group: Karpinski / Projects: 3, 4
- S. WU, J. ZHANG, A. BELOUSOV, J. KARPINSKI, AND R. SOBOLEWSKI
Ultra-long-lived coherent acoustic phonons in GaN single crystals
Journal of Physics: Conference Series **92**, 012021 (2007).
Group: Karpinski / Projects: 3, 4
- M. ZEHETMAYER, M. EISTERER, C. KRUTZLER, J. JUN, S. M. KAZAKOV, J. KARPINSKI, AND H. W. WEBER
Order-disorder transition in the flux line lattice of superconducting MgB_2 single crystals with artificially introduced defects: comparison with theory
Superconductor Science & Technology **20**, S247 (2007).
Group: Karpinski / Projects: 3, 4
- N. D. ZHIGADLO AND J. KARPINSKI
High-pressure synthesis and superconductivity of $Ca_{2-x}Na_xCuO_2Cl_2$
Physica C **460**, 372 (2007).
Group: Karpinski / Projects: 3, 4
- M. BRUHWILER, B. BATLOGG, S. M. KAZAKOV, C. NIEDERMAYER, AND J. KARPINSKI

- Na_xCoO₂: Enhanced low-energy excitations of electrons on a 2d triangular lattice*
 Physica B **378-80**, 630 (2006).
 Group: Karpinski / Projects: 3, 4
- M. BRÜHWILER, S. M. KAZAKOV, J. KARPINSKI, AND B. BATLOGG
Large mass enhancement in RbOs₂O₆
 Physica B **378-80**, 880 (2006).
 Group: Karpinski / Projects: 3, 4
- M. BRÜHWILER, S. M. KAZAKOV, J. KARPINSKI, AND B. BATLOGG
Mass enhancement, correlations, and strong-coupling superconductivity in the β -pyrochlore KOs₂O₆
 Physical Review B **73**, 094518 (2006).
 Group: Karpinski / Projects: 3, 4
- R. CUBITT, C. D. DEWHURST, M. R. ESKILDSEN, S. J. LEVETT, A. MATADEEN, J. JUN, S. M. KAZAKOV, J. KARPINSKI, S. L. BUD'KO, N. E. ANDERSON, AND P. C. CANFIELD
Penetration depth anisotropy in MgB₂ single crystals and powders
 Journal of the Physics and Chemistry of Solids **67**, 493 (2006).
 Group: Karpinski / Projects: 3, 4
- D. DAGHERO, R. S. GONNELLI, G. A. UMMARINO, A. CALZOLARI, V. DELLAROCCHA, V. A. STEPANOV, S. M. KAZAKOV, J. JUN, AND J. KARPINSKI
Effect of the magnetic field on the gaps of MgB₂: A directional point-contact study
 Journal of the Physics and Chemistry of Solids **67**, 424 (2006).
 Group: Karpinski / Projects: 3, 4
- D. DI CASTRO, M. ORTOLANI, E. CAPPELLUTI, U. SCHADE, N. D. ZHIGADLO, AND J. KARPINSKI
Infrared properties of Mg_{1-x}Al_x(B_{1-y}C_y)₂ single crystals in the normal and superconducting state
 Physical Review B **73**, 174509 (2006).
 Group: Karpinski / Projects: 3, 4
- C. DUBOIS, N. JENKINS, A. A. MANUEL, N. D. ZHIGADLO, J. KARPINSKI, AND Ø. FISCHER
Crystal-edge scanning tunnelling spectroscopy on aluminium-doped magnesium diboride
 Superconductor Science & Technology **19**, 695 (2006).
 Groups: Fischer, Karpinski / Projects: 2, 3, 4
- J. L. GAVILANO, B. PEDRINI, K. MAGISHI, J. HINDERER, M. WELLER, H. R. OTT, S. M. KAZAKOV, AND J. KARPINSKI
Localized versus itinerant magnetic moments in Na_{0.7}CoO₂
 Physical Review B **74**, 064410 (2006).
 Groups: Karpinski, Ott / Projects: 1, 3, 4
- R. S. GONNELLI, D. DAGHERO, A. CALZOLARI, G. A. UMMARINO, M. TORTELLO, V. A. STEPANOV, N. D. ZHIGADLO, K. ROGACKI, J. KARPINSKI, C. PORTESI, E. MONTICONE, D. MIJATOVIC, D. VELDHUIS, AND A. BRINKMAN
Recent achievements in MgB₂ physics and applications: A large-area SQUID magnetometer and point-contact spectroscopy measurements
 Physica C **435**, 59 (2006).
 Group: Karpinski / Projects: 3, 4
- R. S. GONNELLI, D. DAGHERO, G. A. UMMARINO, A. CALZOLARI, V. DELLAROCCHA, V. A. STEPANOV, S. M. KAZAKOV, J. JUN, AND J. KARPINSKI
A point-contact study of the superconducting gaps in Al-substituted and C-substituted MgB₂ single crystals
 Journal of the Physics and Chemistry of Solids **67**, 360 (2006).
 Group: Karpinski / Projects: 3, 4
- ▶ R. S. GONNELLI, D. DAGHERO, G. A. UMMARINO, A. CALZOLARI, M. TORTELLO, V. A. STEPANOV, N. D. ZHIGADLO, K. ROGACKI, J. KARPINSKI, F. BERNARDINI, AND S. MASSIDDA
Effect of Magnetic Impurities in a Two-Band Superconductor: A Point-Contact Study of Mn-Substituted MgB₂ Single Crystals
 Physical Review Letters **97**, 037001 (2006).
 Group: Karpinski / Projects: 3, 4
- V. GURITANU, A. B. KUZMENKO, D. VAN DER MAREL, S. M. KAZAKOV, N. D. ZHIGADLO, AND J. KARPINSKI
Anisotropic optical conductivity and two colors of MgB₂
 Physical Review B **73**, 104509 (2006).
 Groups: Karpinski, van der Marel / Projects: 2, 3, 4
- ▶ R. KHASANOV, A. SHENGELAYA, K. CONDER, E. MORENZONI, I. M. SAVIĆ, J. KARPINSKI, AND H. KELLER
Correlation between oxygen isotope effects on transition temperature and magnetic penetration depth in high-temperature superconductors close to optimal doping
 Physical Review B **74**, 064504 (2006).
 Groups: Keller, Karpinski / Projects: 2, 3, 4
- V. G. KOGAN, R. PROZOROV, S. L. BUD'KO,

- P. C. CANFIELD, J. R. THOMPSON, J. KARPINSKI, N. D. ZHIGADLO, AND P. MIRANOVIĆ
Effect of field-dependent core size on reversible magnetization of high- κ superconductors
 Physical Review B **74**, 184521 (2006).
 Group: Karpinski / Projects: 3, 4
- A. KOHEN, T. CREN, Y. NOAT, T. PROSLIER, F. GIUBILEO, F. BOBBA, A. M. CUCOLO, N. ZHIGADLO, S. M. KAZAKOV, J. KARPINSKI, W. SACKS, AND D. RODITCHEV
Recent progress in vortex studies by tunneling spectroscopy
 Physica C **437-38**, 145 (2006).
 Group: Karpinski / Projects: 3, 4
- A. KOHEN, F. GIUBILEO, F. BOBBA, T. PROSLIER, N. ZHIGADLO, S. M. KAZAKOV, J. KLEIN, J. KARPINSKI, A. M. CUCOLO, AND D. RODITCHEV
"Lazy Fisherman" method of vortex analysis: application to MgB₂
 Journal of the Physics and Chemistry of Solids **67**, 442 (2006).
 Group: Karpinski / Projects: 3, 4
- C. KRUTZLER, M. ZEHETMAYER, M. EISTERER, H. W. WEBER, N. D. ZHIGADLO, J. KARPINSKI, AND A. WISNIEWSKI
Anisotropic reversible mixed-state properties of superconducting carbon-doped Mg(B_{1-x}C_x)₂ single crystals
 Physical Review B **74**, 144511 (2006).
 Group: Karpinski / Projects: 3, 4
- G. LAMURA, A. GAUZZI, S. M. KAZAKOV, J. KARPINSKI, AND A. ANDREONE
High-resolution measurements of the magnetic penetration depth on Yba₂Cu₄O₈ single crystals
 Journal of the Physics and Chemistry of Solids **67**, 447 (2006).
 Group: Karpinski / Projects: 3, 4
- E. LIAROKAPIS, D. LAMPAKIS, D. PALLES, J. KARPINSKI, AND C. PANAGOPOULOS
A Raman view of local lattice distortions and charge transfer in cuprates
 Journal of the Physics and Chemistry of Solids **67**, 2065 (2006).
 Group: Karpinski / Projects: 3, 4
- D. PAL, L. DEBEER-SCHMITT, T. BERA, R. CUBITT, C. D. DEWHURST, J. JUN, N. D. ZHIGADLO, J. KARPINSKI, V. G. KOGAN, AND M. R. ESKILDSEN
Measuring the penetration depth anisotropy in MgB₂ using small-angle neutron scattering
 Physical Review B **73**, 012513 (2006).
 Group: Karpinski / Projects: 3, 4
- B. PEDRINI, S. WEYENETH, J. L. GAVILANO, J. HINDERER, M. WELLER, H. R. OTT, S. M. KAZAKOV, AND J. KARPINSKI
Magnetic transition in Na_{0.5}CoO₂ at 88 K
 Physica B **378-80**, 861 (2006).
 Groups: Karpinski, Ott / Projects: 1, 3, 4
- K. ROGACKI, B. BATLOGG, J. KARPINSKI, N. D. ZHIGADLO, G. SCHUCK, S. M. KAZAKOV, P. WAGLI, R. PUŻNIAK, A. WIŚNIEWSKI, F. CARBONE, A. BRINKMAN, AND D. VAN DER MAREL
Strong magnetic pair breaking in Mn-substituted MgB₂ single crystals
 Physical Review B **73**, 174520 (2006).
 Groups: Karpinski, van der Marel / Projects: 2, 3, 4
- G. SCHUCK, S. M. KAZAKOV, K. ROGACKI, N. D. ZHIGADLO, AND J. KARPINSKI
Crystal growth, structure, and superconducting properties of the β -pyrochlore KO₂O₆
 Physical Review B **73**, 144506 (2006).
 Group: Karpinski / Projects: 3, 4
- A. V. SOLOGUBENKO, N. D. ZHIGADLO, J. KARPINSKI, AND H. R. OTT
Thermal conductivity of Al-doped MgB₂: Impurity scattering and the validity of the Wiedemann-Franz law
 Physical Review B **74**, 184523 (2006).
 Groups: Karpinski, Ott / Projects: 2, 3, 4
- S. STREULE, M. MEDARDE, A. PODLESNYAK, E. POMJAKUSHINA, K. CONDER, S. KAZAKOV, J. KARPINSKI, AND J. MESOT
Short-range charge ordering in Ho_{0.1}Sr_{0.9}CoO_{3-x} (0.15 \leq x \leq 0.49)
 Physical Review B **73**, 024423 (2006).
 Groups: Karpinski, Mesot / Projects: 1, 3, 4, 6
- S. WU, P. GEISER, J. JUN, J. KARPINSKI, J. R. PARK, AND R. SOBOLEWSKI
Long-lived, coherent acoustic phonon oscillations in GaN single crystals
 Applied Physics Letters **88**, 041917 (2006).
 Group: Karpinski / Projects: 3, 4
- M. ZEHETMAYER, M. EISTERER, R. MÜLLER, M. WEIGAND, J. JUN, S. M. KAZAKOV, J. KARPINSKI, AND H. W. WEBER
Flux Pinning in Neutron Irradiated MgB₂ Single Crystals
 Journal of Physics: Conference Series **43**, 651 (2006).
 Group: Karpinski / Projects: 3, 4

- M. ZEHETMAYER, C. KRUTZLER, M. EISTERER, J. JUN, S. M. KAZAKOV, J. KARPINSKI, AND H. W. WEBER
Effect of disorder on the irreversible magnetic properties of single crystalline MgB₂: comparison of carbon doping and neutron irradiation
 Physica C **445**, 65 (2006).
 Group: Karpinski / Projects: 3, 4
- M. BRÜHWILER, S. M. KAZAKOV, J. KARPINSKI, AND B. BATLOGG
Intrinsic thermodynamic properties of the pyrochlore superconductor RbOs₂O₆ extracted by condensation energy analysis
 Physical Review B **71**, 214517 (2005).
 Group: Karpinski / Projects: 3, 4
- P. CARRETTA, A. KEREN, J. S. LORD, I. ZUCCA, S. M. KAZAKOV, AND J. KARPINSKI
Anomaly in YBa₂Cu₄O₈ charge distribution below T_c: A zero-field muon spin relaxation study
 Physical Review B **71**, 052507 (2005).
 Group: Karpinski / Projects: 3, 4
- A. CARRINGTON, J. D. FLETCHER, J. R. COOPER, O. J. TAYLOR, L. BALICAS, N. D. ZHIGADLO, S. M. KAZAKOV, J. KARPINSKI, J. P. H. CHARMANT, AND J. KORTUS
de Haas-van Alphen effect investigation of the electronic structure of Al-substituted MgB₂
 Physical Review B **72**, 060507 (2005).
 Group: Karpinski / Projects: 3, 4
- D. DAGHERO, R. S. GONNELLI, A. CALZOLARI, G. A. UMMARINO, V. DELLAROCCHA, V. A. STEPANOV, N. ZHIGADLO, S. M. KAZAKOV, AND J. KARPINSKI
The superconducting gaps of C-substituted and Al-substituted MgB₂ single crystals by point-contact spectroscopy
 Physica Status Solidi (c) **2**, 1656 (2005).
 Group: Karpinski / Projects: 3, 4
- D. DI CASTRO, R. KHASANOV, C. GRIMALDI, J. KARPINSKI, S. M. KAZAKOV, R. BRÜTSCH, AND H. KELLER
Pressure effect on the magnetic penetration depth in MgB₂
 Physical Review B **72**, 094504 (2005).
 Groups: Keller, Karpinski / Projects: 2, 3, 4
- M. EISTERER, M. ZEHETMAYER, H. W. WEBER, AND J. KARPINSKI
Reversible magnetization of the two-band MgB₂ superconductor: A phenomenological approach
 Physical Review B **72**, 134525 (2005).
 Group: Karpinski / Projects: 3, 4
- ▶ J. D. FLETCHER, A. CARRINGTON, O. J. TAYLOR, S. M. KAZAKOV, AND J. KARPINSKI
Temperature-Dependent Anisotropy of the Penetration Depth and Coherence Length of MgB₂
 Physical Review Letters **95**, 097005 (2005).
 Group: Karpinski / Projects: 3, 4
- S. GALAMBOSI, J. A. SOININEN, A. MATTILA, S. HUOTARI, S. MANNINEN, G. VANKO, N. D. ZHIGADLO, J. KARPINSKI, AND K. HÄMÄLÄINEN
Inelastic x-ray scattering study of collective electron excitations in MgB₂
 Physical Review B **71**, 060504 (2005).
 Group: Karpinski / Projects: 3, 4
- J. L. GAVILANO, D. RAU, B. PEDRINI, K. MAGISHI, M. WELLER, J. HINDERER, H. R. OTT, S. M. KAZAKOV, AND J. KARPINSKI
Unconventional charge ordering in Na_{0.70}CoO₂ below 300 K?
 Physica B **359**, 1237 (2005).
 Groups: Karpinski, Ott / Projects: 3, 4
- ▶ P. GEISER, J. JUN, S. M. KAZAKOV, P. WÄGLI, J. KARPINSKI, B. BATLOGG, AND L. KLEMM
Al_xGa_{1-x}N bulk single crystals
 Applied Physics Letters **86**, 081908 (2005).
 Group: Karpinski / Projects: 3, 4
- R. S. GONNELLI, D. DAGHERO, A. CALZOLARI, G. A. UMMARINO, V. DELLAROCCHA, V. A. STEPANOV, S. M. KAZAKOV, N. ZHIGADLO, AND J. KARPINSKI
Evidence for single-gap superconductivity in Mg(B_{1-x}C_x)₂ single crystals with x = 0.132 from point-contact spectroscopy
 Physical Review B **71**, 060503 (2005).
 Group: Karpinski / Projects: 3, 4
- R. S. GONNELLI, D. DAGHERO, G. A. UMMARINO, A. CALZOLARI, M. TORTELLO, V. A. STEPANOV, N. ZHIGADLO, S. M. KAZAKOV, AND J. KARPINSKI
Evidence for One-Gap Superconductivity in Mg(B_{1-x}C_x)₂ Single Crystals at x = 0.132 by Point-Contact Spectroscopy
 Journal of Superconductivity **18**, 681 (2005).
 Group: Karpinski / Projects: 3, 4
- J. KARPINSKI, N. D. ZHIGADLO, G. SCHUCK, S. M. KAZAKOV, B. BATLOGG, K. ROGACKI, R. PUZNIAK, J. JUN, E. MÜLLER, P. WÄGLI, R. GONNELLI, D. DAGHERO, G. A. UMMARINO, AND V. A. STEPANOV

Al substitution in MgB₂ crystals: Influence on superconducting and structural properties

Physical Review B **71**, 174506 (2005).

Group: Karpinski / Projects: 3, 4

S. M. KAZAKOV, R. PUZNIAK, K. ROGACKI, A. V. MIRONOV, N. D. ZHIGADLO, J. JUN, C. SOLTMANN, B. BATLOGG, AND J. KARPINSKI

Carbon substitution in MgB₂ single crystals: Structural and superconducting properties

Physical Review B **71**, 024533 (2005).

Group: Karpinski / Projects: 3, 4

- ▶ R. KHASANOV, D. G. ESHCHENKO, D. DI CASTRO, A. SHENGELAYA, F. LA MATINA, A. MAISURADZE, C. BAINES, H. LUETKENS, J. KARPINSKI, S. M. KAZAKOV, AND H. KELLER

Magnetic penetration depth in RbOs₂O₆ studied by muon spin rotation

Physical Review B **72**, 104504 (2005).

Groups: Keller, Karpinski, Mesot / Projects: 1, 2, 3, 4

R. KHASANOV, J. KARPINSKI, AND H. KELLER
Pressure effect on the in-plane magnetic penetration depth in YBa₂Cu₄O₈

Journal of Physics: Condensed Matter **17**, 2453 (2005).

Groups: Keller, Karpinski, Mesot / Projects: 1, 2, 3, 4

- ▶ A. KOHEN, T. CREN, T. PROSLIER, Y. NOAT, W. SACKS, D. RODITCHEV, F. GIUBILEO, F. BOBBA, A. M. CUCOLO, N. ZHIGADLO, S. M. KAZAKOV, AND J. KARPINSKI

Superconducting vortex profile from fixed point measurements the "Lazy Fisherman" tunneling microscopy method

Applied Physics Letters **86**, 212503 (2005).

Group: Karpinski / Projects: 3, 4

D. LAMPAKIS, D. PALLES, E. LIAROKAPIS, S. M. KAZAKOV, AND J. KARPINSKI

Hydrostatic-pressure-induced phase separation in the YBa₂Cu₄O₈ superconductor

Physical Review B **72**, 014539 (2005).

Group: Karpinski / Projects: 3, 4

K. MAGISHI, J. L. GAVILANO, B. PEDRINI, J. HINDERER, M. WELLER, H. R. OTT, S. M. KAZAKOV, AND J. KARPINSKI

Evidence for s-wave superconductivity in the β-pyrochlore oxide RbOs₂O₆

Physical Review B **71**, 024524 (2005).

Groups: Karpinski, Ott / Projects: 3, 4

- ▶ A. MATTILA, J. A. SOININEN, S. GALAMBOSI, S. HUOTARI, G. VANKÓ, N. D. ZHIGADLO, J. KARPINSKI, AND K. HÄMÄLÄINEN

Local Electronic Structure of MgB₂ by X-Ray Raman Scattering at the boron K edge

Physical Review Letters **94**, 247003 (2005).

Group: Karpinski / Projects: 3, 4

J. D. MOORE, G. K. PERKINS, A. D. CAPLIN, J. JUN, S. M. KAZAKOV, J. KARPINSKI, AND L. F. COHEN

Angular dependence of the order-disorder transition in proton irradiated single crystal MgB₂

Physical Review B **71**, 224509 (2005).

Group: Karpinski / Projects: 3, 4

B. PEDRINI, J. L. GAVILANO, S. WEYENETH, E. FELDER, J. HINDERER, M. WELLER, H. R. OTT, S. M. KAZAKOV, AND J. KARPINSKI

Magnetic phase transition at 88 K in Na_{0.5}CoO₂ revealed by ²³Na NMR investigations

Physical Review B **72**, 214407 (2005).

Groups: Karpinski, Ott / Projects: 1, 3, 4

V. SCAGNOLI, U. STAUB, M. JANOUSCH, A. M. MULDER, M. SHI, G. I. MEIJER, S. ROSENKRANZ, S. B. WILKINS, L. PAOLASINI, J. KARPINSKI, S. M. KAZAKOV, AND S. W. LOVESEY

Charge disproportionation and search for orbital ordering in NdNiO₃ by use of resonant x-ray diffraction

Physical Review B **72**, 155111 (2005).

Group: Karpinski / Projects: 3, 4

A. V. SOLOGUBENKO, N. D. ZHIGADLO, S. M. KAZAKOV, J. KARPINSKI, AND H. R. OTT

Influence of carbon substitution on the heat transport in single crystalline MgB₂

Physical Review B **71**, 020501 (2005).

Groups: Karpinski, Ott / Projects: 2, 3, 4

M. ZEHETMAYER, M. EISTERER, S. SPONAR, H. W. WEBER, A. WISNIEWSKI, R. PUZNIAK, P. PANTA, S. M. KAZAKOV, AND J. KARPINSKI

Magnetic properties of superconducting HgBa₂CuO_{4+δ} single crystals in the overdoped state before and after particle irradiation

Physica C **418**, 73 (2005).

Group: Karpinski / Projects: 3, 4

Group of H. Keller

R. KHASANOV, A. SHENGELAYA, A. BUSSMAN-HOLDER, J. KARPINSKI, H. KELLER, AND K. A. MULLER

s-wave Symmetry Along the c-axis and s + d In plane Superconductivity in Bulk YBa₂Cu₄O₈

Journal of Superconductivity **21**, 81 (2008).

Groups: Karpinski, Keller / Projects: 3, 4

- R. KHASANOV, A. SHENGELAYA, J. KARPINSKI, A. BUSSMANN-HOLDER, H. KELLER, AND K. A. MÜLLER
s-wave symmetry along the c-axis and s + d in-plane superconductivity in bulk YBa₂Cu₄O₈
Journal of Superconductivity and Novel Magnetism **21**, 81 (2008).
Groups: Keller, Karpinski / Project: 2
- ▶ R. KHASANOV, A. SHENGELAYA, A. MAISURADZE, D. DI CASTRO, R. ESCAMILLA, AND H. KELLER
Correlation between the transition temperature and the superfluid density in BCS superconductor NbB_{2+x}
Physical Review B **77**, 064506 (2008).
Group: Keller / Project: 2
- S. WEYENETH, T. SCHNEIDER, N. ZHIGADLO, J. KARPINSKI, AND H. KELLER
Probing Superconductivity in MgB₂ confined to magnetic field tuned cylinders by means of critical fluctuations
Journal of Physics: Condensed Matter **20**, 135208 (2008).
Groups: Karpinski, Keller / Projects: 3, 4
- A. R. BISHOP, A. BUSSMANN-HOLDER, O. V. DOLGOV, A. FURRER, H. KAMIMURA, H. KELLER, R. KHASANOV, D. KREMER, R. KANS MANSKE, K. A. MÜLLER, AND A. SIMON
Real and marginal isotope effects in cuprate superconductors
Journal of Superconductivity and Novel Magnetism **20**, 393 (2007).
Group: Keller / Project: 2
- A. BUSSMANN-HOLDER, H. KELLER, AND K. A. MÜLLER
Entscheidende Rolle des Gitters
Physik Journal **6**, 16 (2007).
Group: Keller / Project: 2
- A. BUSSMANN-HOLDER, R. KHASANOV, A. SHENGELAYA, A. MAISURADZE, F. LA MATTINA, H. KELLER, AND K. A. MÜLLER
Mixed order parameter symmetries in cuprate superconductors
Europhysics Letters **77**, 27002 (2007).
Group: Keller / Project: 2
- ▶ R. KHASANOV, A. SHENGELAYA, D. DI CASTRO, D. G. ESHCHENKO, I. M. Savić, K. CONDER, E. POMJAKUSHINA, J. KARPINSKI, S. KAZAKOV, AND H. KELLER
Magnetic-field dependence of the oxygen isotope effect on the magnetic penetration depth of hole-doped cuprate superconductors
Physical Review B **75**, 060505 (2007).
Groups: Keller, Karpinski / Projects: 2, 3, 4
- ▶ R. KHASANOV, A. SHENGELAYA, A. MAISURADZE, F. LA MATTINA, A. BUSSMANN-HOLDER, H. KELLER, AND K. A. MÜLLER
Experimental Evidence for Two Gaps in the High-Temperature La_{1.83}Sr_{0.17}CuO₄ Superconductor
Physical Review Letters **98**, 057007 (2007).
Group: Keller / Project: 2
- ▶ R. KHASANOV, S. STRÄSSLE, D. DI CASTRO, T. MASUI, S. MIYASAKA, S. TAJIMA, A. BUSSMANN-HOLDER, AND H. KELLER
Multiple Gap Symmetries for the Order Parameter of Cuprate Superconductors from Penetration Depth Measurements
Physical Review Letters **99**, 237601 (2007).
Group: Keller / Project: 2
- ▶ R. KHASANOV, N. D. ZHIGADLO, J. KARPINSKI, AND H. KELLER
In-plane magnetic penetration depth λ_{ab} in Ca_{2-x}Na_xCuO₂Cl₂: Role of the apical sites
Physical Review B **76**, 094505 (2007).
Groups: Keller, Karpinski / Projects: 2, 3, 4
- S. KOHOUT, T. SCHNEIDER, J. ROOS, H. KELLER, T. SASAGAWA, AND H. TAKAGI
Vortex states and magnetic anisotropy in single-crystal La_{2-x}Sr_xCuO₄ studied by torque magnetometry
Physical Review B **76**, 064513 (2007).
Group: Keller / Project: 2
- ▶ T. KONDO, R. KHASANOV, J. KARPINSKI, S. M. KAZAKOV, N. D. ZHIGADLO, T. OHTA, H. M. FRETWELL, A. D. PALCZEWSKI, J. D. KOLL, J. MESOT, E. ROTENBERG, H. KELLER, AND A. KAMINSKI
Dual character of the electronic structure of YBa₂Cu₄O₈: The conduction bands of CuO₂ planes and CuO chains
Physical Review Letters **98**, 157002 (2007).
Groups: Keller, Karpinski, Mesot / Projects: 2, 3, 4
- I. L. LANDAU AND H. KELLER
On the interpretation of muon-spin-rotation experiments in the mixed state of type-II superconductors
Physica C **466**, 131 (2007).
Group: Keller / Project: 2
- I. L. LANDAU AND H. KELLER
Two types of H_{c2}(T) dependences in Bi₂Sr₂Ca_{1-x}Y_xCu₂O_{8+δ} with different Yttrium content

- Physica C **458**, 38 (2007).
Group: Keller / Project: 2
- E. MORENZONI, H. LUETKENS, S. A., D. G. ESHCHENKO, R. KHASANOV, A. AMATO, T. PROKSCHA, AND R. SCHEUERMANN
 μ SR studies of hydrogen-bonded ferroelectrics and antiferroelectrics
Physica B **388**, 274 (2007).
Group: Keller / Project: 2
- ▶ T. PROKSCHA, E. MORENZONI, D. G. ESHCHENKO, N. GARIFIANOV, H. GLÜCKLER, R. KHASANOV, H. LUETKENS, AND S. A.
Formation of Hydrogen Impurity States in Silicon and Insulators at Low Implantation Energies
Physical Review Letters **98**, 227401 (2007).
Group: Keller / Project: 2
- S. STRÄSSLE, J. ROOS, M. MALI, K. CONDER, E. POMJAKUSHINA, AND H. KELLER
 ^{139}La NMR and NQR investigations of the superconductor $\text{LaBa}_2\text{Cu}_3\text{O}_{7-\delta}$
Physica C **460-462**, 890 (2007).
Group: Keller / Project: 2
- S. STRÄSSLE, J. ROOS, M. MALI, H. KELLER, AND J. KARPINSKI
 ^{11}B NMR study of single-crystal MgB_2 in the normal conducting phase
Physica C **466**, 168 (2007).
Groups: Keller, Karpinski / Projects: 2, 3, 4
- R. V. YUSUPOV, R. KABANOV, D. MIHAILOVIC, K. CONDER, H. KELLER, AND K. A. MÜLLER
Surface nanomagnetism of La_2CuO_4 particles
Physica C **460-462**, 801 (2007).
Group: Keller / Project: 2
- R. V. YUSUPOV, R. KABANOV, D. MIHAILOVIC, K. CONDER, K. A. MÜLLER, AND H. KELLER
Spontaneous ferromagnetic spin ordering at the surface of La_2CuO_4
Physical Review B **76**, 024428 (2007).
Group: Keller / Project: 2
- R. V. YUSUPOV, T. MERTELJ, D. MIHAILOVIC, K. CONDER, H. KELLER, AND K. A. MÜLLER
Oxygen isotope effect on the polaronic infrared photo-induced absorption spectra of surface nanomagnetism of La_2CuO_4
Physica C **460-462**, 920 (2007).
Group: Keller / Project: 2
- A. ZORKOVSKÁ, A. BARAN, I. BRADARIĆ, I. SAVIĆ, J. ŠEBEK, E. ŠANTAVÁ,
D. MARINČEV, S. KOHOUT, H. KELLER, AND A. FEHER
Influence of Ti^{4+} on the magnetic state of $\text{CaRu}_{1-x}\text{Ti}_x\text{O}_3$
Journal of Magnetism and Magnetic Materials **316**, e699 (2007).
Group: Keller / Project: 2
- ▶ R. KHASANOV, P. S. HÄFLIGER, N. SHITSEVALOVA, A. DUKHNENKO, AND H. KELLER
Pressure effect on the Ginzburg-Landau parameter $\kappa = \lambda/\xi$ in YB_6
Physical Review Letters **97**, 157002 (2006).
Group: Keller / Project: 2
- ▶ R. KHASANOV, I. L. LANDAU, F. BAINES, C. LA MATTINA, A. MAISURADZE, K. TOGANO, AND H. KELLER
Muon-spin-rotation measurements of the penetration depth in $\text{Li}_2\text{Pd}_3\text{B}$
Physical Review B **73**, 214528 (2006).
Group: Keller / Project: 2
- ▶ R. KHASANOV, A. SHENGELAYA, K. CONDER, E. MORENZONI, I. M. SAVIĆ, J. KARPINSKI, AND H. KELLER
Correlation between oxygen isotope effects on transition temperature and magnetic penetration depth in high-temperature superconductors close to optimal doping
Physical Review B **74**, 064504 (2006).
Groups: Keller, Karpinski / Projects: 2, 3, 4
- I. L. LANDAU, R. KHASANOV, K. TOGANO, AND H. KELLER
Temperature dependences of the upper critical field and the Ginzburg-Landau parameter of $\text{Li}_2\text{Pd}_3\text{B}$ from magnetization measurements
Physica C **451**, 134 (2006).
Group: Keller / Project: 2
- E. MORENZONI, R. KHASANOV, T. LUETKENS, H. PROKSCHA, AND A. SUTER
Surface and thin film studies with polarized low energy muons
Journal of Neutron Research **14**, 269 (2006).
Group: Keller / Project: 2
- T. PROKSCHA, E. MORENZONI, K. DEITERS, F. FOROUGH, D. GEORGE, R. KOBLER, A. SUTER, AND V. VRANKOVIC
The new high-intensity surface muon beam $\mu\text{E}4$ for the generation of low-energy muons at PSI
Physica B **374-375**, 460 (2006).
Group: Keller / Project: 2
- V. G. STORCHAK, D. G. ESHCHENKO, AND J. H. BREWER
Quantum diffusion of muonium atoms in solids: Localization vs. band-like propagation

- Physica B **374-375**, 347 (2006).
Group: Keller / Project: 2
- V. G. STORCHAK, D. G. ESHCHENKO, J. H. BREWER, AND S. P. COTTREL
Formation and dynamics of muonium centers in semiconductors
Physica B **374-375**, 398 (2006).
Group: Keller / Project: 2
- ▶ V. G. STORCHAK, D. G. ESHCHENKO, J. H. BREWER, S. P. COTTREL, AND R. L. LICHTI
Muonium in InSb: Shallow acceptor versus deep trap or recombination center
Physical Review B **73**, 081203 (2006).
Group: Keller / Project: 2
- V. G. STORCHAK, D. G. ESHCHENKO, H. LUETKENS, E. MORENZONI, R. L. LICHTI, S. F. MARENKIN, O. N. PASHKOVA, AND J. H. BREWER
Room temperature ferromagnetism in III-V and II-IV-V₂ dilute magnetic semiconductors
Physica B **374-375**, 430 (2006).
Group: Keller / Project: 2
- A. SUTER, E. MORENZONI, N. GARIFIANOV, R. KHASANOV, E. KIRK, H. LUETKENS, T. PROKSCHA, AND M. HORISBERGER
Nonlocal Meissner screening
Physica B **374-375**, 243 (2006).
Group: Keller / Project: 2
- A. BUSSMANN-HOLDER AND H. KELLER
Polaron formation as origin of unconventional isotope effects in cuprate superconductors
The European Physical Journal B **44**, 487 (2005).
Group: Keller / Project: 2
- A. BUSSMANN-HOLDER, H. KELLER, A. R. BISHOP, A. SIMON, R. MICNAS, AND K. A. MÜLLER
Unconventional isotope effects as evidence for polaron formation in cuprates
Europhysics Letters **72**, 423 (2005).
Group: Keller / Project: 2
- D. DI CASTRO, R. KHASANOV, C. GRIMALDI, J. KARPINSKI, S. M. KAZAKOV, R. BRÜTSCH, AND H. KELLER
Pressure effect on the magnetic penetration depth in MgB₂
Physical Review B **72**, 094504 (2005).
Groups: Keller, Karpinski / Projects: 2, 3, 4
- ▶ A. DREW, S. L. LEE, D. CHARALAMBOUS, A. POTENZA, C. MARROWS, H. LUETKENS, A. SUTER, T. PROKSCHA, R. KHASANOV, E. MORENZONI, D. UCKO, AND E. M. FORGAN
Coexistence and Coupling of Superconductivity and Magnetism in Thin Film Structures
Physical Review Letters **95**, 197201 (2005).
Groups: Keller, Mesot / Projects: 1, 2
- ▶ R. KHASANOV, D. G. ESHCHENKO, D. DI CASTRO, A. SHENGELAYA, F. LA MATINA, A. MAISURADZE, C. BAINES, H. LUETKENS, J. KARPINSKI, S. M. KAZAKOV, AND H. KELLER
Magnetic penetration depth in RbOs₂O₆ studied by muon spin rotation
Physical Review B **72**, 104504 (2005).
Groups: Keller, Karpinski, Mesot / Projects: 1, 2, 3, 4
- R. KHASANOV, J. KARPINSKI, AND H. KELLER
Pressure effect on the in-plane magnetic penetration depth in YBa₂Cu₄O₈
Journal of Physics: Condensed Matter **17**, 2453 (2005).
Groups: Keller, Karpinski, Mesot / Projects: 1, 2, 3, 4
- ▶ R. KHASANOV, T. SCHNEIDER, AND H. KELLER
Pressure effects on the superconducting properties of YBa₂Cu₄O₈
Physical Review B **72**, 014524 (2005).
Groups: Mesot, Keller / Projects: 1, 2
- S. KOHOUT, J. ROOS, AND H. KELLER
Automated operation of a homemade torque magnetometer using LabVIEW
Measurement Science & Technology **16**, 2240 (2005).
Group: Keller / Project: 2
- F. L. PRATT, T. LANCASTER, M. L. BROOKS, S. L. BLUNDELL, T. PROKSCHA, E. MORENZONI, A. SUTER, H. LUETKENS, R. KHASANOV, K. SHINOTSUKA, AND H. E. ASSENDER
Surface dynamics of a thin polystyrene film probed by low energy muons
Physical Review B **72**, 121401 (2005).
Group: Keller / Project: 2
- ▶ T. SCHNEIDER, R. KHASANOV, AND H. KELLER
Evidence for charged critical behavior in the pyrochlore superconductor RbOs₂O₆
Physical Review Letters **94**, 077002 (2005).
Group: Keller / Project: 2
- ▶ A. SHENGELAYA, R. KHASANOV, D. G. ESHCHENKO, D. DI CASTRO, I. M. SAVIĆ, M. S. PARK, K. H. KIM, S.-I. LEE, K. A. MÜLLER, AND H. KELLER

Muon-spin-rotation measurements of the penetration depth of the infinite-layer electron-doped $Sr_{0.9}La_{0.1}CuO_2$ cuprate superconductor

Physical Review Letters **94**, 127001 (2005).

Group: Keller / Project: 2

- ▶ V. G. STORCHAK, D. G. ESHCHENKO, J. H. BREWER, B. HITTI, R. L. LICHTI, AND B. A. ARONZON

Magnetic freezeout of electrons into muonium atoms in GaAs

Physical Review B **71**, 113202 (2005).

Group: Keller / Project: 2

A. SUTER, E. MORENZONI, N. GARIFIANOV, R. KHASANOV, E. KIRK, H. LUETKENS, T. PROKSCHA, AND M. HORISBERGER

Observation of nonexponential magnetic penetration profiles in the Meissner state: A manifestation of nonlocal effects in superconductors

Physical Review B **72**, 024506 (2005).

Group: Keller / Project: 2

Group of D. van de Marel

E. GIANNINI, R. GLADYSHEVSKII, N. CLAYTONA, N. MUSOLINO, V. GARNIER, A. PIRIOU, AND R. FLÜKIGER

Growth, structure and physical properties of single crystals of pure and Pb-doped Bi-based high- T_c superconductors

Current Applied Physics **8**, 115 (2008).

Groups: Flükiger, van der Marel / Project: 3

- ▶ A. B. KUZMENKO, E. VAN HEUMEN, F. CARBONE, AND D. VAN DER MAREL

Universal dynamical conductance in graphite to be published in Physical Review Letters (2008).

Group: van der Marel / Project: 1

A. PIRIOU, Y. FASANO, E. GIANNINI, AND O. FISCHER

Effect of oxygen-doping on $Bi_2Sr_2Ca_2Cu_3O_{10+\delta}$ vortex matter: Crossover from electromagnetic to Josephson interlayer coupling

submitted to Physical Review B (2008).

Groups: Fischer, van der Marel / Projects: 2, 5

J. TEYSSIER, R. VIENNOIS, J. SALAMIN, E. GIANNINI, AND D. VAN DER MAREL

Experimental and First principle calculation of $Co_xNi_{1-x}Si$ solid solution structural stability to be published in Journal of Alloys and Compounds (2008).

Group: van der Marel / Projects: 1, 3

O. ZAREMBA, O. SHCHERBAN, R. GLADYSHEVSKII, F. BANFI, AND E. GIANNINI

The 5:7 member of the spin-ladder series in the Bi-Sr-Ca-Cu-O system

to be published in Journal of Alloys and Compounds (2008).

Group: van der Marel / Project: 3

K. S. BURCH, S. V. DORDEVIC, F. P. MENA, A. B. KUZMENKO, D. VAN DER MAREL, J. L. SARRAO, J. R. JEFFRIES, E. D. BAUER, M. B. MAPLE, AND D. N. BASOV

Optical signatures of momentum-dependent hybridization of the local moments and conduction electrons in Kondo lattices

Physical Review B **75**, 054523 (2007).

Group: van der Marel / Projects: 1, 2

C. FILIPIC, Z. KUTNJAK, R. LORTZ, M. DAWBER, AND J. F. SCOTT

Low temperature phase transitions in barium sodium niobate

Journal of Physics: Condensed Matter **19**, 236206 (2007).

Groups: Triscone, van der Marel / Project: 2

- ▶ V. GURITANU, D. VAN DER MAREL, J. TEYSSIER, T. JARLBORG, H. WILHELM, M. SCHMIDT, AND F. STEGLICH

Optical evidence for heavy charge carriers in FeGe

Physical Review B **75**, 155114 (2007).

Groups: Giamarchi, van der Marel / Project: 1

E. VAN HEUMEN, R. LORTZ, A. B. KUZMENKO, F. CARBONE, D. VAN DER MAREL, X. ZHAO, G. YU, Y. CHO, N. BARISIC, M. GREVEN, C. C. HOMES, AND S. V. DORDEVIC

Optical and thermodynamic properties of the high-temperature superconductor $HgBa_2CuO_{4+\delta}$

Physical Review B **75**, 054522 (2007).

Group: van der Marel / Project: 2

A. B. KUZMENKO

Multiband and impurity effects in infrared and optical spectra of MgB_2

Physica C **456**, 63 (2007).

Group: van der Marel / Projects: 2, 3

A. B. KUZMENKO, D. VAN DER MAREL, F. CARBONE, AND F. MARSIGLIO

Model-independent sum rule analysis based on limited-range spectral data

New Journal of Physics **9**, 229 (2007).

Group: van der Marel / Projects: 1, 2

R. LORTZ, C. MEINGAST, A. I. RYKOV, AND S. TAJIMA

- Fragile Superconductivity and a kinetic glass transition in the vortex matter of the high-temperature superconductor $YBa_2Cu_3O_{7-\delta}$*
Journal of Low Temperature Physics **147**, 365 (2007).
Groups: Triscone, van der Marel / Project: 2
- R. LORTZ, N. MUSOLINO, Y. WANG, A. JUNOD, AND N. TOYOTA
Origin of the magnetization peak effect in the superconductor Nb_3Sn
Physical Review B **75**, 094503 (2007).
Groups: Triscone, van der Marel / Project: 2
- R. LORTZ, Y. WANG, A. DEMUER, M. BÖTTGER, B. BERGK, G. ZWICKNAGEL, Y. NAKAZAWA, AND J. WOSNITZA
Calorimetric evidence for a novel superconducting state in the layered organic superconductor κ -(BEDT) $_2$ Cu(NCS) $_2$
Physical Review Letters **99**, 187002 (2007).
Groups: Triscone, van der Marel / Project: 2
- R. LORTZ, Y. WANG, A. JUNOD, AND N. TOYOTA
Thermal fluctuations in the classical superconductor Nb_3Sn from high-resolution specific-heat measurements
Physica C **460-462**, 149 (2007).
Groups: Triscone, van der Marel / Project: 2
- M. R. NORMAN, A. V. CHUBUKOV, E. VAN HEUMEN, A. B. KUZMENKO, AND D. VAN DER MAREL
Optical integral in the cuprates and the question of sum-rule violation
Physical Review B **76**, 220509 (2007).
Group: van der Marel / Project: 2
- A. P. PETROVIĆ, Y. FASANO, R. LORTZ, M. DECROUX, M. POTEL, R. CHEVREL, AND Ø. FISCHER
Unconventional resistive transitions in the extreme type-II superconductor $Tl_2Mo_6Se_6$
Physica C **460-462**, 702 (2007).
Groups: Fischer, Triscone, van der Marel / Projects: 1, 2
- A. PIRIOU, Y. FASANO, E. GIANNINI, AND O. FISCHER
Doping-dependence of the vortex phase diagram of $Bi_2Sr_2Ca_2Cu_3O_{10+\delta}$
Physica C **460-462**, 408 (2007).
Groups: Fischer, van der Marel / Projects: 2, 3, 5
- F. RONNING, C. CAPAN, N. O. MORENO, J. D. THOMPSON, L. N. BULAEVSKII, R. MOVSHOVICH, AND D. VAN DER MAREL
Magnetic excitations of the 2-D Sm spin layers in $Sm(La, Sr)CuO_4$
Journal of Magnetism and Magnetic Materials **310**, e392 (2007).
Group: van der Marel / Projects: 1, 2
- D. SHALTIEL, H.-A. K. VON NIDDA, B. Y. SHAPIRO, I. SHAPIRO, A. LOIDL, T. KURZ, B. BOGOSLAVSKY, T. TAMAGAI, Ø. FISCHER, A. PIRIOU, E. GIANNINI, T. WATANABE, T. FUJII, AND A. MATSUDA, B. ROSENSTEIN
Interaction of AC magnetic field with Josephson vortices in high anisotropy superconductors $Bi2212$ and $Bi2223$
Physica C **460-462**, 1238 (2007).
Groups: van der Marel, Fischer / Project: 3
- R. TEDIOSI, N. P. ARMITAGE, E. GIANNINI, AND D. VAN DER MAREL
Charge Carrier Interaction with a Purely Electronic Collective Mode: Plasmarons and the Infrared Response of Elemental Bismuth
Physical Review Letters **99**, 016406 (2007).
Group: van der Marel / Project: 1
- J. TEYSSIER, A. B. KUZMENKO, D. VAN DER MAREL, F. MARSIGLIO, A. B. LIASHCHENKO, V. FILIPPOV, AND N. SHITSEVALOVA
Optical study of electronic structure and electron-phonon coupling in ZrB_{12}
Physical Review B **75**, 134503 (2007).
Group: van der Marel / Project: 2
- R. VIENNOIS, E. GIANNINI, M. KOZA, AND J. L. SAUVAJOL
Lattice dynamics of Sr_2TiO_4
Journal of Physics: Conference Series **92**, 012172 (2007).
Group: van der Marel / Project: 3
- F. CARBONE, A. B. KUZMENKO, H. J. A. MOLEGRAAF, E. VAN HEUMEN, E. GIANNINI, AND D. VAN DER MAREL
In-plane optical spectral weight transfer in optimally doped $Bi_2Sr_2Ca_2Cu_3O_{10}$
Physical Review B **74**, 024502 (2006).
Group: van der Marel / Projects: 2, 3
- F. CARBONE, A. B. KUZMENKO, H. J. A. MOLEGRAAF, E. VAN HEUMEN, V. LUKOVAC, F. MARSIGLIO, D. VAN DER MAREL, K. HAULE, G. KOTLIAR, H. BERGER, S. COURJAULT, P. H. KES, AND M. LI
Doping dependence of the redistribution of optical spectral weight in $Bi_2Sr_2CaCu_2O_{8+\delta}$
Physical Review B **74**, 064510 (2006).
Groups: van der Marel, Margaritondo / Projects: 2, 3
- F. CARBONE, M. ZANGRANDO, A. BRINKMAN, A. NICOLAOU, F. BONDINO, E. MAGNANO, A. A. NUGROHO, T. JARLBORG, F. PARMIGIANI, AND D. VAN DER

MAREL

*Electronic structure of MnSi: The role of electron-electron interactions*Physical Review B **73**, 085114 (2006).

Group: van der Marel / Project: 1

J. DEISENHOFER, R. M. EREMINA, A. PIMENOV, T. GAVRILOVA, H. BERGER, M. JOHNSON, P. LEMMENS, H.-A. KRUG VON NIDDA, A. LOIDL, K.-S. LEE, AND M.-H. WHANGBO

Structural and magnetic dimers in the spin-gapped system CuTe_2O_5 Physical Review B **74**, 174421 (2006).

Groups: Margaritondo, van der Marel / Projects: 1, 3

D. L. FENG, Z. X. SHEN, X. J. ZHOU, M. K. SHEN, D. H. LU, AND D. V. D. MAREL

*Puzzles about 1/8 magic doping in cuprate*Journal of the Physics and Chemistry of Solids **67**, 198 (2006).

Group: van der Marel / Projects: 1, 2

G. GOLL, M. MARZ, R. LORTZ, A. JUNOD, AND W. GOLDACKER

*Observation of a second energy gap in Nb_3Sn break junctions*AIP Conference Proceedings **850**, 987 (2006).

Groups: Triscone, van der Marel / Project: 2

► C. GRIMALDI AND I. BALBERG
*Tunneling and Nonuniversality in Continuum Percolation Systems*Physical Review Letters **96**, 066602 (2006).

Group: van der Marel / Project: 1

C. GRIMALDI, E. CAPPELLUTI, AND F. MARSIGLIO

*Off-Fermi surface cancellation effects in spin-Hall conductivity of a two-dimensional Rashba electron gas*Physical Review B **73**, 081303 (2006).

Group: van der Marel / Project: 1

V. GURITANU, A. B. KUZMENKO, D. VAN DER MAREL, S. M. KAZAKOV, N. D. ZHIGADLO, AND J. KARPINSKI

Anisotropic optical conductivity and two colors of MgB_2 Physical Review B **73**, 104509 (2006).

Groups: Karpinski, van der Marel / Projects: 2, 3, 4

M. KUGLER, G. L. DE CASTRO, E. GIANNINI, A. PIRIOU, A. A. MANUEL, C. HESS, AND Ø. FISCHER

*Scanning tunneling spectroscopy on $\text{Bi}_2\text{Sr}_2\text{Ca}_2\text{Cu}_3\text{O}_{10+\delta}$ single crystals*Journal of the Physics and Chemistry of Solids **67**, 353 (2006).

Groups: van der Marel, Fischer / Project: 3

R. LORTZ, F. LIN, N. MUSOLINO, Y. WANG, A. JUNOD, B. ROSENSTEIN, AND N. TOYOTA
*Thermal fluctuations and vortex melting in the superconductor Nb_3Sn from high-resolution specific-heat experiments*Physical Review B **74**, 104502 (2006).

Groups: Triscone, van der Marel / Project: 2

R. LORTZ, T. TOMITA, Y. WANG, A. JUNOD, J. S. SCHILLING, T. MASUI, AND S. TAJIMA
On the Origin of the Double Superconducting Transition in overdoped $\text{YBa}_2\text{Cu}_3\text{O}_x$ Physica C **194-198**, 434 (2006).

Groups: Triscone, van der Marel / Project: 2

R. LORTZ, Y. WANG, U. TUTSCH, S. ABE, C. MEINGAST, P. POPOVICH, W. KNAFO, N. SHITSEVALOVA, Y. PADERNO, AND A. JUNOD

Superconductivity mediated by a soft phonon mode: specific heat and resistivity and thermal expansion and magnetization of YB_6 Physical Review B **73**, 024512 (2006).

Groups: Triscone, van der Marel / Project: 2

D. VAN DER MAREL
*Superconductors: Electrons living apart together*Nature Physics **2**, 585 (2006).

Group: van der Marel / Project: 2

D. VAN DER MAREL, F. CARBONE, A. B. KUZMENKO, AND E. GIANNINI
*Scaling properties of the optical conductivity of Bi-based cuprates*Annalen der Physik **321**, 1716 (2006).

Group: van der Marel / Project: 2

F. MARSIGLIO
*Sum rule anomaly from suppression of inelastic scattering in the superconducting state*Physical Review B **73**, 064507 (2006).

Group: van der Marel / Project: 2

F. MARSIGLIO, F. CARBONE, A. B. KUZMENKO, AND D. VAN DER MAREL
Intraband optical spectral weight in the presence of a van Hove singularity: Application to $\text{Bi}_2\text{Sr}_2\text{CaCu}_2\text{O}_{8+\delta}$ Physical Review B **74**, 174516 (2006).

Group: van der Marel / Project: 2

F. P. MENA, J. F. DITUSA, D. VAN DER MAREL, G. AEPPLI, D. P. YOUNG, A. DAMASCELLI, AND J. A. MYDOSH

*Suppressed reflectivity due to spin-controlled localization in a magnetic semiconductor*Physical Review B **73**, 085205 (2006).

Group: van der Marel / Project: 1

- K. ROGACKI, B. BATLOGG, J. KARPINSKI, N. D. ZHIGADLO, G. SCHUCK, S. M. KAZAKOV, P. WAGLI, R. PUŻNIAK, A. WIŚNIEWSKI, F. CARBONE, A. BRINKMAN, AND D. VAN DER MAREL
Strong magnetic pair breaking in Mn-substituted MgB₂ single crystals
Physical Review B **73**, 174520 (2006).
Groups: Karpinski, van der Marel / Projects: 2, 3, 4
- P. ROMANIELLO, P. L. DE BOEIJ, F. CARBONE, AND D. VAN DER MAREL
Optical properties of bcc transition metals in the range 0–40 eV
Physical Review B **73**, 075115 (2006).
Group: van der Marel / Project: 1
- J. TEYSSIER, A. KUZMENKO, D. VAN DER MAREL, R. LORTZ, A. JUNOD, V. FILIPPOV, AND N. SHITSEVALOVA
Electronic and optical properties of ZrB₁₂ and YB₆. Discussion on electron-phonon coupling
Physica Status Solidi (c) **3**, 3114 (2006).
Group: van der Marel / Project: 2
- E. GIANNINI, N. CLAYTON, N. MUSOLINO, A. PIRIOU, R. GLADYSHEVSKII, AND R. FLÜKIGER
Growth and superconducting properties of Pb-free and Pb-doped Bi-2223 crystals
IEEE Transactions on Applied Superconductivity **15**, 3102 (2005).
Groups: van der Marel, Flükiger / Project: 3
- A. B. KUZMENKO
Kramers-Kronig constrained variational analysis of optical spectra
Review of Scientific Instruments **76**, 083108 (2005).
Group: van der Marel / Projects: 1, 2
- A. B. KUZMENKO, H. J. A. MOLEGRAAF, F. CARBONE, AND D. VAN DER MAREL
Temperature-modulation analysis of superconductivity-induced transfer of in-plane spectral weight in Bi₂Sr₂CaCu₂O₈
Physical Review B **72**, 144503 (2005).
Group: van der Marel / Project: 2
- R. LORTZ, S. ABE, Y. WANG, F. BOUQUET, U. TUTSCH, AND A. JUNOD
Modulated-bath AC calorimetry using modified commercial Peltier elements
Review of Scientific Instruments **76**, 103902 1 (2005).
Groups: Triscone, van der Marel / Project: 2
- R. LORTZ, A. JUNOD, D. JACCARD, Y. WANG, S. TAJIMA, AND T. MASUI
Evolution of the specific-heat anomaly of the high-temperature superconductor YBa₂Cu₃O₇ under influence of charge transfer through application of high pressure up to 10 GPa
Journal of Physics: Condensed Matter **17**, 4135 (2005).
Groups: Triscone, van der Marel / Project: 2
- R. LORTZ, Y. WANG, S. ABE, C. MEINGAST, Y. PADERNO, V. FILIPPOV, AND A. JUNOD
Specific heat and magnetic susceptibility and resistivity and thermal expansion of the superconductor ZrB₁₂
Physical Review B **72**, 024547 (2005).
Groups: Triscone, van der Marel / Project: 2
- F. P. MENA, A. B. KUZMENKO, A. HADIPOUR, J. L. M. VAN MECHELEN, D. VAN DER MAREL, AND N. A. BABUSHKINA
Oxygen isotope effect and phase separation in the optical conductivity of (La_{0.5}Pr_{0.5})_{0.7}Ca_{0.3}MnO₃ thin films
Physical Review B **72**, 134422 (2005).
Group: van der Marel / Projects: 1, 5
- F. P. MENA, D. VAN DER MAREL, AND J. L. SARRAO
Optical conductivity of CeMIn₅ (M = Co, Rh, Ir)
Physical Review B **72**, 045119 (2005).
Group: van der Marel / Projects: 1, 2
- T. PLACKOWSKI, Y. WANG, R. LORTZ, A. JUNOD, AND T. WOLF
Reversible and irreversible magnetocaloric effect in the NdBa₂Cu₃O₇ superconductor in relation with specific heat and magnetization
Journal of Physics: Condensed Matter **17**, 6871 (2005).
Groups: Triscone, van der Marel / Project: 2
- X. SU, E. GIANNINI, AND R. FLÜKIGER
Improvement of the critical current density of Bi-2223 tapes by introducing Ag Layers inside individual filaments
Superconductor Science & Technology **18**, 830 (2005).
Groups: Flükiger, van der Marel / Project: 6
- Y. WANG, R. LORTZ, Y. PADERNO, V. FILIPPOV, S. ABE, U. TUTSCH, AND A. JUNOD
Specific heat and magnetization of a ZrB₁₂ single crystal: characterization of a type II/1 superconductor
Physical Review B p. 024548 (2005).
Groups: Triscone, van der Marel / Project: 2

Group of G. Margaritondo

D. ARCON, A. ZORKO, M. PREGELJ, J. DOLINSEK, H. BERGER, A. OZAROWSKI, H. VAN TOOL, AND L. C. BRUNEL

High field ESR in a two-dimensional $S = 1$ spin system $Ni_5(TeO_3)_4Br_2$

Journal of Magnetism and Magnetic Materials **316**, E349 (2007).

Group: Margaritondo / Project: 3

D. ARIOSA, C. CANCELLIERI, P. H. LIN, AND D. PAVUNA

Self ordering of random intercalates in thin films of cuprate superconductors: Growth model and x-ray diffraction diagnosis

Physical Review B **75**, 184505 (2007).

Group: Margaritondo / Project: 5

C. BATTAGLIA, H. CERCELLIER, L. DESPONT, C. MONNEY, M. PRESTER, H. BERGER, L. FORRÓ, M. G. GARNIER, AND P. AEBI

Non-uniform doping across the Fermi surface of NbS_2 intercalates

The European Physical Journal B **57**, 385 (2007).

Groups: Aebi, Margaritondo, Forró / Projects: 1, 3

R. BECKER, H. BERGER, AND M. JOHNSON
Monoclinic $Cu_3(SeO_3)_2Cl_2$: an oxohalide with an unusual CuO_4Cl trigonal-bipyramidal coordination

Acta Crystallographica C **63**, i4 (2007).

Group: Margaritondo / Project: 3

R. BECKER, M. JOHNSON, AND H. BERGER
Crystal Structure of the New Cobalt Tellurite Chloride $Co_5Te_4O_{11}Cl_4$

Zeitschrift für Anorganische und Allgemeine Chemie **633**, 422 (2007).

Group: Margaritondo / Project: 3

R. BECKER, M. PRESTER, H. BERGER, M. JOHNSON, D. DROBAC, AND I. ZIVKOVIC
Crystal structure and magnetic properties of the new cobalt tellurite halide $Co_5(TeO_3)_4X_2$ ($X = Cl, Br$)

Solid State Sciences **9**, 223 (2007).

Group: Margaritondo / Project: 3

R. BECKER, M. PRESTER, H. BERGER, P. H. LIN, M. JOHNSON, D. DROBAC, AND I. ZIVKOVIC

Crystal structure and magnetic properties of two new cobalt selenite halides $Co_5(SeO_3)_4X_2$ ($X = Cl, Br$)

Journal of Solid State Chemistry **180**, 1051 (2007).

Group: Margaritondo / Project: 3

C. CANCELLIERI, P.-H. LIN, D. ARIOSA, AND D. PAVUNA

Dopant rearrangement and superconductivity in $Bi_2Sr_{2-x}La_xCuO_6$ thin films under annealing

Journal of Physics: Condensed Matter **19**, 246214 (2007).

Group: Margaritondo / Project: 5

▶ H. CERCELLIER, C. MONNEY, F. CLERC, C. BATTAGLIA, L. DESPONT, M. G. GARNIER, H. BECK, P. AEBI, L. PATTHEY, H. BERGER, AND L. FORRÓ

Evidence for an Excitonic Insulator Phase in $1T-TiSe_2$

Physical Review Letters **99**, 146403 (2007).

Groups: Aebi, Margaritondo, Forró / Projects: 1, 3

F. CLERC, C. BATTAGLIA, H. CERCELLIER, C. MONNEY, H. BERGER, L. DESPONT, M. G. GARNIER, AND P. AEBI

Fermi surface of layered compounds and bulk charge density wave systems

Journal of Physics: Condensed Matter **19**, 335002 (2007).

Groups: Aebi, Margaritondo / Projects: 1, 3

P. FAZEKAS, N. BARISIC, I. KEZSMARKI, L. DEMKO, H. BERGER, L. FORRÓ, AND G. MIHALY

Magnetic-field-induced transition in $BaVS_3$

Physical Review B **75**, 035128 (2007).

Groups: Margaritondo, Forró / Projects: 1, 3

P. FAZEKAS, K. PENC, K. RADNÓCZI, N. BARIŠIĆ, H. BERGER, L. FORRÓ, S. MITROVIĆ, A. GAUZZI, L. DEMKÓ, I. KÉZSMÁRKI, AND G. MIHÁLY

The electronic structure and the phases of $BaVS_3$

Journal of Magnetism and Magnetic Materials **310**, 928 (2007).

Groups: Margaritondo, Forró / Project: 3

L. V. GASPAROV, K.-Y. CHOI, G. GÜNTHERODT, H. BERGER, AND L. FORRÓ

Electronic Raman scattering in magnetite

Journal of Applied Physics **101**, 09G108 (2007).

Groups: Margaritondo, Forró / Project: 3

▶ J. GECK, S. V. BORISENKO, H. BERGER, H. ESCHRIG, J. FINK, M. KNUPFER, K. KOEPERNIK, A. KOITZSCH, A. A. KORDYUK, V. B. ZABOLOTNYI, AND B. BÜCHNER

Anomalous Quasiparticle Renormalization in $Na_{0.73}CoO_2$: Role of Interorbital Interactions and Magnetic Correlations

- Physical Review Letters **99**, 046403 (2007).
Group: Margaritondo / Project: 3
- C. L. HUANG, J. Y. LIN, Y. T. CHANG, C. P. SUN, H. Y. SHEN, C. C. CHOU, H. BERGER, T. K. LEE, AND H. D. YANG
Experimental evidence for a two-gap structure of superconducting NbSe₂: A specific-heat study in external magnetic fields
Physical Review B **76**, 212504 (2007).
Group: Margaritondo / Project: 3
- D. S. INOSOV, S. V. BORISENKO, I. EREMIN, A. A. KORDYUK, V. B. ZABOLOTNYY, J. GECK, A. KOITZSCH, J. FINK, M. KNUPFER, B. BÜCHNER, H. BERGER, AND R. FOLLATH
Relation between the one-particle spectral function and dynamic spin susceptibility of superconducting Bi₂Sr₂CaCu₂O_{8-δ}
Physical Review B **75**, 172505 (2007).
Group: Margaritondo / Project: 3
- D. S. INOSOV, J. FINK, A. A. KORDYUK, S. V. BORISENKO, V. B. ZABOLOTNYY, R. SCHUSTER, M. KNUPFER, B. BÜCHNER, R. FOLLATH, H. A. DÜRR, W. EBERHARDT, V. HINKOV, B. KEIMER, AND H. BERGER
Momentum and energy dependence of the anomalous high-energy dispersion in the electronic structure of high temperature superconductors
Physical Review Letters **99**, 237002 (2007).
Group: Margaritondo / Project: 3
- E. E. KRASOVSKII, V. N. STROCOV, N. BARRATT, H. BERGER, W. SCHATTKE, AND R. CLAESSEN
Band mapping in the one-step photoemission theory: Multi-Bloch-wave structure of final states and interference effects
Physical Review B **75**, 045432 (2007).
Group: Margaritondo / Project: 3
- T. KROLL, A. A. ALIGIA, M. KNUPFER, J. GECK, C. HESS, T. SCHWIEGER, G. KRABBES, C. SEKAR, D. R. BATCHELOR, H. BERGER, G. A. SAWATZKY, AND B. BÜCHNER
Spectroscopic investigations on layered sodium cobaltates
Physica C **460-462**, 487 (2007).
Group: Margaritondo / Project: 3
- I. KÉZSMÁRKI, R. GAÁL, C. C. HOMES, B. SÍPOS, H. BERGER, S. BORDÁCS, G. MIHÁLY, AND L. FORRÓ
High-pressure infrared spectroscopy: tuning of the low-energy excitations in correlated electron systems
Physical Review B **76**, 205114 (2007).
Groups: Margaritondo, Forró / Projects: 1, 3
- M. MILJAK, R. BECKER, M. HERAK, M. PRESTER, O. MILAT, M. JOHNSON, AND H. BERGER
A new modification of nickel selenite NiSeO₃ — crystal structure and magnetic properties
Journal of Physics: Condensed Matter **19**, 196203 (2007).
Group: Margaritondo / Project: 3
- S. MITROVIC, P. FAZEKAS, C. SÖNDERGAARD, D. ARIOSA, N. BARISIC, H. BERGER, D. CLOETTA, L. FORRÓ, H. HÖCHST, I. KUPCIC, D. PAVUNA, AND G. MARGARITONDO
Experimental electronic structure and Fermi-surface instability of the correlated 3d sulphide BaVS₃: High-resolution angle-resolved photoemission spectroscopy
Physical Review B **75**, 153103 (2007).
Groups: Margaritondo, Forró / Projects: 1, 3
- D. PACILÉ, M. PAPAGNO, M. LAVAGNINI, H. BERGER, L. DEGIORGI, AND M. GRIONI
Photoemission and optical studies of ZrSe₃, HfSe₃, and ZrS₃
Physical Review B **76**, 155406 (2007).
Groups: Margaritondo, Degiorgi, Grioni / Projects: 1, 3
- M. PREGELJ, A. ZORKO, H. BERGER, H. VAN TOL, L. C. BRUNEL, A. OZAROWSKI, S. NELLUTLA, Z. JAGLIČIČ, O. ZAHARKO, P. TREGENNA-PIGGOTT, AND D. ARČON
Magnetic structure of the S = 1 Ni₅(TeO₃)₄Br₂ layered system governed by magnetic anisotropy
Physical Review B **76**, 144408 (2007).
Group: Margaritondo / Project: 3
- R. SCHUSTER, M. KNUPFER, AND H. BERGER
Exciton band structure of pentacene molecular solids: Breakdown of the frenkel exciton model
Physical Review Letters **98**, 037402 (2007).
Group: Margaritondo / Project: 3
- R. SCHUSTER, M. KNUPFER, D. R. ZAHN, AND H. BERGER
Anisotropic dynamic response of pentacene single crystals
The European Physical Journal B **59**, 25 (2007).
Group: Margaritondo / Project: 3
- F. SOTO, H. BERGER, L. CABO, C. CARBALLEIRA, J. MOSQUEIRA, D. PAVUNA, P. TOIMIL, AND F. VIDAL
Electric and magnetic characterization of NbSe₂ single crystals: Anisotropic superconducting fluctuations above T_c

- Physica C **460-462**, 789 (2007).
Group: Margaritondo / Project: 3
- F. SOTO, H. BERGER, L. CABO, C. CARBALLEIRA, J. MOSQUEIRA, D. PAVUNA, AND F. VIDAL
In-plane and transverse superconducting fluctuation diamagnetism in the presence of charge-density waves in 2H-NbSe₂ single crystals
Physical Review B **75**, 094509 (2007).
Group: Margaritondo / Project: 3
- D. STOLTZ, M. BIELMANN, M. BOVET, L. SCHLAPBACH, AND H. BERGER
Tunneling evidence for spatial location of the charge-density-wave induced band splitting in 1T-TaSe₂
Physical Review B **76**, 073410 (2007).
Groups: Margaritondo, Schlapbach / Project: 3
- V. B. ZABOLOTNYY, S. V. BORISENKO, A. A. KORDYUK, J. FINK, J. GECK, A. KOITZSCH, M. KNUPFER, B. BÜCHNER, H. BERGER, A. ERB, C. T. LIN, B. KEIMER, AND R. FOLATH
Effect of Zn and Ni impurities on the quasiparticle renormalization in Bi₂Sr₂CaCu₂O_{8+δ}
Physica C **460-462**, 882 (2007).
Group: Margaritondo / Project: 3
- V. B. ZABOLOTNYY, S. V. BORISENKO, A. A. KORDYUK, J. GECK, D. S. INOSOV, A. KOITZSCH, J. FINK, M. KNUPFER, B. BÜCHNER, S.-L. DRECHSLER, H. BERGER, A. ERB, M. LAMBACHER, L. PATTHEY, V. HINKOV, AND B. KEIMER
Momentum and temperature dependence of renormalization effects in the high-temperature superconductor YBa₂Cu₃O_{7-δ}
Physical Review B **76**, 064519 (2007).
Group: Margaritondo / Project: 3
- A. ZORKO, D. ARCON, J. DOLINSEK, Z. JAGLICIC, A. JEROMEN, H. VAN TOL, L. C. BRUNEL, AND H. BERGER
Magnetism in the novel spin system Ni₅(TeO₃)₄Br₂ with two-dimensional frustrated geometry
Journal of Physics: Condensed Matter **19**, 145278 (2007).
Group: Margaritondo / Project: 3
- R. BECKER AND H. BERGER
Cu₂CoTeO₆
Acta Crystallographica E **62**, i261 (2006).
Group: Margaritondo / Project: 3
- R. BECKER AND H. BERGER
Reinvestigation of CuSe₂O₅
Acta Crystallographica E **62**, i256 (2006).
Group: Margaritondo / Project: 3
- R. BECKER AND H. BERGER
Reinvestigation of Ni₃TeO₆
Acta Crystallographica E **62**, i222 (2006).
Group: Margaritondo / Project: 3
- R. BECKER, H. BERGER, M. JOHNSON, M. PRESTER, Z. MAROHNIC, M. MILJAK, AND M. HERAK
Crystal structure and magnetic properties of Co₂TeO₃Cl₂ and Co₂TeO₃Br₂
Journal of Solid State Chemistry **179**, 836 (2006).
Group: Margaritondo / Project: 3
- R. BECKER, M. JOHNSON, AND H. BERGER
A new synthetic cobalt tellurate: Co₃TeO₆
Acta Crystallographica C **62**, I67 (2006).
Group: Margaritondo / Project: 3
- R. BECKER, M. JOHNSON, H. BERGER, M. PRESTER, I. ZIVKOVIC, D. DROBAC, M. MILJAK, AND M. HERAK
Crystal structure and magnetic properties of Co₇(TeO₃)₄Br₆ – A new cobalt tellurite bromide
Solid State Sciences **8**, 836 (2006).
Group: Margaritondo / Project: 3
- M. BIMBI, G. ALLODI, R. DE RENZI, G. MAZZOLI, H. BERGER, AND A. AMATO
The Verwey transition in Fe₃O₄: A single crystal muon investigation
Physica B **374**, 51 (2006).
Group: Margaritondo / Project: 3
- S. V. BORISENKO, A. A. KORDYUK, A. KOITZSCH, J. FINK, J. GECK, V. ZABOLOTNYY, M. KNUPFER, B. BÜCHNER, H. BERGER, M. FALUB, M. SHI, J. KREMPASKY, AND L. PATTHEY
Parity of the pairing bosons in a high-temperature Pb-Bi₂Sr₂CaCu₂O₈ bilayer superconductor by angle-resolved photoemission spectroscopy
Physical Review Letters **96**, 067001 (2006).
Group: Margaritondo / Project: 3
- G. CAIMI, L. DEGIORGI, H. BERGER, AND L. FORRÓ
Optical evidence for a magnetically driven structural transition in the spin web Cu₃TeO₆
Europhysics Letters **75**, 496 (2006).
Groups: Margaritondo, Degiorgi, Forró / Projects: 1, 3
- G. CAIMI, L. DEGIORGI, H. BERGER, AND L. FORRÓ
Phonon analysis of the S = 1 quantum spin systems Ni₅Te₄O₁₂X₂ (X = Cl and Br)

Journal of Physics: Condensed Matter **18**, 4065 (2006).

Groups: Margaritondo, Degiorgi, Forró / Projects: 1, 3

F. CARBONE, A. B. KUZMENKO, H. J. A. MOLEGRAAF, E. VAN HEUMEN, V. LUKOVAC, F. MARSIGLIO, D. VAN DER MAREL, K. HAULE, G. KOTLIAR, H. BERGER, S. COURJAUULT, P. H. KES, AND M. LI

Doping dependence of the redistribution of optical spectral weight in $\text{Bi}_2\text{Sr}_2\text{CaCu}_2\text{O}_{8+\delta}$

Physical Review B **74**, 064510 (2006).

Groups: van der Marel, Margaritondo / Projects: 2, 3

F. CLERC, C. BATTAGLIA, M. BOVET, L. DESPONT, C. MONNEY, H. CERCELLIER, M. GARNIER, P. AEBI, H. BERGER, AND L. FORRÓ

Lattice-distortion-enhanced electron-phonon coupling and Fermi surface nesting in 1T-TaS₂

Physical Review B **74**, 151114 (2006).

Groups: Margaritondo, Aebi, Forró / Projects: 1, 2, 3

D. CLOETTA, D. ARIOSA, C. CANCELLIERI, M. ABRECHT, M. S., AND D. PAVUNA

Three-dimensional dispersion induced by extreme tensile strain in $\text{La}_{2-x}\text{Sr}_x\text{CuO}_4$ films

Physical Review B **74**, 014519 (2006).

Group: Margaritondo / Project: 5

S. COLONNA, F. RONCI, A. CRICENTI, L. PERFETTI, H. BERGER, AND M. GRIONI

Scanning tunneling microscopy observation of a mott-insulator phase at the 1T-TaSe₂ surface

Japanese Journal of Applied Physics **45**, 1950 (2006).

Groups: Margaritondo, Grioni / Projects: 1, 3

S. J. CROWE, M. R. LEES, D. M. K. PAUL, R. I. BEWELY, J. TAYLOR, G. MCINTYRE, O. ZAHARKO, AND H. BERGER

Effect of externally applied pressure on the magnetic behavior of $\text{Cu}_2\text{Te}_2\text{O}_5(\text{Br}_x\text{Cl}_{1-x})_2$

Physical Review B **73**, 144410 (2006).

Groups: Mesot, Margaritondo / Projects: 1, 3, 6

J. DEISENHOFER, R. M. EREMINA, A. PIMENOV, T. GAVRILOVA, H. BERGER, M. JOHNSON, P. LEMMENS, H.-A. KRUG VON NIDDA, A. LOIDL, K.-S. LEE, AND M.-H. WHANGBO

Structural and magnetic dimers in the spin-gapped system CuTe_2O_5

Physical Review B **74**, 174421 (2006).

Groups: Margaritondo, van der Marel / Projects: 1, 3

L. DESPONT, F. CLERC, M. G. GARNIER, H. BERGER, L. FORRÓ, AND P. AEBI

Multiple scattering investigation of the 1T-TaS₂ surface termination

The European Physical Journal B **52**, 421 (2006).

Groups: Aebi, Margaritondo, Forró / Projects: 3, 5

D. V. EVTUSHINSKY, A. A. KORDYUK, S. V. BORISENKO, V. B. ZABOLOTNYI, M. KNUPFER, J. FINK, B. BÜCHNER, A. PAN, A. ERB, C. T. LIN, AND H. BERGER

Unadulterated spectral function of low-energy quasiparticles in $\text{Bi}_2\text{Sr}_2\text{CaCu}_2\text{O}_{8+\delta}$

Physical Review B **74**, 172509 (2006).

Group: Margaritondo / Project: 3

J. FINK, A. KOITZSCH, J. GECK, V. ZABOLOTNYI, M. KNUPFER, B. BÜCHNER, A. CHUBUKOV, AND H. BERGER

Reevaluation of the coupling to a bosonic mode of the charge carriers in $(\text{Bi}, \text{Pb})_2\text{Sr}_2\text{CaCu}_2\text{O}_{8+\delta}$ at the antinodal point

Physical Review B **74**, 165102 (2006).

Group: Margaritondo / Project: 3

J. GECK, M. v. ZIMMERMANN, H. BERGER, S. V. BORISENKO, H. ESCHRIG, K. KOEPERNIK, M. KNUPFER, AND B. BÜCHNER

Stripe correlations in $\text{Na}_{0.75}\text{CoO}_2$

Physical Review Letters **97**, 106403 (2006).

Group: Margaritondo / Project: 3

M. GROBOSCH, R. SCHUSTER, T. PICHLER, M. KNUPFER, AND H. BERGER

Analysis of the anisotropy of excitons in pentacene single crystals using reflectivity measurements and electron energy-loss spectroscopy

Physical Review B **74**, 155202 (2006).

Group: Margaritondo / Project: 3

Z. JAGLIČIĆ, J. DOLINŠEK, A. BILUŠIĆ, A. SMONTARA, Z. TRONTELJ, AND H. BERGER

Searching for magnetic frustration-like properties in tetrahedral spin systems $\text{Cu}_2\text{Te}_2\text{O}_5(\text{Br}_{1-x}\text{Cl}_x)_2$

Physica B **382**, 209 (2006).

Group: Margaritondo / Project: 3

Z. JAGLIČIĆ, S. EL SHAWISH, A. JEROMEN, A. BILUŠIĆ, A. SMONTARA, Z. TRONTELJ, J. BONČA, J. DOLINŠEK, AND H. BERGER

Magnetic ordering and ergodicity of the spin system in the $\text{Cu}_2\text{Te}_2\text{O}_5\text{X}_2$ family of quantum magnets

Physical Review B **73**, 214408 (2006).

Group: Margaritondo / Project: 3

M. KNUPFER AND H. BERGER

Dispersion of electron-hole excitations in pentacene along (100)

Chemical Physics **325**, 92 (2006).

Group: Margaritondo / Project: 3

- ▶ A. KOHEN, T. PROSLIER, T. CREN, Y. NOAT, W. SACKS, H. BERGER, AND D. RODITCHEV
Probing the superfluid velocity with a superconducting tip: the Doppler shift effect

Physical Review Letters **97**, 027001 (2006).

Group: Margaritondo / Project: 3

A. A. KORDYUK, S. V. BORISENKO, A. KOITZSCH, J. FINK, M. KNUPFER, B. BÜCHNER, AND H. BERGER

Life of the nodal quasiparticles in Bi-2212 as seen by ARPES

Journal of the Physics and Chemistry of Solids **67**, 201 (2006).

Group: Margaritondo / Project: 3

- ▶ A. KORDYUK, S. V. BORISENKO, V. B. ZABOLOTNYY, J. GECK, M. KNUPFER, J. FINK, B. BÜCHNER, C. T. LIN, B. KEIMER, H. BERGER, A. PAN, S. KOMIYA, AND Y. ANDO

Constituents of the quasiparticle spectrum along the nodal direction of high- T_c cuprates

Physical Review Letters **97**, 017002 (2006).

Group: Margaritondo / Project: 3

T. KROLL, M. KNUPFER, J. GECK, C. HESS, T. SCHWIEGER, G. KRABBES, C. SEKAR, D. R. BATCHELOR, H. BERGER, AND B. BÜCHNER

X-ray absorption spectroscopy of Na_xCoO_2 layered cobaltates

Physical Review B **74**, 115123 (2006).

Group: Margaritondo / Project: 3

- ▶ I. KÉZSMÁRKI, G. MIHÁLY, R. GAÁL, N. BARIŠIĆ, A. AKRAP, H. BERGER, L. FORRÓ, C. C. HOMES, AND L. MIHÁLY
Separation of orbital contributions to the optical conductivity of BaVS_3

Physical Review Letters **96**, 186402 (2006).

Groups: Margaritondo, Forró / Projects: 1, 3

H. L. LIU, M. QUIJADA, D. B. ROMERO, D. B. TANNER, A. ZIBOLD, G. L. CARR, H. BERGER, L. FORRÓ, L. MIHALY, G. CAO, B.-H. O, J. T. MARKERT, J. P. RICE, M. J. BURNS, AND K. A. DELIN

Drude behavior in the far-infrared conductivity of cuprate superconductors

Annalen der Physik **15**, 606 (2006).

Groups: Margaritondo, Forró / Project: 3

- ▶ A. MANS, I. SANTOSO, Y. HUANG, W. K. SIU, S. TAVADDOD, V. ARPIAINEN, M. LINDROSS, H. BERGER, V. N. STROCOV, M. SHI, L. PATTHEY, AND M. S. GOLDEN

Experimental Proof of a Structural Origin for the Shadow Fermi Surface of $\text{Bi}_2\text{Sr}_2\text{CaCu}_2\text{O}_{8+\delta}$

Physical Review Letters **96**, 107007 (2006).

Group: Margaritondo / Project: 3

L. MIHÁLY, T. FEHÉR, B. DÓRA, B. NÁFRÁDI, H. BERGER, AND L. FORRÓ

Spin resonance in the ordered magnetic state of $\text{Ni}_5(\text{TeO}_3)_4\text{Cl}_2$

Physical Review B **74**, 174403 (2006).

Groups: Margaritondo, Forró / Projects: 1, 3

- ▶ L. MIHÁLY, B. DÓRA, A. VÁNYOLOS, H. BERGER, AND L. FORRÓ

Spin-Lattice Interaction in the Quasi-One-Dimensional Helimagnet LiCu_2O_2

Physical Review Letters **97**, 067206 (2006).

Groups: Margaritondo, Forró / Projects: 1, 3

M. PAPAGNO, D. PACILÉ, G. CAIMI, H. BERGER, L. DEGIORGI, AND M. GRIONI

Electronic structure of one-dimensional copper oxide chains in LiCu_2O_2 from angle-resolved photoemission and optical spectroscopy

Physical Review B **73**, 115120 (2006).

Groups: Margaritondo, Degiorgi, Griani / Projects: 1, 3

- ▶ L. PERFETTI, P. LOUKAKOS, M. LISOWSKI, U. BOVENSIEPEN, H. BERGER, S. BIERMANN, P. S. CORNAGLIA, A. GEORGES, AND M. WOLF

Time evolution of the electronic structure of 1T-TaS_2 through the insulator-metal transition

Physical Review Letters **97**, 067402 (2006).

Group: Margaritondo / Project: 3

V. N. STROCOV, E. E. KRASOVSKII, W. SCHATKE, N. BARRETT, H. BERGER, D. SCHRUPP, AND R. CLAESSEN

Three-dimensional band structure in layered TiTe_2 : Photoemission final-state effects

Physical Review B **74**, 195125 (2006).

Group: Margaritondo / Project: 3

- ▶ V. B. ZABOLOTNYY, S. V. BORISENKO, A. A. KORDYUK, J. FINK, J. GECK, A. KOITZSCH, M. KNUPFER, B. BÜCHNER, H. BERGER, A. ERB, C. T. LIN, B. KEIMER, AND R. FOLLATH

Effect of Zn and Ni impurities on the quasiparticle renormalization of superconducting Bi-2212

Physical Review Letters **96**, 037003 (2006).

Group: Margaritondo / Project: 3

O. ZAHARKO, H. RØNNOW, J. MESOT, S. CROWE, D. PAUL, P. BROWN, A. DAOUALADINE, A. MEENTS, A. WAGNER,

- M. PRESTER, AND H. BERGER
Incommensurate magnetic ordering in $\text{Cu}_2\text{Te}_2\text{O}_5\text{X}_2$ ($\text{X} = \text{Cl}, \text{Br}$) studied by single crystal neutron diffraction
Physical Review B **73**, 064422 (2006).
Groups: Margaritondo, Mesot / Projects: 2, 3
- C. BATTAGLIA, H. CERCELLIER, F. CLERC, L. DESPONT, M. G. GARNIER, C. KOITZSCH, P. AEBI, H. BERGER, L. FORRÓ, AND C. AMBROSCH-DRAXL
Fermi surface induced lattice distortion in NbTe_2
Physical Review B **72**, 195114 (2005).
Groups: Margaritondo, Aebi, Forró / Projects: 1, 3
- S. COLONNA, F. RONCI, A. CRICENTI, L. PERFETTI, H. BERGER, AND M. GRIONI
Mott phase at the surface of 1T-TaSe_2 observed by scanning tunneling microscopy
Physical Review Letters **94**, 036405 (2005).
Groups: Margaritondo, Grioni / Project: 3
- L. V. GASPAROV, D. ARENAS, K.-Y. CHOI, G. GÜNTHERODT, H. BERGER, L. FORRÓ, G. MARGARITONDO, V. V. STRUZHKIN, AND R. HEMLEY
Magnetite: Raman study of the high-pressure and low-temperature effects
Journal of Applied Physics **97**, 10A922 (2005).
Groups: Margaritondo, Forró / Project: 3
- M. GRIONI, C. R. AST, D. PACILE, M. PAPANAGNO, H. BERGER, AND L. PERFETTI
Photoemission as a probe of coexisting and conflicting periodicities in low-dimensional solids
New Journal of Physics **7**, 106 (2005).
Groups: Margaritondo, Grioni / Projects: 1, 3
- M. HERAK, H. BERGER, M. PRESTER, M. MILJAK, I. ZIVKOVIC, O. MILAT, D. DROBAC, S. POPOVIC, AND O. ZAHARKO
Novel spin lattice in Cu_3TeO_6 : an antiferromagnetic order and domain dynamics
Journal of Physics: Condensed Matter **17**, 7667 (2005).
Groups: Margaritondo, Mesot / Projects: 1, 3
- A. A. KORDYUK, S. V. BORISENKO, A. KOITZSCH, J. FINK, M. KNUPFER, AND H. BERGER
Bare electron dispersion from experiment: Self-consistent self-energy analysis of photoemission data
Physical Review B **71**, 214513 (2005).
Group: Margaritondo / Project: 3
- I. KÉZSMÁRKI, G. MIHÁLY, R. GAÁL, N. BARIŠIĆ, H. BERGER, L. FORRÓ, C. C. HOMES, AND L. MIHÁLY
Pressure-induced suppression of the spin-gapped insulator phase in BaVS_3 : An infrared optical study
Physical Review B **71**, 193103 (2005).
Groups: Margaritondo, Forró / Project: 3
- L. PERFETTI, T. A. GLOOR, F. MILA, H. BERGER, AND M. GRIONI
Unexpected periodicity in the quasi-two-dimensional Mott insulator 1T-TaS_2 revealed by angle-resolved photoemission
Physical Review B **71**, 153101 (2005).
Groups: Margaritondo, Mila, Grioni / Projects: 1, 3
- A. PERUCCHI, L. DEGIORGI, AND H. BERGER
Infrared signature of the charge-density-wave gap in ZrTe_3
The European Physical Journal B **48**, 489 (2005).
Groups: Margaritondo, Degiorgi / Project: 3
- D. POPOVIC, M. BOVET, H. BERGER, AND P. AEBI
Fingerprinting substitution sites in $\text{Pb}, \text{Dy-Bi}_2\text{Sr}_2\text{Ca}_1\text{Cu}_2\text{O}_{8+\delta}$ using X-ray Photoelectron Diffraction
The European Physical Journal – Applied Physics **30**, 171 (2005).
Groups: Aebi, Margaritondo / Projects: 2, 3
- A. SMONTARA, A. BILUSIC, Z. JAGLICIC, A. ZORKO, J. DOLINSEK, AND H. BERGER
Anomalous thermal Conductivity of single crystal $\text{Cu}_2\text{Te}_2\text{O}_5\text{Cl}_2$
Applied Magnetic Resonance **29**, 261 (2005).
Group: Margaritondo / Project: 3
- O. ZAHARKO, H. M. RØNNOW, A. DAOUD-ALADINE, S. STREULE, F. JURANYI, J. MESOT, H. BERGER, AND P. BROWN
Incommensurate magnetism in the coupled spin tetrahedra system $\text{Cu}_2\text{Te}_2\text{O}_5\text{Cl}_2$
Low Temperature Physics **31**, 814 (2005).
Groups: Mesot, Margaritondo / Projects: 1, 3
- O. ZAHARKO, H. M. RØNNOW, A. DAOUD-ALADINE, S. STREULE, F. JURANYI, J. MESOT, H. BERGER, AND P. J. BROWN
Incommensurate magnetism in the coupled spin tetrahedra system $\text{Cu}_2\text{Te}_2\text{O}_5\text{Cl}_2$
Fizika Nizkikh Temperatur **31**, 1068 (2005).
Groups: Margaritondo, Mesot / Projects: 1, 3
- Group of J. Mesot**
- A. D. BIANCHI, M. KENZELMANN, L. DEBEER-SCHMITT, J. S. WHITE, E. M. FORGAN, J. MESOT, M. ZOLLIKER, J. KOHLBRECHER, R. MOVSHOVICH, E. D.

- BAUER, J. L. SARRAO, Z. FISK, C. PETROVIC, AND M. R. ESKILDSEN
Superconducting Vortices in CeCoIn₅: Toward the Pauli-Limiting Field
Science **319**, 177 (2008).
Group: Mesot / Project: 2
- M. GARCÍA-FERNAÑDEZ, U. STAUB, Y. BODENTHIN, S. M. LAWRENCE, A. M. MULDERS, C. E. BUCKLEY, S. WEYENETH, E. POMJAKUSHINA, AND K. CONDER
Resonant soft x-ray powder diffraction study to determine the orbital ordering in A-site ordered SmBaMn₂O₆
Physical Review B **77**, 060402 (2008).
Group: Mesot / Project: 3
- T. GIAMARCHI, C. RÜEGG, AND O. TCHERNYSHYOV
Bose-Einstein Condensation in Magnetic Insulators
Nature Physics **4**, 198 (2008).
Groups: Giamarchi, Mesot / Project: 1
- C. RÜEGG, B. NORMAND, M. MATSUMOTO, A. FÜRRER, D. MCMORROW, K. KRÄMER, H.-U. GÜDEL, S. N. GVASALIYA, H. MUTKA, AND M. BOEHM
Pressure-induced quantum phase transition in the spin-liquid TlCuCl₃
Physical Review Letters (2008).
Group: Mesot / Project: 1
- M. STINGACIU, E. POMJAKUSHINA, H. GRIMMER, M. TROTTMANN, AND K. CONDER
Crystal Growth of Tb_{0.9}Dy_{0.1}BaCo₂O_{5+δ} using travelling solvent floating zone method
Journal of Crystal Growth **310**, 1239 (2008).
Group: Mesot / Project: 3
- J. CHANG, S. PAILHÉS, M. SHI, M. MANSOON, T. CLAESSON, O. TJERNBERG, J. VOIGT, V. PEREZ, L. PATTHEY, N. MOMONO, M. ODA, M. IDO, A. SCHNYDER, C. MUDRY, AND J. MESOT
When low- and high-energy electronic responses meet in cuprate superconductors
Physical Review B **75**, 224508 (2007).
Group: Mesot / Project: 2
- J. CHANG, A. P. SCHNYDER, R. GILARDI, H. M. RØNNOW, S. PAILHES, N. B. CHRISTENSEN, C. NIEDERMAYER, D. F. MCMORROW, A. HIESS, A. STUNAUT, M. ENDERLE, B. LAKE, O. SOBOLEV, N. MOMONO, M. ODA, M. IDO, C. MUDRY, AND J. MESOT
Magnetic-Field-Induced Spin Excitations and Renormalized Spin Gap of the Underdoped La_{1.895}Sr_{0.105}CuO₄ Superconductor
Physical Review Letters **98**, 077004 (2007).
Group: Mesot / Projects: 1, 3, 6
- N. B. CHRISTENSEN, H. M. RØNNOW, D. F. MCMORROW, A. HARRISON, T. G. PERRING, M. ENDERLE, R. COLDEA, L. P. REGNAULT, AND G. AEPPLI
Quantum dynamics and entanglement of spins on a square lattice
Proceedings of the National Academy of Science of the USA **104**, 15264 (2007).
Group: Mesot / Project: 1
- N. B. CHRISTENSEN, H. M. RØNNOW, J. MESOT, R. A. EWINGS, N. MOMONO, M. ODA, M. IDO, M. ENDERLE, D. F. MCMORROW, AND A. T. BOOTHROYD
Nature of the Magnetic Order in the Charge-Ordered Cuprate La_{1.48}Nd_{0.4}Sr_{0.12}CuO₄
Physical Review Letters **98**, 197003 (2007).
Group: Mesot / Project: 2
- T. KONDO, R. KHASANOV, J. KARPINSKI, S. M. KAZAKOV, N. D. ZHIGADLO, T. OHTA, H. M. FRETWELL, A. D. PALCZEWSKI, J. D. KOLL, J. MESOT, E. ROTENBERG, H. KELLER, AND A. KAMINSKI
Dual character of the electronic structure of YBa₂Cu₄O₈: The conduction bands of CuO₂ planes and CuO chains
Physical Review Letters **98**, 157002 (2007).
Groups: Keller, Karpinski, Mesot / Projects: 2, 3, 4
- A. PODLESNYAK, K. CONDER, E. POMJAKUSHINA, A. MIRMELSTEIN, P. ALLENSPACH, AND D. KHOMSKII
Effect of light Sr doping on the spin-state transition in LaCoO₃
Journal of Magnetism and Magnetic Materials **310**, 1552 (2007).
Group: Mesot / Project: 3
- A. PODLESNYAK, A. KARKIN, K. CONDER, E. POMJAKUSHINA, M. STINGACIU, AND P. ALLENSPACH
Magnetic and electric transport properties of TbBaCo₂O_{5.5} single crystal
Journal of Magnetism and Magnetic Materials **316**, e710 (2007).
Group: Mesot / Project: 3
- A. PODLESNYAK, V. POMJAKUSHIN, E. V. POMJAKUSHINA, K. CONDER, AND A. FURRER
Magnetic excitations in the spin-trimer compounds Ca₃Cu_{3-x}Ni_x(PO₄)₄ (x = 0, 1, 2)
Physical Review B **76**, 064420 (2007).
Group: Mesot / Project: 1
- V. Y. POMJAKUSHIN, A. FURRER, D. V. SHEP-

TYAKOV, E. V. POMJAKUSHINA, AND K. CONDER

Crystal and magnetic structures of the spin-trimer compounds $Cu_3Cu_{3-x}Ni_x(PO_4)_4$ ($x = 0, 1, 2$)

Physical Review B **76**, 174433 (2007).

Group: Mesot / Project: 1

H. M. RØNNOW, J. JENSEN, R. PARTHASARATHY, G. AEPPLI, T. F. ROSENBAUM, D. MCMORROW, AND C. KRAEMER

Magnetic excitations near the quantum phase transition in the Ising ferromagnet $LiHoF_4$

Physical Review B **75**, 054426 (2007).

Group: Mesot / Project: 1

J. CHANG, J. MESOT, R. GILARDI, J. KOHLBRECHER, A. J. DREW, U. DIVAKAR, S. J. LISTER, S. L. LEE, S. P. BROWN, D. CHARALAMBOUS, E. M. FORGAN, C. D. DEWHURST, R. CUBITT, N. MONOMO, AND M. ODA

Neutron scattering investigations of the Abrikosov state of high-temperature superconductors

Physica B **385-386**, 35 (2006).

Group: Mesot / Projects: 1, 3, 6

S. J. CROWE, M. R. LEES, D. M. K. PAUL, R. I. BEWELY, J. TAYLOR, G. MCINTYRE, O. ZAHARKO, AND H. BERGER

Effect of externally applied pressure on the magnetic behavior of $Cu_2Te_2O_5(Br_xCl_{1-x})_2$

Physical Review B **73**, 144410 (2006).

Groups: Mesot, Margaritondo / Projects: 1, 3, 6

A. J. DREW, D. O. G. HERON, U. K. DIVAKAR, S. L. LEE, R. GILARDI, J. MESOT, F. Y. OGRIN, D. CHARALAMBOUS, N. MONOMO, M. ODA, AND C. BAINES

μ SR measurements on the vortex lattice of $La_{1.83}Sr_{0.17}CuO_4$

Physica B **374-375**, 203 (2006).

Group: Mesot / Projects: 1, 3, 6

A. FURRER AND C. RÜEGG

Bose-Einstein condensation in magnetic materials

Physica B **385-386**, 295 (2006).

Group: Mesot / Projects: 1, 3, 6

P. S. HÄFLIGER, A. PODLESNYAK, K. CONDER, AND A. FURRER

Pressure effect on the pseudogap in the optimally doped high-temperature superconductor $La_{1.81}Sr_{0.15}Ho_{0.04}Cu_{16}O_4$

Europhysics Letters **73**, 260 (2006).

Group: Mesot / Projects: 1, 3, 6

P. S. HÄFLIGER, A. PODLESNYAK, K. CONDER,

E. POMJAKUSHINA, AND A. FURRER

Pseudogap of the high-temperature superconductor $La_{1.96-x}Sr_xHo_{0.04}CuO_4$ as observed by neutron crystal-field spectroscopy

Physical Review B **74**, 184520 (2006).

Group: Mesot / Projects: 1, 3, 6

► M. MEDARDE, C. DALLERA, M. GRIONI, J. VOIGT, A. PODLESNYAK, E. POMJAKUSHINA, K. CONDER, T. NEISIUS, O. TJERNBERG, AND S. BARILO

Low-temperature spin-state transition in $LaCoO_3$ investigated using resonant x-ray absorption at the Co K edge

Physical Review B **73**, 054424 (2006).

Groups: Mesot, Grioni / Projects: 1, 3

► G. I. MENON, A. DREW, U. DIVAKAR, S. LEE, R. GILARDI, J. MESOT, F. OGRIN, D. CHARALAMBOUS, E. FORGAN, N. MOMONO, M. ODA, C. DEWHURST, AND C. BAINES

Muons as Local Probes of Three-Body Correlations in the Mixed State of Type-II Superconductors

Physical Review Letters **97**, 177004 (2006).

Group: Mesot / Projects: 1, 3, 6

H. E. MOHOTTALA, B. O. WELLS, J. I. BUDNICK, W. A. HINES, C. NIEDERMAYER, L. UDBY, C. BERNHARD, A. R. MOODENBAUGH, AND F. C. CHOU

Phase separation in superoxygenated $La_{2-x}Sr_xCuO_{4+y}$

Nature Materials **5**, 377 (2006).

Groups: Bernhard, Mesot / Projects: 1, 2, 3, 6

► J. PADIYATH, J. STAHN, AND M. HORISBERGER

Multilayers with tailored blurred interfaces

Applied Physics Letters **89**, 113123 (2006).

Group: Mesot / Projects: 1, 3, 6

A. PODLESNYAK, S. STREULE, K. CONDER, E. POMJAKUSHINA, J. MESOT, A. MIRMELSTEIN, P. SCHÜTZENDORF, R. LENGSDORF, AND M. M. ABD-ELMEGUID

Pressure effects on crystal structure, magnetic and transport properties of layered perovskite $TbBaCo_2O_{5.5}$

Physica B **378-380**, 537 (2006).

Group: Mesot / Projects: 1, 3, 6

► A. PODLESNYAK, S. STREULE, J. MESOT, M. MEDARDE, E. POMJAKUSHINA, K. CONDER, A. TANAKA, M. HAVERKORT, AND D. I. HOMSKII

Spin-state transition in $LaCoO_3$: direct neutron spectroscopic evidence of excited magnetic states

- Physical Review Letters **97**, 247208 (2006).
Group: Mesot / Projects: 1, 3, 6
- E. POMJAKUSHINA, K. CONDER, AND V. POMJAKUSHIN
Orbital order-disorder transition with volume collapse in HoBaCo₂O_{5.5}: A high-resolution neutron diffraction study
Physical Review B **73**, 113105 (2006).
Group: Mesot / Projects: 1, 3, 6
- ▶ H. M. RØNNOW, C. RENNER, G. AEPPLI, T. KIMURA, AND Y. TOKURA
Polarons and confinement of electronic motion to two dimensions in a layered manganite
Nature **440**, 1025 (2006).
Group: Mesot / Projects: 1, 3, 6
- V. R. SHAH, C. SCHANZER, P. BÖNI, AND H. B. BRAUN
Interface and magnetic characterization of FM/AF/FM multilayers
Proceedings of the NATO Advanced Research Workshop p. 179 (2006).
Group: Mesot / Project: 6
- S. STREULE, M. MEDARDE, A. PODLESNYAK, E. POMJAKUSHINA, K. CONDER, S. KAZAKOV, J. KARPINSKI, AND J. MESOT
Short-range charge ordering in Ho_{0.1}Sr_{0.9}CoO_{3-x} (0.15 ≤ x ≤ 0.49)
Physical Review B **73**, 024423 (2006).
Groups: Karpinski, Mesot / Projects: 1, 3, 4, 6
- S. STREULE, A. PODLESNYAK, E. POMJAKUSHINA, K. CONDER, D. SHEPTYAKOV, M. MEDARDE, AND J. MESOT
Oxygen order-disorder phase transition in PrBaCo₂O_{5.48} at high temperature
Physica B **378-380**, 539 (2006).
Group: Mesot / Projects: 1, 3, 6
- S. STREULE, A. PODLESNYAK, D. SHEPTYAKOV, E. POMJAKUSHINA, M. STINGACIU, K. CONDER, M. MEDARDE, M. V. PATRAKBEV, I. A. LEONIDOV, V. L. KOZHEVNIKOV, AND J. MESOT
High-temperature order-disorder transition and polaronic conductivity in PrBaCo₂O_{5.48}
Physical Review B **73**, 094203 (2006).
Group: Mesot / Projects: 1, 3, 6
- O. ZAHARKO, H. RØNNOW, J. MESOT, S. CROWE, D. PAUL, P. BROWN, A. DAOU-ALADINE, A. MEENTS, A. WAGNER, M. PRESTER, AND H. BERGER
Incommensurate magnetic ordering in Cu₂Te₂O₅X₂ (X = Cl, Br) studied by single crystal neutron diffraction
Physical Review B **73**, 064422 (2006).
Groups: Margaritondo, Mesot / Projects: 2, 3
- S. N. BARILO, S. SHIRYAEV, G. L. BYCHKOV, V. P. PLAKHTY, A. S. SHESTAK, A. G. SOLDATOV, A. PODLESNYAK, K. CONDER, M. BARAN, W. R. FLAVELL, AND A. FURRER
Sub-liquidus co-crystallization in the Ln₂O₃-BaO-CoO system: growth of large LnBaCo₂O_{5+x} (Ln = Eu, Gd, Tb, Dy) single crystals
Journal of Crystal Growth **275**, 120 (2005).
Group: Mesot / Project: 3
- ▶ S. BAYRAKCI, I. MIREBEAU, P. BOURGES, Y. SIDIS, M. ENDERLE, J. MESOT, D. CHEN, C. LIN, AND B. KEIMER
Magnetic ordering and spin waves in Na_{0.82}CoO₂
Physical Review Letters **94**, 157205 (2005).
Group: Mesot / Project: 1
- G. L. BYCHKOV, S. V. SHIRYAEV, A. G. SOLDATOV, A. S. SHESTAK, S. BARILO, D. V. SHEPTYAKOV, K. CONDER, E. POMJAKUSHINA, A. PODLESNYAK, A. FURRER, AND R. BRUETSCH
Crystal growth features and properties of layered rare earth and barium cobaltates
Crystal Research and Technology **40**, 395 (2005).
Group: Mesot / Project: 3
- K. CONDER, E. POMJAKUSHINA, V. POMJAKUSHIN, M. STINGACIU, S. STREULE, AND A. PODLESNYAK
Oxygen isotope effect on metal-insulator transition in layered cobaltites RBaCo₂O_{5.5} (R = Pr, Dy, Ho, and Y)
Journal of Physics: Condensed Matter **17**, 5813 (2005).
Group: Mesot / Project: 3
- K. CONDER, E. POMJAKUSHINA, A. SOLDATOV, AND E. MITBERG
Oxygen content determination in perovskite-type cobaltates
Materials Research Bulletin **40**, 257 (2005).
Group: Mesot / Project: 3
- ▶ A. DREW, S. L. LEE, D. CHARALAMBOUS, A. POTENZA, C. MARROWS, H. LUETKENS, A. SUTER, T. PROKSCHA, R. KHASANOV, E. MORENZONI, D. UCKO, AND E. M. FORGAN
Coexistence and Coupling of Superconductivity and Magnetism in Thin Film Structures
Physical Review Letters **95**, 197201 (2005).
Groups: Keller, Mesot / Projects: 1, 2

- J. EMERY, D. MASSIOT, P. LACORRE, Y. LALIGANT, AND K. CONDER
¹⁷O NMR in room temperature phase of *La₂Mo₂O₉ fast oxide ionic conductor*
 Magnetic Resonance in Chemistry **43**, 366 (2005).
 Group: Mesot / Project: 3
- M. ENDERLE, C. MUKHERJEE, B. FAK, R. KREMER, J.-M. BROTO, H. ROSNER, S.-L. DRECHSLER, J. RICHTER, J. MALEK, A. PROKOFIEV, W. ASSMUS, S. PUJOL, J.-L. RAGGAZZONI, H. RAKOTO, M. RHEINSTADTER, AND H. RØNNOW
Quantum helimagnetism of the frustrated spin-1/2 chain LiCuVO₄
 Europhysics Letters **70**, 237 (2005).
 Group: Mesot / Project: 1
- R. GILARDI, S. STREULE, N. MOMONO, M. ODA, AND J. MESOT
Doping dependence of the vortex glass and sublimation transitions in the high-T_c superconductor La_{2-x}Sr_xCuO₄ as determined from macroscopic measurements
 The European Physical Journal B **47**, 231 (2005).
 Group: Mesot / Project: 1
- M. HERAK, H. BERGER, M. PRESTER, M. MILJAK, I. ZIVKOVIC, O. MILAT, D. DROBAC, S. POPOVIC, AND O. ZAHARKO
Novel spin lattice in Cu₃TeO₆: an antiferromagnetic order and domain dynamics
 Journal of Physics: Condensed Matter **17**, 7667 (2005).
 Groups: Margaritondo, Mesot / Projects: 1, 3
- M. JANOSCHEK, B. ROESSLI, L. KELLER, S. N. GVASALIYA, K. CONDER, AND E. POMJAKUSHINA
Reduction of the ordered magnetic moment in YMnO₃ with hydrostatic pressure
 Journal of Physics: Condensed Matter **17**, L425 (2005).
 Group: Mesot / Project: 3
- A. KAMINSKI, H. M. FRETWELL, M. R. NORMAN, M. RANDERIA, S. ROSENKRANZ, U. CHATTERJEE, J. C. CAMPUZANO, J. MESOT, T. SATO, T. TAKAHASHI, T. TERASHIMA, M. TAKANO, K. KADOWAKI, Z. Z. LI, AND H. RAFFY
Momentum anisotropy of the scattering rate in cuprate superconductors
 Physical Review B **71**, 014517 (2005).
 Group: Mesot / Project: 1
- ▶ R. KHASANOV, D. G. ESHCHENKO, D. DI CASTRO, A. SHENGELAYA, F. LA MATTINA, A. MAISURADZE, C. BAINES, H. LUETKENS, J. KARPINSKI, S. M. KAZAKOV, AND H. KELLER
Magnetic penetration depth in RbOs₂O₆ studied by muon spin rotation
 Physical Review B **72**, 104504 (2005).
 Groups: Keller, Karpinski, Mesot / Projects: 1, 2, 3, 4
- R. KHASANOV, J. KARPINSKI, AND H. KELLER
Pressure effect on the in-plane magnetic penetration depth in YBa₂Cu₄O₈
 Journal of Physics: Condensed Matter **17**, 2453 (2005).
 Groups: Keller, Karpinski, Mesot / Projects: 1, 2, 3, 4
- ▶ R. KHASANOV, T. SCHNEIDER, AND H. KELLER
Pressure effects on the superconducting properties of YBa₂Cu₄O₈
 Physical Review B **72**, 014524 (2005).
 Groups: Mesot, Keller / Projects: 1, 2
- B. LAKE, K. LEFMANN, N. B. CHRISTENSEN, G. AEPPLI, D. F. MCMORROW, H. M. RØNNOW, P. VORDERWISCH, P. SMEIBIDL, N. MANGKORNTONG, T. SASAGAWA, M. NOHARA, AND H. TAKAGI
Three-dimensionality of field-induced magnetism in a high-temperature superconductor
 Nature Materials **4**, 658 (2005).
 Group: Mesot / Project: 1
- S. LEE, A. A. PODLESNYAK, K. PROKES, V. E. SIKOLENKO, A. S. ERMOLENKO, E. G. GERASIMOV, Y. A. DOROFEEV, A. P. VOKHMYANIN, J.-G. PARK, AND A. N. PIROGOV
Magnetic phase transitions in TbNi₅ single crystal: Bulk properties and neutron diffraction studies
 Journal of Experimental and Theoretical Physics Letters **82**, 34 (2005).
 Group: Mesot / Project: 1
- E. LIAROKAPIS, D. PALLES, D. LAMPAKIS, G. BÖTTGER, K. CONDER, AND E. KALDIS
Phase separation in fully oxygenated Y_{1-y}Ca_yBa₂Cu₃O_x compounds
 Physical Review B **71**, 014303 (2005).
 Group: Mesot / Project: 3
- J. MESOT, J. CHANG, J. KOHLBRECHER, R. GILARDI, A. J. DREW, U. DIVAKAR, D. HERON, S. J. LISTER, S. L. LEE, S. P. BROWN, D. CHARALAMBOUS, E. M. FORGAN, F. Y. OGRIN, G. I. MENON, C. D. DEWHURST, R. CUBITT, C. BAINES, N. MOMONO, M. ODA, T. UEFUJI, AND K. YAMADA

Combined neutron scattering and muon-spin rotation investigations of the Abrikosov state of high-temperature superconductors

Proceedings of SPIE **5932**, 59322D (2005).

Group: Mesot / Project: 1

J. PADIYATH, J. STAHN, P. ALLENSPACH, M. HORISBERGER, M. GUPTA, T. GUTBERLET, AND P. BÖNI

Smooth interfaces of multilayer monochromators

Physica B **357**, 218 (2005).

Group: Mesot / Project: 6

A. PODLESNYAK, P. S. HÄFLIGER, K. CONDER, AND A. FURRER

Neutron spectroscopic study of the pseudogap formation in $La_{1.81}Sr_{0.15}Ho_{0.04}CuO_4$ at ambient and elevated pressure

Journal of Physics: Condensed Matter **17**, S801 (2005).

Group: Mesot / Project: 1

A. PODLESNYAK, S. STREULE, M. MEDARDE, K. CONDER, E. POMJAKUSHINA, AND J. MESOT

Effect of oxygen nonstoichiometry on structural and magnetic properties of $PrBaCo_2O_{5+\delta}$

Physica B **359-361**, 1348 (2005).

Group: Mesot / Project: 1

C. RENNER, G. AEPPLI, AND H. M. RØNNOW
Charge ordering, stripes and phase separation in manganese perovskite oxides: an STM/STS study

Materials Science and Engineering **C25**, 775 (2005).

Group: Mesot / Project: 1

B. ROESSLI, S. N. GVASALIYA, E. POMJAKUSHINA, AND K. CONDER

Spin fluctuations in the stacked-triangular antiferromagnet $YMnO_3$

Journal of Experimental and Theoretical Physics Letters **81**, 287 (2005).

Group: Mesot / Project: 3

- ▶ C. RÜEGG, B. NORMAND, M. MATSUMOTO, C. NIEDERMAYER, A. FURRER, K. W. KRÄMER, H. U. GÜDEL, P. BOURGES, Y. SIDIS, AND H. MUTKA

Quantum Statistics of Interacting Dimer Spin Systems

Physical Review Letters **95**, 267201 (2005).

Group: Mesot / Project: 1

- ▶ H. M. RØNNOW, R. PARTHASARATHY, J. JENSEN, G. AEPPLI, T. F. ROSENBAUM, AND D. MCMORROW

Quantum phase transition of a magnet in a spin bath

Science **308**, 389 (2005).

Group: Mesot / Project: 1

C. SCHANZER, V. R. SHAH, T. GUTBERLET, M. GUPTA, P. BÖNI, AND H. B. BRAUN

Magnetic depth profiling of FM/AF/FM trilayers by PNR

Physica B **356**, 46 (2005).

Group: Mesot / Project: 6

V. R. SHAH, C. SCHANZER, P. BÖNI, AND H. B. BRAUN

Magnetization reversal in FM/AF/FM trilayers: dependence of AF thickness

Journal of Magnetism and Magnetic Materials **286**, 484 (2005).

Group: Mesot / Project: 6

- ▶ U. STAUB, A. M. MULDER, O. ZAHARKO, S. JANSSEN, T. NAKAMURA, AND S. W. LOVESEY

Orbital Dynamics of the 4f Shell in DyB_2C_2

Physical Review Letters **94**, 036408 (2005).

Group: Mesot / Project: 1

S. STREULE, A. PODLESNYAK, J. MESOT, M. MEDARDE, K. CONDER, E. POMJAKUSHINA, E. MITBERG, AND V. KOZHEVNIKOV

Effect of oxygen ordering on the structural and magnetic properties of the layered perovskites $PrBaCo_2O_{5+\delta}$

Journal of Physics: Condensed Matter **17**, 3317 (2005).

Group: Mesot / Project: 3

O. ZAHARKO, H. M. RØNNOW, A. DAOUD-ALADINE, S. STREULE, F. JURANYI, J. MESOT, H. BERGER, AND P. BROWN

Incommensurate magnetism in the coupled spin tetrahedra system $Cu_2Te_2O_5Cl_2$

Low Temperature Physics **31**, 814 (2005).

Groups: Mesot, Margaritondo / Projects: 1, 3

O. ZAHARKO, H. M. RØNNOW, A. DAOUD-ALADINE, S. STREULE, F. JURANYI, J. MESOT, H. BERGER, AND P. J. BROWN

Incommensurate magnetism in the coupled spin tetrahedra system $Cu_2Te_2O_5Cl_2$

Fizika Nizkikh Temperatur **31**, 1068 (2005).

Groups: Margaritondo, Mesot / Projects: 1, 3

Group of F. Mila

A. GELLÉ, A. M. LÄUCHLI, B. KUMAR, AND F. MILA

- Two-dimensional quantum antiferromagnet with a fourfold degenerate dimer ground state*
Physical Review B **77**, 014419 (2008).
Group: Mila / Project: 1
- G. MISGUICH AND F. MILA
Quantum Dimer Model on the triangular lattice: Semiclassical and variational approaches to vison dispersion and condensation
Physical Review B (2008).
Group: Mila / Project: 1
- ▶ K. P. SCHMIDT, J. DORIER, A. LAEUCHLI, AND F. MILA
Supersolid phase induced by correlated hopping in spin-1/2 frustrated quantum magnets
Physical Review Letters **100**, 090401 (2008).
Group: Mila / Project: 1
- ▶ N. LAFLORENCIE AND F. MILA
Quantum and Thermal Transitions Out of the Supersolid Phase of a 2D Quantum Antiferromagnet
Physical Review Letters **99**, 027202 (2007).
Group: Mila / Project: 1
- A. LÄUCHLI, S. DOMMANGE, B. NORMAND, AND F. MILA
Static impurities in the $S = 3/2$ kagome lattice: Exact diagonalization calculations on small clusters
Physical Review B **76**, 144413 (2007).
Group: Mila / Project: 1
- F. MILA, F. VERNAY, A. RALKO, F. BECCA, P. FAZEKAS, AND K. PENC
The emergence of resonating valence bond physics in spin-orbital models
Journal of Physics: Condensed Matter **19**, 145201 (2007).
Group: Mila / Project: 1
- S. MIYAHARA, J.-B. FOUET, S. R. MANMANA, R. M. NOACK, H. MAYAFFRE, I. SHEIKIN, C. BERTHIER, AND F. MILA
Uniform and staggered magnetizations induced by Dzyaloshinskii-Moriya interactions in isolated and coupled spin-1/2 dimers in a magnetic field
Physical Review B **75**, 184402 (2007).
Group: Mila / Project: 1
- ▶ K. PENC, J.-B. FOUET, S. MIYAHARA, O. TCHERNYSHYOV, AND F. MILA
Ising Phases of Heisenberg Ladders in a Magnetic Field
Physical Review Letters **99**, 117201 (2007).
Group: Mila / Project: 1
- D. POILBLANC, M. MAMBRINI, A. LÄUCHLI, AND F. MILA
Exotic phenomena in doped quantum magnets
Journal of Physics: Condensed Matter **19**, 145205 (2007).
Group: Mila / Project: 1
- D. POILBLANC, C. WEBER, F. MILA, AND M. SIGRIST
Checkerboard order in the t - J model on the square lattice
Journal of Magnetism and Magnetic Materials **310**, 523 (2007).
Groups: Rice, Mila, Sigrist / Project: 1
- A. RALKO, M. FERRERO, F. BECCA, D. IVANOV, AND F. MILA
Crystallization of the resonating valence bond liquid as vortex condensation
Physical Review B **76**, 140404 (2007).
Group: Mila / Project: 1
- ▶ A. RALKO, F. MILA, AND D. POILBLANC
Phase Separation and Flux Quantization in the Doped Quantum Dimer Model on Square and Triangular Lattices
Physical Review Letters **99**, 127202 (2007).
Group: Mila / Project: 1
- C. R. AST, D. PACILÉ, M. PAPAGNO, T. GLOOR, F. MILA, S. FEDRIGO, G. WITICH, K. KERN, H. BRUNE, AND M. GRIONI
Orbital selective overlayer-substrate hybridization in a Pb monolayer on Ag(111)
Physical Review B **73**, 245428 (2006).
Groups: Grioni, Mila / Project: 1
- ▶ M. CLÉMANCEY, H. MAYAFFRE, C. BERTHIER, M. HORVATIĆ, J.-B. FOUET, S. MIYAHARA, F. MILA, B. CHIARI, AND O. PIOVESANA
Field-Induced Staggered Magnetization and Magnetic Ordering in $\text{Cu}_2(\text{C}_5\text{H}_{12}\text{N}_2)_2\text{Cl}_4$
Physical Review Letters **97**, 167204 (2006).
Group: Mila / Project: 1
- J.-B. FOUET, A. LÄUCHLI, S. PILGRAM, R. M. NOACK, AND F. MILA
Frustrated three-leg spin tubes: From spin 1/2 with chirality to spin 3/2
Physical Review B **73**, 014409 (2006).
Group: Mila / Project: 1
- J.-B. FOUET, F. MILA, D. CLARKE, H. YOUK, O. TCHERNYSHYOV, P. FENDLEY, AND R. M. NOACK
Condensation of magnons and spinons in a frustrated ladder
Physical Review B **73**, 214405 (2006).
Group: Mila / Project: 1

- J. L. GAVILANO, E. FELDER, D. RAU, H. R. OTT, P. MILLET, F. MILA, T. CICHOREK, AND A. C. MOTA
Na₂V₃O₇: An unusual low-dimensional quantum magnet
 Physica B **378-380**, 123 (2006).
 Groups: Ott, Mila / Project: 1
- ▶ A. LÄUCHLI, F. MILA, AND K. PENC
Quadrupolar Phases of the S = 1 Bilinear-Biquadratic Heisenberg Model on the Triangular Lattice
 Physical Review Letters **97**, 087205 (2006).
 Group: Mila / Project: 1
- M. MAMBRINI, A. LÄUCHLI, D. POILBLANC, AND F. MILA
Plaquette valence-bond crystal in the frustrated Heisenberg quantum antiferromagnet on the square lattice
 Physical Review B **74**, 144422 (2006).
 Group: Mila / Project: 1
- V. V. MAZURENKO, F. MILA, AND V. I. ANISIMOV
Electronic structure and exchange interactions of Na₂V₃O₇
 Physical Review B **73**, 014418 (2006).
 Group: Mila / Project: 1
- D. POILBLANC, F. ALET, F. BECCA, A. RALKO, F. TROUSSELET, AND F. MILA
Doping quantum dimer models on the square lattice
 Physical Review B **74**, 014437 (2006).
 Group: Mila / Project: 1
- D. POILBLANC, A. LÄUCHLI, M. MAMBRINI, AND F. MILA
Spinon deconfinement in doped frustrated quantum antiferromagnets
 Physical Review B **73**, 100403 (2006).
 Group: Mila / Project: 1
- A. RALKO, M. FERRERO, F. BECCA, D. IVANOV, AND F. MILA
Dynamics of the quantum dimer model on the triangular lattice: Soft modes and local resonating valence-bond correlations
 Physical Review B **74**, 134301 (2006).
 Group: Mila / Project: 1
- K. P. SCHMIDT, J. DORIER, A. LÄUCHLI, AND F. MILA
Single-particle versus pair condensation of hard-core bosons with correlated hopping
 Physical Review B **74**, 174508 (2006).
 Group: Mila / Project: 1
- F. VERNAY, A. RALKO, F. BECCA, AND F. MILA
Identification of an RVB liquid phase in a quantum dimer model with competing kinetic terms
 Physical Review B **74**, 054402 (2006).
 Group: Mila / Project: 1
- C. WEBER, A. LÄUCHLI, F. MILA, AND T. GIAMARCHI
Magnetism and superconductivity of strongly correlated electrons on the triangular lattice
 Physical Review B **73**, 014519 (2006).
 Groups: Mila, Giamarchi / Project: 1
- C. WEBER, D. POILBLANC, S. CAPPONI, F. MILA, AND C. JAUDET
Bond-order-modulated staggered-flux phase of the tJ model on a square lattice
 Physical Review B **74**, 104506 (2006).
 Group: Mila / Project: 1
- ▶ R. BENDJAMA, B. KUMAR, AND F. MILA
Absence of Single-Particle Bose-Einstein Condensation at Low Densities for Bosons with Correlated Hopping
 Physical Review Letters **95**, 110406 (2005).
 Group: Mila / Project: 1
- J. DORIER, F. BECCA, AND F. MILA
Quantum compass model on the square lattice
 Physical Review B **72**, 024448 (2005).
 Group: Mila / Project: 1
- M. ELHAJAL AND F. MILA
Dynamic spin Jahn-Teller effect in small magnetic clusters
 The European Physical Journal B **47**, 185 (2005).
 Group: Mila / Project: 1
- J. L. GAVILANO, E. FELDER, D. RAU, H. R. OTT, P. MILLET, F. MILA, T. CICHOREK, AND A. C. MOTA
Unusual magnetic properties of the low-dimensional quantum magnet Na₂V₃O₇
 Physical Review B **72**, 064431 (2005).
 Groups: Mila, Ott / Project: 1
- V. N. KOTOV, M. ELHAJAL, M. E. ZHITOMIRSKY, AND F. MILA
Dzyaloshinsky-Moriya-induced order in the spin-liquid phase of the S = 1/2 pyrochlore antiferromagnet
 Physical Review B **72**, 014421 (2005).
 Group: Mila / Project: 1
- S. MIYAHARA AND F. MILA
The effects of Dzyaloshinsky-Moriya interaction in the orthogonal dimer Heisenberg model for SrCu₂(BO₃)₂
 Progress of Theoretical Physics **159**, 33 (2005).
 Group: Mila / Project: 1

L. PERFETTI, T. A. GLOOR, F. MILA, H. BERGER, AND M. GRIONI

Unexpected periodicity in the quasi-two-dimensional Mott insulator 1T-TaS₂ revealed by angle-resolved photoemission

Physical Review B **71**, 153101 (2005).

Groups: Margaritondo, Mila, Griani / Projects: 1, 3

C. WEBER, F. BECCA, AND F. MILA

Finite-temperature properties of frustrated classical spins coupled to the lattice

Physical Review B **72**, 024449 (2005).

Group: Mila / Project: 1

Group of R. Nesper

- ▶ A. MICHAILOVSKI, R. KIEBACH, W. BENSCH, J.-D. GRUNWALDT, A. BAIKER, S. KOMARNENI, AND G. R. PATZKE

Morphological and Kinetic Studies on Hexagonal Tungstates

Chemistry of Materials **19**, 185 (2007).

Group: Nesper / Projects: 4, 6

M. WÖRLE, R. NESPER, G. MAIR, AND H. G. VON SCHNERING

Li₆B₁₈(Li₂O)_x – A boride with a porous framework of B₆ octahedra

Solid State Sciences **9**, 459 (2007).

Group: Nesper / Projects: 4, 6

M. J. HEIGHT, L. MÄDLER, S. E. PRATSINIS, AND F. KRUMEICH

Nanorods of ZnO Made by Flame Spray Pyrolysis

Chemistry of Materials **18**, 572 (2006).

Group: Nesper / Projects: 4, 6

F. KRUMEICH AND R. NESPER

Oxidation products of the niobium tungsten oxide Nb₄W₁₃O₄₇: A high-resolution scanning transmission electron microscopy study

Journal of Solid State Chemistry **179**, 1857 (2006).

Group: Nesper / Projects: 4, 6

A. MICHAILOVSKI AND G. R. PATZKE

Hydrothermal Synthesis of Molybdenum Oxide Based Materials: Strategy and Structural Chemistry

Chemistry–A European Journal **12**, 9122 (2006).

Group: Nesper / Projects: 4, 6

A. MICHAILOVSKI, H. RÜEGGER, D. SHEPTYAKOV, AND G. R. PATZKE

Synthesis and characterization of Novel Fluorinated Poly(oxomolybdates)

Inorganic Chemistry **45**, 5641 (2006).

Group: Nesper / Projects: 4, 6

R. NESPER, A. IVANTCHENKO, AND F. KRUMEICH

Synthesis and Characterization of Carbon-Based Nanoparticles and Highly Magnetic Nanoparticles with Carbon Coatings

Advanced Functional Materials **16**, 296 (2006).

Group: Nesper / Projects: 4, 6

- ▶ A. M. TAURINO, A. FORLEO, L. FRANCIOSO, P. SICILIANO, M. STALDER, AND R. NESPER

Synthesis, electrical characterization and gas sensing properties of molybdenum oxide nanorods

Applied Physics Letters **88**, 152111 (2006).

Group: Nesper / Projects: 4, 6

M. WÖRLE, R. NESPER, AND T. CHATTERJI

LiB_x (0.82 < x ≤ 1.0) – an incommensurate Composite Structure below 150 K

Zeitschrift für Anorganische und Allgemeine Chemie **632**, 1737 (2006).

Group: Nesper / Projects: 4, 6

Q. XIE AND R. NESPER

Structural and Electronic Characterization of Eu₂LiSi₃, Eu₂LiGe₃ and Eu_xSr_{2-x}LiGe₃ Mixed Crystals

Zeitschrift für Anorganische und Allgemeine Chemie **632**, 1743 (2006).

Group: Nesper / Projects: 4, 6

J. HABERECHE, F. KRUMEICH, M. STALDER, AND R. NESPER

Carbon nanostructures on high-temperature ceramics – a novel composite material and its functionalization

Catalysis Today **102**, 40 (2005).

Group: Nesper / Projects: 4, 6

J. HABERECHE, R. NESPER, AND H. GRÜTZMACHER

A Construction Kit for Si-B-C-N Ceramic Materials Based on Borazine Precursors

Chemistry of Materials **17**, 2340 (2005).

Group: Nesper / Projects: 4, 6

C. KUBATA, F. KRUMEICH, M. WÖRLE, AND R. NESPER

The Real Structure of YbSi_{1.4} – Commensurately and Incommensurately Modulated Silicon Substructures

Zeitschrift für Anorganische und Allgemeine Chemie **631**, 546 (2005).

Group: Nesper / Projects: 4, 6

F. OTTINGER, I. KROSLAKOVA, K. HAMETNER, E. REUSSER, R. NESPER, AND

- D. GÜNTHER
Analytical evidence of amorphous microdomains within nitridosilicate and nitridoaluminosilicate single crystals
Analytical & Bioanalytical Chemistry **383**, 489 (2005).
Group: Nesper / Projects: 4, 6
- F. OTTINGER AND R. NESPER
Synthesis and Crystal Structure of the Nitridosilicates $Ca_5[Si_2N_6]$ and $Ca_7[NbSi_2N_9]$
Zeitschrift für Anorganische und Allgemeine Chemie **631**, 1597 (2005).
Group: Nesper / Projects: 4, 6
- S. PIOTTO AND R. NESPER
CURVIS: a program to study and analyse crystallographic structures and phase transitions
Journal of Applied Crystallography **38**, 223 (2005).
Group: Nesper / Projects: 4, 6
- H. G. VON SCHNERING, M. SCHWARZ, J.-H. CHANG, K. PETERS, E. M. PETERS, AND R. NESPER
Refinement of the crystal structures of the tetrahedro-tetrasilicides K_4Si_4 , Rb_4Si_4 and CS_4Si_4
Zeitschrift für Kristallographie – New Crystal Structures **220**, 525 (2005).
Group: Nesper / Projects: 4, 6
- Group of H.-R. Ott**
- F. PFUNER, L. DEGIORGI, H. R. OTT, A. BIANCHI, AND Z. FISK
Magneto-optical behavior of $EuIn_2P_2$
Physical Review B **77**, 024417 (2008).
Groups: Degiorgi, Ott / Project: 1
- M. WELLER, J. L. GAVILANO, A. SACCHETTI, AND H. R. OTT
Low temperature NMR study of $CeAl_3$ under hydrostatic pressure
Physica B **403**, 834 (2008).
Group: Ott / Project: 1
- M. WELLER, J. L. GAVILANO, A. SACCHETTI, AND H. R. OTT
Pressure induced variation of the ground state of $CeAl_3$
Physical Review B **77**, 132402 (2008).
Group: Ott / Project: 1
- B. PEDRINI, S. WESSEL, J. L. GAVILANO, H. R. OTT, S. M. KAZAKOV, AND J. KARPINSKI
Quenching of the Haldane gap in $LiVSi_2O_6$ and related compounds
The European Physical Journal B **55**, 219 (2007).
Groups: Karpinski, Ott / Projects: 1, 3, 4
- A. V. SOLOGUBENKO, T. LORENZ, H. R. OTT, AND A. FREIMUTH
Thermal Conductivity via Magnetic Excitations in Spin-Chain Materials
Journal of Low Temperature Physics **174**, 387 (2007).
Group: Ott / Project: 2
- G. A. WIGGER, E. FELDER, M. WELLER, S. STREULE, H. R. OTT, A. D. BIANCHI, AND Z. FISK
Percolation limited magnetic order in $Eu_{1-x}Ca_xB_6$
The European Physical Journal B **46**, 231 (2007).
Group: Ott / Project: 1
- G. CAIMI, A. PERUCCHI, L. DEGIORGI, H. R. OTT, V. M. PEREIRA, A. H. CASTRO NETO, A. D. BIANCHI, AND Z. FISK
Magneto-Optical Evidence of Double Exchange in a Percolating Lattice
Physical Review Letters **96**, 016403 (2006).
Groups: Degiorgi, Ott / Project: 1
- J. L. GAVILANO, E. FELDER, D. RAU, H. R. OTT, P. MILLET, F. MILA, T. CICHOREK, AND A. C. MOTA
 $Na_2V_3O_{0.7}$: An unusual low-dimensional quantum magnet
Physica B **378-380**, 123 (2006).
Groups: Ott, Mila / Project: 1
- J. L. GAVILANO, B. PEDRINI, K. MAGISHI, J. HINDERER, M. WELLER, H. R. OTT, S. M. KAZAKOV, AND J. KARPINSKI
Localized versus itinerant magnetic moments in $Na_{0.7}CoO_2$
Physical Review B **74**, 064410 (2006).
Groups: Karpinski, Ott / Projects: 1, 3, 4
- J. HINDERER, S. M. WEYENETH, M. WELLER, J. L. GAVILANO, E. FELDER, F. HULLIGER, AND H. R. OTT
NMR study of $CeTe$ at low temperatures
Physica B **378-380**, 765 (2006).
Group: Ott / Project: 1
- H. R. OTT
Heavy electrons and non-Fermi liquids, the early times
Physica B **378-380**, 1 (2006).
Group: Ott / Project: 1
- B. PEDRINI, S. WEYENETH, J. L. GAVILANO, J. HINDERER, M. WELLER, H. R. OTT, S. M. KAZAKOV, AND J. KARPINSKI

Magnetic transition in Na_{0.5}CoO₂ at 88 K
 Physica B **378-80**, 861 (2006).

Groups: Karpinski, Ott / Projects: 1, 3, 4

A. V. SOLOGUBENKO, N. D. ZHIGADLO,
 J. KARPINSKI, AND H. R. OTT

Thermal conductivity of Al-doped MgB₂: Impurity scattering and the validity of the Wiedemann-Franz law

Physical Review B **74**, 184523 (2006).

Groups: Karpinski, Ott / Projects: 2, 3, 4

M. WELLER, J. HINDERER, J. L. GAVILANO,
 B. PEDRINI, D. RAU, I. SHEIKIN, M. CHIAO,
 AND H. R. OTT

NQR studies of CePd₂In under hydrostatic pressure

Physica B **378-380**, 892 (2006).

Group: Ott / Project: 1

J. L. GAVILANO, E. FELDER, D. RAU, H. R. OTT,
 P. MILLET, F. MILA, T. CICHOREK, AND
 A. C. MOTA

Unusual magnetic properties of the low-dimensional quantum magnet Na₂V₃O₇

Physical Review B **72**, 064431 (2005).

Groups: Mila, Ott / Project: 1

J. L. GAVILANO, D. RAU, B. PEDRINI,
 K. MAGISHI, M. WELLER, J. HINDERER, H. R. OTT,
 S. M. KAZAKOV, AND J. KARPINSKI

Unconventional charge ordering in Na_{0.70}CoO₂ below 300 K?

Physica B **359**, 1237 (2005).

Groups: Karpinski, Ott / Projects: 3, 4

K. MAGISHI, J. L. GAVILANO, B. PEDRINI,
 J. HINDERER, M. WELLER, H. R. OTT, S. M. KAZAKOV,
 AND J. KARPINSKI

Evidence for s-wave superconductivity in the β -pyrochlore oxide RbOs₂O₆

Physical Review B **71**, 024524 (2005).

Groups: Karpinski, Ott / Projects: 3, 4

B. PEDRINI, J. L. GAVILANO, S. WEYENETH,
 E. FELDER, J. HINDERER, M. WELLER, H. R. OTT,
 S. M. KAZAKOV, AND J. KARPINSKI

Magnetic phase transition at 88 K in Na_{0.5}CoO₂ revealed by ²³Na NMR investigations

Physical Review B **72**, 214407 (2005).

Groups: Karpinski, Ott / Projects: 1, 3, 4

A. V. SOLOGUBENKO, N. D. ZHIGADLO, S. M. KAZAKOV,
 J. KARPINSKI, AND H. R. OTT

Influence of carbon substitution on the heat transport in single crystalline MgB₂

Physical Review B **71**, 020501 (2005).

Groups: Karpinski, Ott / Projects: 2, 3, 4

G. A. WIGGER, E. FELDER, R. MONNIER,
 H. R. OTT, L. PHAM, AND Z. FISK

Low-temperature phase transitions in the induced-moment system PrB₄

Physical Review B **72**, 014419 (2005).

Group: Ott / Project: 1

Group of P. Paruch

► G. CATALAN, H. BÉA, S. FUSIL, M. BIBES,
 P. PARUCH, A. BARTHÉLÉMY, AND J. F. SCOTT
Fractal Dimension and Size Scaling of Domains in Thin Films of Multiferroic BiFeO₃

Physical Review Letters **100**, 027602 (2008).

Group: Paruch / Project: 5

► P. PARUCH AND J.-M. TRISCONÉ
High-temperature ferroelectric domain stability in epitaxial PbZr_{0.2}Ti_{0.8}O₃ thin films

Applied Physics Letters **88**, 162907 (2006).

Groups: Triscone, Paruch / Project: 5

Group of Ch. Renner

S. HEUTZ, C. MITRA, W. WU, A. J. FISHER,
 A. KERRIDGE, M. STONEHAM, A. H. HARKER,
 J. GARDENER, H.-H. TSENG, T. S. JONES,
 C. RENNER, AND G. AEPPLI

Molecular Thin Films: A New type of Magnetic Switch

Advanced Materials **19**, 3618 (2007).

Group: Renner / Project: 1

S. DE SANTIS, B. BRYANT, M. WARNER,
 H. WANG, T. KIMURA, Y. TOKURA, C. RENNER,
 A. BIANCONI, AND G. AEPPLI

Imaging of Polarons in Ferromagnetic Bilayered Manganites by Scanning Tunneling Microscopy

Journal of Superconductivity and Novel Magnetism **20**, 531 (2007).

Group: Renner / Project: 1

Group of T. M. Rice

Y. CHEN, T. M. RICE, AND F. C. ZHANG
Atomic scale rotational symmetry breaking in lightly doped Ca_{2-x}Na_xCuO₂Cl₂

Physica C **460-462**, 234 (2007).

Groups: Rice, Sigrist / Project: 2

P. A. FRIGERI, D. F. AGTERBERG, I. MILAT,
 AND M. SIGRIST

Phenomenological theory of the 's-wave' state in superconductors without an inversion center

The European Physical Journal B **54**, 435 (2007).

Groups: Rice, Sigrist / Project: 2

- M. INDERGAND, C. HONERKAMP, A. LÄUCHLI, D. POILBLANC, AND M. SIGRIST
Plaquette bond order wave in the quarter-filled extended Hubbard model on the checkerboard lattice
Physical Review B **75**, 045105 (2007).
Groups: Rice, Sigrist / Project: 1
- M. INDERGAND AND M. SIGRIST
Existence of Long-Range Magnetic Order in the Ground State of Two-Dimensional spin-1/2 Heisenberg antiferromagnets
Progress of Theoretical Physics **117**, 1 (2007).
Groups: Rice, Sigrist / Project: 1
- C. INIOTAKIS
Andreev bound states in rounded corners of d-wave superconductors
Physica C **460-462**, 1143 (2007).
Groups: Rice, Sigrist / Project: 2
- C. INIOTAKIS, N. HAYASHI, Y. SAWA, T. YOKOYAMA, U. MAY, Y. TANAKA, AND M. SIGRIST
Andreev bound states and tunneling characteristics of a noncentrosymmetric superconductor
Physical Review B **76**, 012501 (2007).
Groups: Rice, Sigrist / Project: 2
- ▶ Y. KASAHARA, T. IWASAWA, H. SHISHIDO, T. SHIBAUCHI, K. BEHNIA, Y. HAGA, T. D. MATSUDA, Y. ONUKI, M. SIGRIST, AND Y. MATSUDA
Exotic Superconducting Properties in the Electron-Hole-Compensated Heavy-Fermion 'semimetal' URu₂Si₂
Physical Review Letters **99**, 116402 (2007).
Groups: Rice, Sigrist / Project: 2
- R. M. KONIK AND T. M. RICE
Orbital dependence of quasiparticle lifetimes in Sr₂RuO₄
Physical Review B **76**, 104501 (2007).
Groups: Rice, Sigrist / Project: 1
- D. POILBLANC, C. WEBER, F. MILA, AND M. SIGRIST
Checkerboard order in the t-J model on the square lattice
Journal of Magnetism and Magnetic Materials **310**, 523 (2007).
Groups: Rice, Mila, Sigrist / Project: 1
- T. M. RICE
Twenty years of RVB theory
Journal of Magnetism and Magnetic Materials **310**, 454 (2007).
Groups: Rice, Sigrist / Project: 2
- T. M. RICE, K.-Y. YANG, AND F.-C. ZHANG
A Phenomenological Theory of the Pseudogap State
Physica C **460-462**, 252 (2007).
Groups: Rice, Sigrist / Project: 2
- A. RÜEGG, S. PILGRAM, AND M. SIGRIST
Strongly renormalized quasi-two-dimensional electron gas in a heterostructure with correlation effects
Physical Review B **75**, 195117 (2007).
Groups: Rice, Sigrist / Project: 1
- M. SIGRIST, D. F. AGTERBERG, P. A. FRIGERI, N. HAYASHI, R. P. KAUR, A. KOGA, I. MILAT, K. WAKABAYASHI, AND Y. YANASE
Superconductivity in non-centrosymmetric materials
Journal of Magnetism and Magnetic Materials **310**, 536 (2007).
Groups: Rice, Sigrist / Project: 2
- ▶ K. WAKABAYASHI, Y. TAKANE, AND M. SIGRIST
Perfectly Conducting Channel and Universality Crossover in Disordered Graphene Nanoribbons
Physical Review Letters **99**, 036601 (2007).
Groups: Rice, Sigrist / Project: 1
- S. WEHRLI AND M. SIGRIST
Jahn-Teller effect versus Hund's rule coupling in C₆₀^{N-}
Physical Review B **76**, 125419 (2007).
Groups: Rice, Sigrist / Project: 1
- Y. YANASA AND M. SIGRIST
Magnetic Properties in Non-centrosymmetric Superconductors with and without Antiferromagnetic Order
Journal of the Physical Society of Japan **76**, 124709 (2007).
Groups: Rice, Sigrist / Project: 2
- ▶ Y. YANASE AND M. SIGRIST
Non-centrosymmetric Superconductivity and Antiferromagnetic Order: Microscopic Discussion of CePt₃Si
Journal of the Physical Society of Japan **76**, 043712 (2007).
Groups: Rice, Sigrist / Project: 2
- K.-Y. YANG, T. M. RICE, AND F.-C. ZHANG
Effect of superlattice modulation of electronic parameters on the density of states of cuprate superconductors
Physical Review B **76**, 100501 (2007).
Groups: Rice, Sigrist / Project: 2
- D. F. AGTERBERG, P. A. FRIGERI, R. P. KAUR, A. KOGA, AND M. SIGRIST

- Magnetic fields and superconductivity without inversion symmetry in CePt₃Si*
Physica B **378-380**, 351 (2006).
Groups: Rice, Sigrist / Project: 2
- E. BASCONES AND T. M. RICE
Spin susceptibility of underdoped cuprates: The case of ortho-II YBa₂Cu₃O_{6.5}
Physical Review B **74**, 134501 (2006).
Groups: Rice, Sigrist / Project: 2
- E. BAUER, I. BONALDE, A. EICHLER, G. HILSCHER, Y. KITAOKA, R. LACKNER, S. LAUMANN, H. MICHOR, M. NICKLAS, P. ROGL, E. W. SCHEIDT, M. SIGRIST, AND M. YOGI
CePt₃Si: Heavy Fermion Superconductivity and Magnetic Order without Inversion Symmetry
AIP Conference Proceedings **850**, 695 (2006).
Groups: Rice, Sigrist / Project: 2
- B. BINZ, H. B. BRAUN, T. M. RICE, AND M. SIGRIST
Magnetic Domain Formation in Itinerant Metamagnets
Physical Review Letters **96**, 196406 (2006).
Groups: Rice, Sigrist / Project: 1
- Y. CHEN, T. M. RICE, AND F. C. ZHANG
Rotational Symmetry Breaking in the Ground State of Sodium-Doped Cuprate Superconductors
Physical Review Letters **97**, 237004 (2006).
Groups: Rice, Sigrist / Project: 2
- P. A. FRIGERI, M. SIGRIST, AND D. F. AGTERBERG
Characterization of the s-wave state in parity-violating superconductors
Physica B **378-380**, 900 (2006).
Groups: Rice, Sigrist / Project: 2
- P. GENTILE, C. NOCE, AND M. SIGRIST
Role of spin exchange on the coexistence of superconductivity and itinerant ferromagnetism in a two carrier model
Physica B **378-380**, 550 (2006).
Groups: Rice, Sigrist / Project: 2
- N. HAYASHI, Y. KATO, P. A. FRIGERI, K. WAKABAYASHI, AND M. SIGRIST
Basic properties of a vortex in a noncentrosymmetric superconductor
Physica C **437-438**, 96 (2006).
Groups: Rice, Sigrist / Project: 2
- N. HAYASHI, K. WAKABAYASHI, P. A. FRIGERI, Y. KATO, AND M. SIGRIST
Spatially resolved NMR relaxation rate in a noncentrosymmetric superconductor
Physica B **378-380**, 388 (2006).
Groups: Rice, Sigrist / Project: 2
- N. HAYASHI, K. WAKABAYASHI, P. A. FRIGERI, AND M. SIGRIST
Nuclear magnetic relaxation rate in a noncentrosymmetric superconductor
Physical Review B **73**, 092508 (2006).
Groups: Rice, Sigrist / Project: 2
- N. HAYASHI, K. WAKABAYASHI, P. A. FRIGERI, AND M. SIGRIST
Temperature dependence of the superfluid density in a noncentrosymmetric superconductor
Physical Review B **73**, 024504 (2006).
Groups: Rice, Sigrist / Project: 2
- M. INDERGAND, A. LÄUCHLI, S. CAPPONI, AND M. SIGRIST
Modeling bond-order wave instabilities in doped frustrated antiferromagnets: Valence bond solids at fractional filling
Physical Review B **74**, 064429 (2006).
Groups: Rice, Sigrist / Project: 1
- R. M. KONIK, T. M. RICE, AND A. M. TSVELIK
Doped Spin Liquid: Luttinger Sum Rule and Low temperature order
Physical Review Letters **96**, 086407 (2006).
Groups: Rice, Sigrist / Project: 2
- A. V. LUKOYANOV, V. V. MAZURENKO, V. I. ANISIMOV, M. SIGRIST, AND T. M. RICE
The semiconductor-to-ferromagnetic-metal transition in FeSb₂
The European Physical Journal B **53**, 205 (2006).
Groups: Rice, Sigrist / Project: 1
- A. P. SCHNYDER, D. MANSKE, C. MUDRY, AND M. SIGRIST
Theory for inelastic neutron scattering in orthorhombic high-T_c superconductors
Physical Review B **73**, 224523 (2006).
Groups: Rice, Sigrist / Project: 2
- S. PILGRAM, T. M. RICE, AND M. SIGRIST
Role of Inelastic Tunneling through the Insulating Barrier in Scanning-Tunneling-Microscope Experiments on Cuprate Superconductors
Physical Review Letters **97**, 117003 (2006).
Groups: Rice, Sigrist / Project: 2
- T. M. RICE AND H. TSUNETSUGU
A simple model for the checkerboard pattern of modulated hole densities in underdoped cuprates

The European Physical Journal B **49**, 1 (2006).

Groups: Rice, Sigrist / Project: 2

T. SHIBAUCHI, L. KRUSIN-ELBAUM, Y. KASAHARA, Y. SHIMONO, Y. MATSUDA, R. D. McDONALD, C. H. MIELKE, S. YONEZAWA, Z. HIROI, M. ARAI, T. KITA, G. BLATTER, AND M. SIGRIST

Uncommonly high upper critical field of the pyrochlore superconductor KOs_2O_6 below the enhanced paramagnetic limit

Physical Review B **74**, 220506 (2006).

Groups: Rice, Sigrist, Blatter / Project: 2

A. O. SHORIKOV, V. I. ANISIMOV, AND M. SIGRIST

A band structure analysis of the coexistence of superconductivity and magnetism in $(Ho, Dy)Ni_2B_2C$

Journal of Physics: Condensed Matter **18**, 5973 (2006).

Groups: Rice, Sigrist / Project: 2

A. O. SHORIKOV, I. A. NEKRASOV, V. I. ANISIMOV, AND M. SIGRIST

A band-structure analysis of the coexistence of superconductivity and magnetism in $(Ho, Dy)Ni_2B_2C$

The Physics of Metals and Metallography **101**, S21 (2006).

Groups: Rice, Sigrist / Project: 2

M. SIGRIST, D. F. AGTERBERG, P. A. FRIGERI, N. HAYASHI, R. P. KAUR, A. KOGA, I. MILAT, AND K. WAKABAYASHI

Unconventional superconductivity in non-centrosymmetric materials

AIP Conference Proceedings **816**, 124 (2006).

Groups: Rice, Sigrist / Project: 2

S. TREBST, H. MONIEN, A. GRZESIK, AND M. SIGRIST

Quasiparticle dynamics in the Kondo lattice model at half filling

Physical Review B **73**, 165101 (2006).

Groups: Rice, Sigrist / Project: 1

K.-Y. YANG, T. M. RICE, AND F.-C. ZHANG

Phenomenological theory of the pseudogap state

Physical Review B **73**, 174501 (2006).

Groups: Rice, Sigrist / Project: 2

- ▶ H. Q. YUAN, D. F. AGTERBERG, N. HAYASHI, P. BADICA, D. VANDERVELDE, K. TOGANO, M. SIGRIST, AND M. B. SALAMON

S-Wave Spin-Triplet Order in Superconductors without Inversion Symmetry: Li_2Pd_3B and Li_2Pt_3B

Physical Review Letters **97**, 017006 (2006).

Groups: Rice, Sigrist / Project: 2

E. BASCONES, T. M. RICE, A. O. SHORIKOV, A. V. LUKOYANOV, AND V. I. ANISIMOV

Optical conductivity of ortho-II $YBa_2Cu_3O_{6.5}$

Physical Review B **71**, 012505 (2005).

Groups: Rice, Sigrist / Project: 2

A. KOGA, N. KAWAKAMI, T. M. RICE, AND M. SIGRIST

Spin, charge and orbital fluctuations in a multi-orbital Mott insulator

Physical Review B **72**, 045128 (2005).

Groups: Rice, Sigrist / Project: 1

A. RÜEGG, M. INDERGAND, S. PILGRAM, AND M. SIGRIST

Slave-boson mean-field theory of the Mott transition in the two-band Hubbard model

The European Physical Journal B **48**, 55 (2005).

Groups: Rice, Sigrist / Project: 1

K. WAKABAYASHI, T. M. RICE, AND M. SIGRIST

Enhanced coherence of antinodal quasiparticles in a dirty d-wave superconductor

Physical Review B **72**, 214517 (2005).

Groups: Rice, Sigrist / Project: 2

Group of A. Schilling

- ▶ H. BARTOLF, A. ENGEL, A. SCHILLING, K. IL'IN, AND M. SIEGEL

Fabrication of metallic structures with lateral dimensions less than 15 nm and $j_c(T)$ -measurements in NbN micro- and nanobridges

Physica C (2008).

Group: Schilling / Project: 5

- ▶ A. ENGEL, H. BARTOLF, A. SCHILLING, K. IL'IN, M. SIEGEL, A. SEMENOV, AND H.-W. HÜBERS

Temperature- and field-dependence of critical currents in NbN microbridges

Journal of Physics: Conference Series **97**, 012152 (2008).

Group: Schilling / Project: 5

- ▶ A. ENGEL, H. BARTOLF, A. SCHILLING, A. SEMENOV, H.-W. HÜBERS, K. IL'IN, AND M. SIEGEL

Magnetic Vortices in Superconducting Photon Detectors

Journal of Modern Optics (2008).

Group: Schilling / Project: 5

K. IL'IN, R. SCHNEIDER, D. GERTHSEN, A. ENGEL, H. BARTOLF, A. SCHILLING, A. SEMENOV, H.-W. HÜBERS, B. FREITAG, AND M. SIEGEL

- Ultra-thin NbN films on Si: crystalline and superconducting properties*
Journal of Physics: Conference Series **97**, 012045 (2008).
Group: Schilling / Project: 5
- K. IL'IN, M. SIEGEL, A. ENGEL, H. BARTOLF, A. SCHILLING, A. SEMENOV, AND H.-W. HÜBERS
Current-Induced Critical State in NbN Thin-Film Structures
Journal of Low Temperature Physics **151**, 585 (2008).
Group: Schilling / Project: 5
- P. HAAS, A. SEMENOV, H.-W. HÜBERS, J. BEYER, A. KIRSTE, T. SCHURIG, K. IL'IN, M. SIEGEL, A. ENGEL, AND A. SMIRNOV
Spectral Sensitivity and Spectral Resolution of Superconducting Single-Photon Detectors
IEEE Transactions on Applied Superconductivity **17**, 298 (2007).
Group: Schilling / Project: 5
- A. SCHILLING AND M. REIBELT
Low-temperature differential-thermal analysis to measure variations in entropy
Review of Scientific Instruments **78**, 033904 (2007).
Group: Schilling / Projects: 4, 5
- A. SEMENOV, P. HAAS, K. IL'IN, H.-W. HÜBERS, M. SIEGEL, A. ENGEL, AND A. SMIRNOV
Energy resolution and sensitivity of a superconducting quantum detector
Physica C **460-462**, 1491 (2007).
Group: Schilling / Project: 5
- A. ENGEL, A. D. SEMENOV, H.-W. HÜBERS, K. IL'IN, AND M. SIEGEL
Fluctuation effects in superconducting nanostrips
Physica C **444**, 12 (2006).
Group: Schilling / Project: 5
- A. ENGEL, A. SEMENOV, H.-W. HÜBERS, K. IL'IN, AND M. SIEGEL
Fluctuations and dark count rates in superconducting NbN single-photon detectors
Physica Status Solidi (c) **2**, 1668 (2005).
Group: Schilling / Project: 5
- K. IL'IN, M. SIEGEL, A. SEMENOV, A. ENGEL, AND H.-W. HÜBERS
Critical current of Nb and NbN thin-film structures: The cross-section dependence
Physica Status Solidi (c) **2**, 1680 (2005).
Group: Schilling / Project: 5
- ▶ A. SEMENOV, A. ENGEL, H.-W. HÜBERS, K. IL'IN, AND M. SIEGEL
Spectral cut-off in the efficiency of the resistive state formation caused by absorption of a single-photon in current-carrying superconducting nano-strips
The European Physical Journal B **47**, 495 (2005).
Group: Schilling / Project: 5
- A. SEMENOV, A. ENGEL, K. IL'IN, M. SIEGEL, AND H.-W. HÜBERS
Noise of a Superconducting Photon Detector
IEEE Transactions on Applied Superconductivity **15**, 518 (2005).
Group: Schilling / Project: 5
- Group of L. Schlapbach**
- R. AGUIAR, D. LOGVINOVICH, A. WEIDENKAFF, H. KARL, C. SCHNEIDER, A. RELLER, AND S. G. EBBINGHAUS
Physical Properties of (La, Sr)Ti(O, N)₃ Thin Films Grown by Pulsed Laser Deposition to be published in Materials Research Bulletin (2008).
Group: Schlapbach / Project: 4
- M. H. AGUIRRE, S. CANULESCU, R. ROBERT, N. HOMAZAVA, D. LOGVINOVICH, L. BOCHER, T. LIPPERT, M. DÖBELI, AND A. WEIDENKAFF
Structure, microstructure and high temperature transport properties of La_{1-x}Ca_xMnO_{3-δ} thin films and polycrystalline bulk materials
Journal of Applied Physics **103**, 013703 (2008).
Group: Schlapbach / Project: 4
- B. BALKE, G. H. FECHER, A. GLOSKOVSKII, J. BARTH, K. KROTH, C. FELSER, R. ROBERT, AND A. WEIDENKAFF
Doped Semiconductors as half-metallic materials: CoTi_{1-x}(M_xSb (M = Sc, V, Cr, Mn, Fe))
Physical Review B **77**, 045209 (2008).
Group: Schlapbach / Project: 4
- L. BOCHER, R. ROBERT, M. H. AGUIRRE, S. MALO, S. HEBERT, A. MAIGNAN, AND A. WEIDENKAFF
Thermoelectric and magnetic properties of perovskite-type manganate phases synthesised by a Ultrasonic Spray Combustion (USC) method to be published in Journal of Solid State Sciences (2008).
Group: Schlapbach / Project: 4
- S. EBBINGHAUS, R. AGUIAR, A. WEIDENKAFF, S. GSELL, AND R. RELLER

Topotactical Growth of thick Perovskite Oxynitride Layers by Ammonolysis of Single Crystalline Oxides

to be published in *Journal of Solid State Sciences* (2008).

Group: Schlapbach / Project: 4

R. ROBERT, M. H. AGUIRRE, L. BOCHER, M. TROTTMANN, S. HEIROTH, T. LIPPERT, AND A. WEIDENKAFF

Thermoelectric properties of polycrystalline samples and epitaxial $\text{LaCo}_{1-x}\text{Ni}_x\text{O}_3$ thin films
to be published in *Journal of Solid State Sciences* (2008).

Group: Schlapbach / Project: 4

A. WEIDENKAFF, R. ROBERT, M. AGUIRRE, L. BOCHER, T. LIPPERT, AND S. CANULESCU
Development of thermoelectric oxides for renewable energy conversion technologies

Renewable Energy **33**, 342 (2008).

Group: Schlapbach / Project: 4

R. AGUIAR, D. LOGVINOVICH, A. WEIDENKAFF, A. RACHEL, A. RELLER, AND S. G. EBBINGHAUS

The vast colour spectrum of ternary metal oxynitride pigments

Dyes and Pigments **76**, 70 (2007).

Group: Schlapbach / Project: 4

R. AGUIAR, A. WEIDENKAFF, C. W. SCHNEIDER, A. RELLER, AND S. G. EBBINGHAUS
Synthesis and properties of oxynitrides (La, Sr) $\text{Ti}(\text{O}, \text{N})_3$ thin films

Progress in Solid State Chemistry **35**, 291 (2007).

Group: Schlapbach / Project: 4

M. H. AGUIRRE, R. ROBERT, D. LOGVINOVICH, AND A. WEIDENKAFF

Synthesis, Crystal Structure and Microstructure Analysis of Perovskite Type compounds $\text{LnCo}_{0.95}\text{Ni}_{0.05}\text{O}_3$ ($\text{Ln} = \text{La}, \text{Pr}, \text{Nd}, \text{Sm}, \text{Gd}$ and Dy)

Inorganic Chemistry **46**, 2744 (2007).

Group: Schlapbach / Project: 4

L. BOCHER, M. H. AGUIRRE, R. ROBERT, M. TROTTMANN, D. LOGVINOVICH, P. HUG, AND A. WEIDENKAFF

Chimie douce synthesis and thermochemical characterization of mesoporous perovskite-type titanate phases

Thermochimica Acta **457**, 11 (2007).

Group: Schlapbach / Project: 4

- ▶ G. BUCHS, A. V. KRASHENINNIKOV, P. RUFFIEUX, P. GRÖNING, A. S. FOSTER, R. M. NIEMINEN, AND O. GRÖNING

Creation of paired electron states in the gap of semiconducting carbon nanotubes by correlated hydrogen adsorption

New Journal of Physics **9**, 275 (2007).

Group: Schlapbach / Project: 1

- ▶ G. BUCHS, P. RUFFIEUX, P. GRÖNING, AND O. GRÖNING

Creation and STM/STS investigations of hydrogen ions induced defects on single-walled carbon nanotubes

Journal of Physics: Conference Series **61**, 160 (2007).

Group: Schlapbach / Project: 1

- ▶ G. BUCHS, P. RUFFIEUX, P. GRÖNING, AND O. GRÖNING

Scanning tunneling microscopy investigations of hydrogen plasma-induced electron scattering centers on single-walled carbon nanotubes

Applied Physics Letters **90**, 013104 (2007).

Group: Schlapbach / Project: 1

S. CANULESCU, T. LIPPERT, A. WOKAUN, M. DÖBELI, A. WEIDENKAFF, R. ROBERT, AND D. LOGVINOVICH

The effect of the fluence of the plume species on the properties of La-Ca-Mn-O thin films prepared by pulsed laser deposition

Applied Surface Science **253**, 8174 (2007).

Group: Schlapbach / Project: 4

S. CANULESCU, T. LIPPERT, A. WOKAUN, R. ROBERT, D. LOGVINOVICH, A. WEIDENKAFF, M. DÖBELI, AND S. M.

Preparation of epitaxial $\text{La}_{0.6}\text{Ca}_{0.4}\text{Mn}_{1-x}\text{Fe}_x\text{O}_3$ ($x = 0, 0.2$) thin Films: Variation of the oxygen content

Progress in Solid State Chemistry **35**, 241 (2007).

Group: Schlapbach / Project: 4

T. LIPPERT, M. J. MONTENEGRO, M. DÖBELI, A. WEIDENKAFF, S. MÜLLER, P. R. WILLMOTT, AND A. WOKAUN

Perovskite thin films deposited by pulsed laser ablation as model systems for electrochemical applications

Progress in Solid State Chemistry **35**, 221 (2007).

Group: Schlapbach / Project: 4

D. LOGVINOVICH, R. AGUIAR, R. ROBERT, M. TROTTMANN, S. G. EBBINGHAUS, A. RELLER, AND A. WEIDENKAFF

Synthesis, Mo-valence state, thermal stability and thermoelectric properties of $\text{SrMoO}_{3-x}\text{N}_x$ ($x > 1$) oxynitride perovskites

Journal of Solid State Chemistry **180**, 2649

- (2007).
Group: Schlapbach / Project: 4
- D. LOGVINOVICH, A. BÖRGER, M. DÖBELI, S. G. EBBINGHAUS, A. RELLER, AND A. WEIDENKAFF
Synthesis and physical chemical properties of Ca substituted LaTiO₂N
Progress in Solid State Chemistry **35**, 281 (2007).
Group: Schlapbach / Project: 4
- I. MAROZAU, M. DÖBELI, T. LIPPERT, D. LOGVINOVICH, M. MALLEPELL, A. SHKABKO, A. WEIDENKAFF, AND A. WOKAUN
One-step preparation of N-doped strontium titanate films by pulsed laser deposition
Applied Physics A **89**, 933 (2007).
Group: Schlapbach / Project: 4
- R. ROBERT, M. H. AGUIRRE, P. HUG, A. RELLER, AND A. WEIDENKAFF
High temperature thermoelectric properties of Ln(Co, Ni)O₃ (Ln = La, Pr, Nd, Sm, Gd, and Dy) compounds
Acta Materialia **55**, 4965 (2007).
Group: Schlapbach / Project: 4
- R. ROBERT, L. BOCHER, B. SIPOS, M. DÖBELI, AND A. WEIDENKAFF
Ni-doped cobaltates as potential materials for high temperature solar thermoelectric converters
Progress in Solid State Chemistry **35**, 447 (2007).
Group: Schlapbach / Project: 4
- D. STOLTZ, M. BIELMANN, M. BOVET, L. SCHLAPBACH, AND H. BERGER
Tunneling evidence for spatial location of the charge-density-wave induced band splitting in 1T-TaSe₂
Physical Review B **76**, 073410 (2007).
Groups: Margaritondo, Schlapbach / Project: 3
- A. WEIDENKAFF, R. ROBERT, M. H. AGUIRRE, L. BOCHER, AND L. SCHLAPBACH
Nanostructured thermoelectric oxides with low thermal conductivity
Physica Status Solidi **6**, 247 (2007).
Group: Schlapbach / Project: 4
- ▶ P. RUFFIEUX, M. MELLE-FRANCO, O. GRÖNING, M. BIELMANN, F. ZERBETTO, AND P. GRÖNING
Charge-density oscillation on graphite induced by the interference of electron waves
Physical Review B **71**, 153403 (2005).
Group: Schlapbach / Project: 1
- Group of M. Sigrist**
- Y. CHEN, T. M. RICE, AND F. C. ZHANG
Atomic scale rotational symmetry breaking in lightly doped Ca_{2-x}Na_xCuO₂Cl₂
Physica C **460-462**, 234 (2007).
Groups: Rice, Sigrist / Project: 2
- P. A. FRIGERI, D. F. AGTERBERG, I. MILAT, AND M. SIGRIST
Phenomenological theory of the 's-wave' state in superconductors without an inversion center
The European Physical Journal B **54**, 435 (2007).
Groups: Rice, Sigrist / Project: 2
- M. INDERGAND, C. HONERKAMP, A. LÄUCHLI, D. POILBLANC, AND M. SIGRIST
Plaquette bond order wave in the quarter-filled extended Hubbard model on the checkerboard lattice
Physical Review B **75**, 045105 (2007).
Groups: Rice, Sigrist / Project: 1
- M. INDERGAND AND M. SIGRIST
Existence of Long-Range Magnetic Order in the Ground State of Two-Dimensional spin-1/2 Heisenberg antiferromagnets
Progress of Theoretical Physics **117**, 1 (2007).
Groups: Rice, Sigrist / Project: 1
- C. INIOTAKIS
Andreev bound states in rounded corners of d-wave superconductors
Physica C **460-462**, 1143 (2007).
Groups: Rice, Sigrist / Project: 2
- C. INIOTAKIS, N. HAYASHI, Y. SAWA, T. YOKOYAMA, U. MAY, Y. TANAKA, AND M. SIGRIST
Andreev bound states and tunneling characteristics of a noncentrosymmetric superconductor
Physical Review B **76**, 012501 (2007).
Groups: Rice, Sigrist / Project: 2
- ▶ Y. KASAHARA, T. IWASAWA, H. SHISHIDO, T. SHIBAUCHI, K. BEHNIA, Y. HAGA, T. D. MATSUDA, Y. ONUKI, M. SIGRIST, AND Y. MATSUDA
Exotic Superconducting Properties in the Electron-Hole-Compensated Heavy-Fermion 'semimetal' URu₂Si₂
Physical Review Letters **99**, 116402 (2007).
Groups: Rice, Sigrist / Project: 2
- R. M. KONIK AND T. M. RICE
Orbital dependence of quasiparticle lifetimes in Sr₂RuO₄
Physical Review B **76**, 104501 (2007).
Groups: Rice, Sigrist / Project: 1

D. POILBLANC, C. WEBER, F. MILA, AND M. SIGRIST
Checkerboard order in the t - J model on the square lattice

Journal of Magnetism and Magnetic Materials **310**, 523 (2007).

Groups: Rice, Mila, Sigrist / Project: 1

T. M. RICE

Twenty years of RVB theory

Journal of Magnetism and Magnetic Materials **310**, 454 (2007).

Groups: Rice, Sigrist / Project: 2

T. M. RICE, K.-Y. YANG, AND F.-C. ZHANG
A Phenomenological Theory of the Pseudogap State

Physica C **460-462**, 252 (2007).

Groups: Rice, Sigrist / Project: 2

A. RÜEGG, S. PILGRAM, AND M. SIGRIST
Strongly renormalized quasi-two-dimensional electron gas in a heterostructure with correlation effects

Physical Review B **75**, 195117 (2007).

Groups: Rice, Sigrist / Project: 1

M. SIGRIST, D. F. AGTERBERG, P. A. FRIGERI, N. HAYASHI, R. P. KAUR, A. KOGA, I. MILAT, K. WAKABAYASHI, AND Y. YANASE
Superconductivity in non-centrosymmetric materials

Journal of Magnetism and Magnetic Materials **310**, 536 (2007).

Groups: Rice, Sigrist / Project: 2

► K. WAKABAYASHI, Y. TAKANE, AND M. SIGRIST
Perfectly Conducting Channel and Universality Crossover in Disordered Graphene Nanoribbons

Physical Review Letters **99**, 036601 (2007).

Groups: Rice, Sigrist / Project: 1

S. WEHRLI AND M. SIGRIST
Jahn-Teller effect versus Hund's rule coupling in C_{60}^{N-}

Physical Review B **76**, 125419 (2007).

Groups: Rice, Sigrist / Project: 1

Y. YANASA AND M. SIGRIST
Magnetic Properties in Non-centrosymmetric Superconductors with and without Antiferromagnetic Order

Journal of the Physical Society of Japan **76**, 124709 (2007).

Groups: Rice, Sigrist / Project: 2

► Y. YANASE AND M. SIGRIST

Non-centrosymmetric Superconductivity and Antiferromagnetic Order: Microscopic Discussion of $CePt_3Si$

Journal of the Physical Society of Japan **76**, 043712 (2007).

Groups: Rice, Sigrist / Project: 2

K.-Y. YANG, T. M. RICE, AND F.-C. ZHANG
Effect of superlattice modulation of electronic parameters on the density of states of cuprate superconductors

Physical Review B **76**, 100501 (2007).

Groups: Rice, Sigrist / Project: 2

D. F. AGTERBERG, P. A. FRIGERI, R. P. KAUR, A. KOGA, AND M. SIGRIST
Magnetic fields and superconductivity without inversion symmetry in $CePt_3Si$

Physica B **378-380**, 351 (2006).

Groups: Rice, Sigrist / Project: 2

E. BASCONES AND T. M. RICE
Spin susceptibility of underdoped cuprates: The case of ortho-II $YBa_2Cu_3O_{6.5}$

Physical Review B **74**, 134501 (2006).

Groups: Rice, Sigrist / Project: 2

E. BAUER, I. BONALDE, A. EICHLER, G. HILSCHER, Y. KITAOKA, R. LACKNER, S. LAUMANN, H. MICHOR, M. NICKLAS, P. ROGL, E. W. SCHEIDT, M. SIGRIST, AND M. YOGI
 $CePt_3Si$: Heavy Fermion Superconductivity and Magnetic Order without Inversion Symmetry

AIP Conference Proceedings **850**, 695 (2006).

Groups: Rice, Sigrist / Project: 2

► B. BINZ, H. B. BRAUN, T. M. RICE, AND M. SIGRIST
Magnetic Domain Formation in Itinerant Metamagnets

Physical Review Letters **96**, 196406 (2006).

Groups: Rice, Sigrist / Project: 1

► Y. CHEN, T. M. RICE, AND F. C. ZHANG
Rotational Symmetry Breaking in the Ground State of Sodium-Doped Cuprate Superconductors

Physical Review Letters **97**, 237004 (2006).

Groups: Rice, Sigrist / Project: 2

P. A. FRIGERI, M. SIGRIST, AND D. F. AGTERBERG
Characterization of the s -wave state in parity-violating superconductors

Physica B **378-380**, 900 (2006).

Groups: Rice, Sigrist / Project: 2

P. GENTILE, C. NOCE, AND M. SIGRIST

- Role of spin exchange on the coexistence of superconductivity and itinerant ferromagnetism in a two carrier model*
 Physica B **378-380**, 550 (2006).
 Groups: Rice, Sigrist / Project: 2
- N. HAYASHI, Y. KATO, P. A. FRIGERI, K. WAKABAYASHI, AND M. SIGRIST
Basic properties of a vortex in a noncentrosymmetric superconductor
 Physica C **437-438**, 96 (2006).
 Groups: Rice, Sigrist / Project: 2
- N. HAYASHI, K. WAKABAYASHI, P. A. FRIGERI, Y. KATO, AND M. SIGRIST
Spatially resolved NMR relaxation rate in a noncentrosymmetric superconductor
 Physica B **378-380**, 388 (2006).
 Groups: Rice, Sigrist / Project: 2
- N. HAYASHI, K. WAKABAYASHI, P. A. FRIGERI, AND M. SIGRIST
Nuclear magnetic relaxation rate in a noncentrosymmetric superconductor
 Physical Review B **73**, 092508 (2006).
 Groups: Rice, Sigrist / Project: 2
- N. HAYASHI, K. WAKABAYASHI, P. A. FRIGERI, AND M. SIGRIST
Temperature dependence of the superfluid density in a noncentrosymmetric superconductor
 Physical Review B **73**, 024504 (2006).
 Groups: Rice, Sigrist / Project: 2
- M. INDERGAND, A. LÄUCHLI, S. CAPPONI, AND M. SIGRIST
Modeling bond-order wave instabilities in doped frustrated antiferromagnets: Valence bond solids at fractional filling
 Physical Review B **74**, 064429 (2006).
 Groups: Rice, Sigrist / Project: 1
- R. M. KONIK, T. M. RICE, AND A. M. TSVELIK
Doped Spin Liquid: Luttinger Sum Rule and Low temperature order
 Physical Review Letters **96**, 086407 (2006).
 Groups: Rice, Sigrist / Project: 2
- A. V. LUKOYANOV, V. V. MAZURENKO, V. I. ANISIMOV, M. SIGRIST, AND T. M. RICE
The semiconductor-to-ferromagnetic-metal transition in FeSb₂
 The European Physical Journal B **53**, 205 (2006).
 Groups: Rice, Sigrist / Project: 1
- A. P. SCHNYDER, D. MANSKE, C. MUDRY, AND M. SIGRIST
Theory for inelastic neutron scattering in orthorhombic high-T_c superconductors
 Physical Review B **73**, 224523 (2006).
 Groups: Rice, Sigrist / Project: 2
- S. PILGRAM, T. M. RICE, AND M. SIGRIST
Role of Inelastic Tunneling through the Insulating Barrier in Scanning-Tunneling-Microscope Experiments on Cuprate Superconductors
 Physical Review Letters **97**, 117003 (2006).
 Groups: Rice, Sigrist / Project: 2
- T. M. RICE AND H. TSUNETSUGU
A simple model for the checkerboard pattern of modulated hole densities in underdoped cuprates
 The European Physical Journal B **49**, 1 (2006).
 Groups: Rice, Sigrist / Project: 2
- T. SHIBAUCHI, L. KRUSIN-ELBAUM, Y. KASHIHARA, Y. SHIMONO, Y. MATSUDA, R. D. McDONALD, C. H. MIELKE, S. YONEZAWA, Z. HIROI, M. ARAI, T. KITA, G. BLATTER, AND M. SIGRIST
Uncommonly high upper critical field of the pyrochlore superconductor KOs₂O₆ below the enhanced paramagnetic limit
 Physical Review B **74**, 220506 (2006).
 Groups: Rice, Sigrist, Blatter / Project: 2
- A. O. SHORIKOV, V. I. ANISIMOV, AND M. SIGRIST
A band structure analysis of the coexistence of superconductivity and magnetism in (Ho, Dy)Ni₂B₂C
 Journal of Physics: Condensed Matter **18**, 5973 (2006).
 Groups: Rice, Sigrist / Project: 2
- A. O. SHORIKOV, I. A. NEKRASOV, V. I. ANISIMOV, AND M. SIGRIST
A band-structure analysis of the coexistence of superconductivity and magnetism in (Ho, Dy)Ni₂B₂C
 The Physics of Metals and Metallography **101**, S21 (2006).
 Groups: Rice, Sigrist / Project: 2
- M. SIGRIST, D. F. AGTERBERG, P. A. FRIGERI, N. HAYASHI, R. P. KAUR, A. KOGA, I. MILAT, AND K. WAKABAYASHI
Unconventional superconductivity in noncentrosymmetric materials
 AIP Conference Proceedings **816**, 124 (2006).
 Groups: Rice, Sigrist / Project: 2
- S. TREBST, H. MONIEN, A. GRZESIK, AND M. SIGRIST
Quasiparticle dynamics in the Kondo lattice model at half filling
 Physical Review B **73**, 165101 (2006).
 Groups: Rice, Sigrist / Project: 1

K.-Y. YANG, T. M. RICE, AND F.-C. ZHANG
Phenomenological theory of the pseudogap state
 Physical Review B **73**, 174501 (2006).

Groups: Rice, Sigrist / Project: 2

- ▶ H. Q. YUAN, D. F. AGTERBERG, N. HAYASHI, P. BADICA, D. VANDERVELDE, K. TOGANO, M. SIGRIST, AND M. B. SALAMON
S-Wave Spin-Triplet Order in Superconductors without Inversion Symmetry: $\text{Li}_2\text{Pd}_3\text{B}$ and $\text{Li}_2\text{Pt}_3\text{B}$
 Physical Review Letters **97**, 017006 (2006).

Groups: Rice, Sigrist / Project: 2

E. BASCONES, T. M. RICE, A. O. SHORIKOV, A. V. LUKOYANOV, AND V. I. ANISIMOV
Optical conductivity of ortho-II $\text{YBa}_2\text{Cu}_3\text{O}_{6.5}$
 Physical Review B **71**, 012505 (2005).

Groups: Rice, Sigrist / Project: 2

A. KOGA, N. KAWAKAMI, T. M. RICE, AND M. SIGRIST
Spin, charge and orbital fluctuations in a multi-orbital Mott insulator
 Physical Review B **72**, 045128 (2005).

Groups: Rice, Sigrist / Project: 1

A. RÜEGG, M. INDERGAND, S. PILGRAM, AND M. SIGRIST
Slave-boson mean-field theory of the Mott transition in the two-band Hubbard model
 The European Physical Journal B **48**, 55 (2005).

Groups: Rice, Sigrist / Project: 1

K. WAKABAYASHI, T. M. RICE, AND M. SIGRIST
Enhanced coherence of antinodal quasiparticles in a dirty d-wave superconductor
 Physical Review B **72**, 214517 (2005).

Groups: Rice, Sigrist / Project: 2

Group of J.-M. Triscone

- ▶ E. BOUSQUET, M. DAWBER, N. STUCKI, C. LICHTENSTEIGER, P. HERMET, S. GARIGLIO, J.-M. TRISCONE, AND P. GHOSEZ
Improper ferroelectricity in perovskite oxide artificial superlattices
 Nature (2008).

Group: Triscone / Project: 5

M. DAWBER, N. STUCKI, C. LICHTENSTEIGER, S. GARIGLIO, P. GHOSEZ, AND J.-M. TRISCONE
Tailoring the Properties of Artificially Layered Ferroelectric Superlattices
 Advanced Materials **19**, 4153 (2007).

Group: Triscone / Project: 5

C. FILIPIC, Z. KUTNJAK, R. LORTZ, M. DAWBER, AND J. F. SCOTT
Low temperature phase transitions in barium sodium niobate

Journal of Physics: Condensed Matter **19**, 236206 (2007).

Groups: Triscone, van der Marel / Project: 2

- ▶ S. GARIGLIO, N. STUCKI, J.-M. TRISCONE, AND G. TRISCONE
Strain relaxation and critical temperature in epitaxial ferroelectric $\text{Pb}(\text{Zr}_{0.20}\text{Ti}_{0.80})\text{O}_3$ thin films

Applied Physics Letters **90**, 202905 (2007).

Group: Triscone / Project: 5

- ▶ C. LICHTENSTEIGER, M. DAWBER, N. STUCKI, J.-M. TRISCONE, J. HOFFMAN, J.-B. YAU, C. H. AHN, L. DESPONT, AND P. AEBI
Monodomain to polydomain transition in ferroelectric PbTiO_3 thin films with $\text{La}_{0.67}\text{Sr}_{0.33}\text{MnO}_3$ electrodes

Applied Physics Letters **90**, 052907 (2007).

Groups: Aebi, Triscone / Project: 5

R. LORTZ, C. MEINGAST, A. I. RYKOV, AND S. TAJIMA
Fragile Superconductivity and a kinetic glass transition in the vortex matter of the high-temperature superconductor $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$

Journal of Low Temperature Physics **147**, 365 (2007).

Groups: Triscone, van der Marel / Project: 2

R. LORTZ, N. MUSOLINO, Y. WANG, A. JUNOD, AND N. TOYOTA
Origin of the magnetization peak effect in the superconductor Nb_3Sn

Physical Review B **75**, 094503 (2007).

Groups: Triscone, van der Marel / Project: 2

- ▶ R. LORTZ, Y. WANG, A. DEMUER, M. BÖTTGER, B. BERGK, G. ZWICKNAGEL, Y. NAKAZAWA, AND J. WOSNITZA
Calorimetric evidence for a novel superconducting state in the layered organic superconductor $\kappa\text{-(BEDT)}_2\text{Cu(NCS)}_2$

Physical Review Letters **99**, 187002 (2007).

Groups: Triscone, van der Marel / Project: 2

R. LORTZ, Y. WANG, A. JUNOD, AND N. TOYOTA
Thermal fluctuations in the classical superconductor Nb_3Sn from high-resolution specific-heat measurements

Physica C **460-462**, 149 (2007).

Groups: Triscone, van der Marel / Project: 2

- ▶ D. MATTHEY, N. REYREN, J.-M. TRISCONE, AND T. SCHNEIDER

- Electric-Field-Effect Modulation of the Transition Temperature, Mobile Carrier Density, and In-Plane Penetration Depth of $\text{NdBa}_2\text{Cu}_3\text{O}_{7-\delta}$ Thin Films*
Physical Review Letters **98**, 057002 (2007).
Group: Triscone / Project: 2
- A. P. PETROVIĆ, Y. FASANO, R. LORTZ, M. DECROUX, M. POTEL, R. CHEVREL, AND Ø. FISCHER
Unconventional resistive transitions in the extreme type-II superconductor $\text{Tl}_2\text{Mo}_6\text{Se}_6$
Physica C **460-462**, 702 (2007).
Groups: Fischer, Triscone, van der Marel / Projects: 1, 2
- ▶ N. REYREN, S. THIEL, A. D. CAVIGLIA, L. F. KOURKOUTIS, G. HAMMERL, C. RICHTER, C. W. SCHNEIDER, T. KOPP, A.-S. RUETSCHI, D. JACCARD, M. GABAY, D. A. MULLER, J.-M. TRISCONE, AND J. MANNHART
Superconducting Interfaces Between Insulating Oxides
Science **317**, 1196 (2007).
Group: Triscone / Project: 2
- R. SALUT, W. DANIAU, S. BALLANDRAS, S. GARIGLIO, G. TRISCONE, AND J.-M. TRISCONE
Direct Writing of High Frequency Surface Acoustic Wave Devices on Epitaxial $\text{Pb}(\text{Zr}_{0.20}\text{Ti}_{0.80})\text{O}_3$ Thin Layers using Focus Ion Beam Etching
in *Proc. of the IEEE IFCS* (2007).
Group: Triscone / Project: 6
- D. G. SCHLOM, L.-Q. CHEN, C.-B. EOM, K. M. RABE, S. K. STREIFFER, AND J.-M. TRISCONE
Strain Tuning of Ferroelectric Thin Films
Annual Review of Materials Research **37**, 589 (2007).
Group: Triscone / Project: 5
- ▶ C. H. AHN, A. BHATTACHARYA, M. D. VENTRA, J. N. ECKSTEIN, C. D. FRISBIE, M. E. GERSHENSON, A. M. GOLDMAN, I. H. INOUE, J. MANNHART, A. J. MILLIS, A. F. MORPURGO, D. NATELSON, AND J.-M. TRISCONE
Electrostatic modification of novel materials
Reviews of Modern Physics **78**, 1185 (2006).
Group: Triscone / Project: 5
- E. COURJON, N. BODIN, G. LENGAIGNE, L. GAUTHIER-MANUEL, W. DANIAU, S. BALLANDRAS, P. PARUCH, J.-M. TRISCONE, AND J. HAUDEN
Fabrication of periodically poled domains transducers on LiNbO_3
in *Proc. of the 2006 IEEE IFCS* (2006), pp. 831–834.
Group: Triscone / Project: 6
- M. DAWBER, C. LICHTENSTEIGER, P. PARUCH, AND J.-M. TRISCONE
Advanced Fabrication and Characterization of Epitaxial Ferroelectric Thin Films and Multilayers
in *Proc. of the 2006 IEEE TUFFC* (2006), vol. 53, pp. 2261–2269.
Group: Triscone / Project: 5
- ▶ L. DESPONT, C. KOITZSCH, F. CLERC, M. G. GARNIER, P. AEBI, C. LICHTENSTEIGER, J.-M. TRISCONE, F. J. GARCIA DE ABAJO, E. BOUSQUET, AND P. GHOSEZ
Direct evidence for ferroelectric polar distortion in ultrathin lead titanate perovskite films
Physical Review B **73**, 094110 (2006).
Groups: Aebi, Triscone / Project: 5
- L. DESPONT, C. LICHTENSTEIGER, F. CLERC, M. G. GARNIER, F. J. GARCIA DE ABAJO, M. A. VAN HOVE, J.-M. TRISCONE, AND P. AEBI
X-ray photoelectron diffraction study of ultrathin PbTiO_3 films
The European Physical Journal B **49**, 141 (2006).
Groups: Aebi, Triscone / Project: 5
- G. GOLL, M. MARZ, R. LORTZ, A. JUNOD, AND W. GOLDACKER
Observation of a second energy gap in Nb_3Sn break junctions
AIP Conference Proceedings **850**, 987 (2006).
Groups: Triscone, van der Marel / Project: 2
- R. LORTZ, F. LIN, N. MUSOLINO, Y. WANG, A. JUNOD, B. ROSENSTEIN, AND N. TOYOTA
Thermal fluctuations and vortex melting in the superconductor Nb_3Sn from high-resolution specific-heat experiments
Physical Review B **74**, 104502 (2006).
Groups: Triscone, van der Marel / Project: 2
- R. LORTZ, T. TOMITA, Y. WANG, A. JUNOD, J. S. SCHILLING, T. MASUI, AND S. TAJIMA
On the Origin of the Double Superconducting Transition in overdoped $\text{YBa}_2\text{Cu}_3\text{O}_x$
Physica C **194-198**, 434 (2006).
Groups: Triscone, van der Marel / Project: 2
- R. LORTZ, Y. WANG, U. TUTSCH, S. ABE, C. MEINGAST, P. POPOVICH, W. KNAFO, N. SHITSEVALOVA, Y. PADERNO, AND A. JUNOD
Superconductivity mediated by a soft phonon mode: specific heat and resistivity and thermal expansion and magnetization of YB_6

Physical Review B **73**, 024512 (2006).

Groups: Triscone, van der Marel / Project: 2

P. PARUCH, T. GIAMARCHI, T. TYBELL, AND J.-M. TRISCONÉ

Nanoscale studies of domain wall motion in epitaxial ferroelectric thin films

Journal of Applied Physics **100**, 051608 (2006).

Groups: Triscone, Giamarchi / Project: 5

- ▶ P. PARUCH AND J.-M. TRISCONÉ

High-temperature ferroelectric domain stability in epitaxial $\text{PbZr}_{0.2}\text{Ti}_{0.8}\text{O}_3$ thin films

Applied Physics Letters **88**, 162907 (2006).

Groups: Triscone, Paruch / Project: 5

- ▶ K. S. TAKAHASHI, M. GABAY, D. JACCARD, K. SHIBUYA, T. OHNISHI, M. LIPPMAA, AND J.-M. TRISCONÉ

Local switching of two-dimensional superconductivity using the ferroelectric field effect

Nature **441**, 195 (2006).

Group: Triscone / Project: 2

- ▶ M. DAWBER, C. LICHTENSTEIGER, M. CANTONI, M. VEITHEN, P. GHOSEZ, K. JOHNSTON, K. M. RABE, AND J.-M. TRISCONÉ

Unusual Behavior of the Ferroelectric Polarization in $\text{PbTiO}_3/\text{SrTiO}_3$ Superlattices

Physical Review Letters **95**, 177601 (2005).

Group: Triscone / Project: 5

- ▶ C. LICHTENSTEIGER, J.-M. TRISCONÉ, J. JUNQUERA, AND P. GHOSEZ

Ferroelectricity and Tetragonality in Ultrathin PbTiO_3 Films

Physical Review Letters **94**, 047603 (2005).

Group: Triscone / Project: 5

R. LORTZ, S. ABE, Y. WANG, F. BOUQUET, U. TUTSCH, AND A. JUNOD

Modulated-bath AC calorimetry using modified commercial Peltier elements

Review of Scientific Instruments **76**, 103902 1 (2005).

Groups: Triscone, van der Marel / Project: 2

R. LORTZ, A. JUNOD, D. JACCARD, Y. WANG, S. TAJIMA, AND T. MASUI

Evolution of the specific-heat anomaly of the high-temperature superconductor $\text{YBa}_2\text{Cu}_3\text{O}_7$ under influence of charge transfer through application of high pressure up to 10 GPa

Journal of Physics: Condensed Matter **17**, 4135 (2005).

Groups: Triscone, van der Marel / Project: 2

R. LORTZ, Y. WANG, S. ABE, C. MEINGAST, Y. PADERNO, V. FILIPPOV, AND A. JUNOD

Specific heat and magnetic susceptibility and resistivity and thermal expansion of the superconductor ZrB_{12}

Physical Review B **72**, 024547 (2005).

Groups: Triscone, van der Marel / Project: 2

- ▶ P. PARUCH, T. GIAMARCHI, AND J.-M. TRISCONÉ

Domain Wall Roughness in Epitaxial Ferroelectric $\text{PbZr}_{0.2}\text{Ti}_{0.8}\text{O}_3$ Thin Films

Physical Review Letters **94**, 197601 (2005).

Groups: Triscone, Giamarchi / Project: 5

T. PLACKOWSKI, Y. WANG, R. LORTZ, A. JUNOD, AND T. WOLF

Reversible and irreversible magnetocaloric effect in the $\text{NdBa}_2\text{Cu}_3\text{O}_7$ superconductor in relation with specific heat and magnetization

Journal of Physics: Condensed Matter **17**, 6871 (2005).

Groups: Triscone, van der Marel / Project: 2

K. S. TAKAHASHI, D. JACCARD, K. SHIBUYA, T. OHNISHI, M. LIPPMAA, AND J.-M. TRISCONÉ

Epitaxial growth and transport properties of Nb-doped SrTiO_3 thin films

in *Proceedings of the SPIE*, I. BOZOVIC AND D. PAVUNA, eds. (2005), vol. 5932, pp. 267–274.

Group: Triscone / Project: 2

Y. WANG, R. LORTZ, Y. PADERNO, V. FILIPPOV, S. ABE, U. TUTSCH, AND A. JUNOD

Specific heat and magnetization of a ZrB_{12} single crystal: characterization of a type II/1 superconductor

Physical Review B p. 024548 (2005).

Groups: Triscone, van der Marel / Project: 2

Group of M. Troyer

P. CORBOZ, M. TROYER, A. KLEINE, I. P. MCCULLOCH, U. SCHOLLWÖCK, AND F. F. ASSAAD

Systematic errors in Gaussian quantum Monte Carlo and a systematic study of the symmetry projection method

Physical Review B **77**, 085108 (2008).

Group: Troyer / Project: 1

- ▶ A. F. ALBUQUERQUE, F. ALET, P. CORBOZ, P. DAYAL, A. FEIGUIN, S. FUCHS, L. GAMPER, E. GULL, S. GÜRTLER, A. HONECKER, R. IGARASHI, M. KÖRNER, M. KOZHEVNIKOV, A. LÄUCHLI, S. R. MANMANA, M. MATSUMOTO, I. P. MCCULLOCH, F. MICHEL, R. M. NOACK, G. PAWLOWSKI, L. POLLET, T. PRUSCHKE, U. SCHOLLWÖCK, S. TODO,

- S. TREBST, M. TROYER, P. WERNER, AND S. WESSEL
The ALPS project release 1.3: Open-source software for strongly correlated systems
Journal of Magnetism and Magnetic Materials **310**, 1187 (2007).
Group: Troyer / Project: 1
- D. BERGMAN, J. ALICEA, E. GULL, S. TREBST, AND L. BALENTS
Order-by-disorder and spiral spin-liquid in frustrated diamond-lattice antiferromagnets
Nature Physics **3**, 487 (2007).
Group: Troyer / Project: 1
- ▶ M. BONINSEGNI, A. KUKLOV, L. POLLET, N. PROKOF'EV, B. V. SVISTUNOV, AND M. TROYER
Luttinger Liquid in the Core of a Screw Dislocation in Helium-4
Physical Review Letters **99**, 035301 (2007).
Group: Troyer / Project: 1
- P. CORBOZ, A. M. LÄUCHLI, K. TOTSUKA, AND H. TSUNETSUGU
Spontaneous trimerization in a bilinear-biquadratic $S = 1$ zig-zag chain
Physical Review B **76**, 220404(R) (2007).
Group: Troyer / Project: 1
- ▶ A. FEIGUIN, S. TREBST, A. W. W. LUDWIG, M. TROYER, A. KITAEV, Z. WANG, AND M. H. FREEDMAN
Interacting Anyons in Topological Quantum Liquids: The Golden Chain
Physical Review Letters **98**, 160409 (2007).
Group: Troyer / Project: 1
- C. GILS, L. POLLET, A. VERNIER, F. HEBERT, G. G. BATROUNI, AND M. TROYER
Quantum Monte Carlo study of a one-dimensional phase-fluctuating condensate
Physical Review A **75**, 063631 (2007).
Group: Troyer / Project: 1
- E. GULL, P. WERNER, A. MILLIS, AND M. TROYER
Performance analysis of continuous-time solvers for quantum impurity models
Physical Review B **76**, 235123 (2007).
Group: Troyer / Project: 1
- ▶ K. HARADA, N. KAWASHIMA, AND M. TROYER
Dimer-Quadrupolar Quantum Phase Transition in the Quasi-One-Dimensional Heisenberg Model with Biquadratic Interaction
Journal of the Physical Society of Japan **76**, 013703 (2007).
Group: Troyer / Project: 1
- F. HÉBERT, F. HAUDIN, L. POLLET, AND G. G. BATROUNI
Mott insulators and correlated superfluids in ultracold Bose-Fermi mixtures
Physical Review A **76**, 043619 (2007).
Group: Troyer / Project: 1
- C. P. MAY, K. ENSSLIN, AND M. TROYER
Self-consistent simulation of quantum wires defined by local oxidation of Ga[Al]As heterostructures
Physical Review B **76**, 235321 (2007).
Group: Troyer / Project: 1
- ▶ L. POLLET, M. BONINSEGNI, A. B. KUKLOV, N. V. PROKOF'EV, B. V. SVISTUNOV, AND M. TROYER
Superfluidity of Grain Boundaries in Solid ^4He
Physical Review Letters **98**, 135301 (2007).
Group: Troyer / Project: 1
- ▶ S. TREBST, P. WERNER, M. TROYER, K. SHT-ENGEL, AND C. NAYAK
Breakdown of a Topological Phase: Quantum Phase Transition in a loop Gas Model with Tension
Physical Review Letters **98**, 070602 (2007).
Group: Troyer / Project: 1
- ▶ S. WESSEL, N. STOOP, E. GULL, S. TREBST, AND M. TROYER
Optimized broad-histogram ensembles for the simulation of quantum systems
Journal of Statistical Mechanics p. P12005 (2007).
Group: Troyer / Project: 1
- ▶ M. BONINSEGNI, A. B. KUKLOV, L. POLLET, N. PROKOF'EV, B. V. SVISTUNOV, AND M. TROYER
Fate of Vacancy-Induced supersolidity in ^4He
Physical Review Letters **97**, 080401 (2006).
Group: Troyer / Project: 1
- E. BUROVSKI, N. V. PROKOF'EV, B. SVISTUNOV, AND M. TROYER
The Fermi-Hubbard model at unitarity
New Journal of Physics **8**, 153 (2006).
Group: Troyer / Project: 1
- ▶ E. BUROVSKI, N. V. PROKOF'EV, B. V. SVISTUNOV, AND M. TROYER
Critical Temperature and Thermodynamics of Attractive Fermions at Unitarity
Physical Review Letters **96**, 160402 (2006).
Group: Troyer / Project: 1
- O. GYGI, H. G. KATZGRABER, M. TROYER, S. WESSEL, AND G. G. BATROUNI

Simulations of ultracold bosonic atoms in optical lattices with anharmonic traps

Physical Review A **73**, 063606 (2006).

Group: Troyer / Project: 1

H. G. KATZGRABER, A. ESPOSITO, AND M. TROYER

Ramping fermions in optical lattices across a Feshbach resonance

Physical Review A **74**, 043602 (2006).

Group: Troyer / Project: 1

H. G. KATZGRABER, S. TREBST, D. HUSE, AND M. TROYER

Feedback-optimized parallel tempering Monte Carlo

Journal of Statistical Mechanics p. P03018 (2006).

Group: Troyer / Project: 1

▶ A. B. KUKLOV, N. V. PROKOF'EV, B. V. SVISTUNOV, AND M. TROYER

Deconfined criticality, runaway flow in the two-component scalar electrodynamics and weak first-order superfluid-solid transitions

Annalen der Physik **321**, 1602 (2006).

Group: Troyer / Project: 1

L. POLLET, C. KOLLATH, M. TROYER, AND S. ULRICH

Mixture of bosonic and spin-polarized fermionic atoms in an optical lattice

Physical Review A **77**, 023608 (2006).

Group: Troyer / Project: 1

▶ L. POLLET, M. TROYER, K. VAN HOUCKE, AND S. M. A. ROMBOUTS

Phase Diagram of Bose-Fermi Mixtures in One-Dimensional Optical lattices

Physical Review Letters **96**, 190402 (2006).

Group: Troyer / Project: 1

▶ S. TREBST, U. SCHOLLWÖCK, M. TROYER, AND P. ZOLLER

d-Wave Resonating Valence Bond States of Fermionic Atoms in Optical Lattices

Physical Review Letters **96**, 250402 (2006).

Group: Troyer / Project: 1

▶ P. WERNER, A. COMANAC, L. DE MEDICI, A. J. MILLIS, AND M. TROYER

Continuous-Time Solver for Quantum Impurity Models

Physical Review Letters **97**, 076405 (2006).

Group: Troyer / Project: 1

F. F. ASSAAD, P. WERNER, P. CORBOZ, E. GULL, AND M. TROYER

Symmetry projection schemes for Gaussian Monte Carlo methods

Physical Review B **72**, 224518 (2005).

Group: Troyer / Project: 1

▶ A. LÄUCHLI, J. C. DOMENGE, C. LHUILLIER, P. SINDZINGRE, AND M. TROYER

Two-Step Restoration of SU(2) Symmetry in a Frustrated Ring-Exchange Magnet

Physical Review Letters **95**, 137206 (2005).

Group: Troyer / Project: 1

P. WERNER, G. REFAEL, AND M. TROYER

Simulation results for an interacting pair of resistively shunted Josephson junctions

Journal of Statistical Mechanics p. P12003 (2005).

Group: Troyer / Project: 1

▶ P. WERNER AND M. TROYER

Efficient Simulation of Resistively Shunted Josephson Junctions

Physical Review Letters **95**, 060201 (2005).

Group: Troyer / Project: 1

▶ S. WESSEL AND M. TROYER

Supersolid Hard-Core Bosons on the Triangular Lattice

Physical Review Letters **95**, 127205 (2005).

Group: Troyer / Project: 1

8.5.2 Scientific articles in journals without peer review

Group of D. Baeriswyl

D. BAERISWYL AND S. FRATINI

Fate of the Wigner crystal on the square lattice
Journal de Physique IV **131**, 247 (2005).

Group: Baeriswyl / Project: 2

Group of Ch. Bernhard

- ▶ T. NACHTRAB, C. BERNHARD, C. T. LIN, D. KÖLLE, AND R. KLEINER

The Ruthenocuprates: Natural Superconductor-Ferromagnet Multilayers
Comptes Rendus de Physique **7**, 68 (2006).

Group: Bernhard / Project: 2

Group of G. Blatter

A. F. ALBUQUERQUE, H. G. KATZGRABER, M. TROYER, AND G. BLATTER

Engineering exotic phases for topologically-protected quantum computation by emulating quantum dimer models
arXiv:0708.0191 (2007).

Groups: Troyer, Blatter / Project: 1

Group of L. Degiorgi

- ▶ F. PFUNER, L. DEGIORGI, K. Y. SHIN, AND I. R. FISHER

Optical properties of the charge-density-wave polychalcogenide compounds R_2Te_5 ($R=Nd, Sm$ and Gd)
arXiv:0712.2206 (2007).

Group: Degiorgi / Project: 1

A. PERUCCHI, L. DEGIORGI, AND H. BERGER

Charge density wave gap in $ZrTe_3$
Journal de Physique IV **131**, 305 (2005).

Groups: Margaritondo, Degiorgi / Project: 3

Group of Ø. Fischer

C. DUBOIS, G. SANTI, I. CUTTAT, C. BERTHOD, N. JENKINS, A. P. PETROVIĆ, A. A. MANUEL, Ø. FISCHER, S. M. KAZAKOV, Z. BUKOWSKI, AND J. KARPINSKI

Scanning Tunneling Spectroscopy in the Superconducting State and Vortex Cores of the beta-pyrochlore KOs_2O_6
arXiv:0704.0529 (2007).

Groups: Giamarchi, Fischer, Karpinski / Projects: 1, 2

G. LEVY DE CASTRO, C. BERTHOD, A. PIRIOU, E. GIANNINI, AND Ø. FISCHER

Preeminent role of the Van Hove singularity in the strong-coupling analysis of scanning tunneling spectroscopy for two-dimensional cuprates

cond-mat/0703131 (2007).

Groups: Fischer, Giamarchi, van der Marel / Projects: 1, 2

Group of L. Forró

S. TOTH, D. QUINTAVALLE, B. NAFRADI, L. KORECZ, L. FORRÓ, AND F. SIMON

Enhanced thermal stability and spin-lattice relaxation rate of $N@C_{60}$ inside carbon nanotubes
arXiv:0801.4783 (2008).

Group: Forró / Project: 1

N. BARIŠIĆ, A. AKRAP, H. BERGER, AND L. FORRÓ

Hysteretic behavior at the collapse of the metal-insulator transition in $BaVS_3$
arXiv:0712.3395 (2007).

Groups: Forró, Margaritondo / Project: 1

N. BARIŠIĆ, A. AKRAP, H. BERGER, AND L. FORRÓ

The evolution of the Non-Fermi Liquid behavior of $BaVS_3$ under high pressure
arXiv:0712.3393 (2007).

Groups: Forró, Margaritondo / Project: 1

T. IVEK, T. VULETIC, S. TOMIC, A. AKRAP, H. BERGER, AND L. FORRÓ

Collective Charge Excitations below the Metal-to-Insulator Transition in $BaVS_3$
arXiv:0706.2079 (2007).

Groups: Forró, Margaritondo / Project: 1

Group of T. Giamarchi

P. BOUILLOT

Méthodes DMRG appliquées au modèle XXZ et à l'échelle de spins quantiques 1/2
Master's thesis, Université de Genève (2007).

Group: Giamarchi / Project: 1

C. DUBOIS, G. SANTI, I. CUTTAT, C. BERTHOD, N. JENKINS, A. P. PETROVIĆ, A. A. MANUEL, Ø. FISCHER, S. M. KAZAKOV, Z. BUKOWSKI, AND J. KARPINSKI

Scanning Tunneling Spectroscopy in the Superconducting State and Vortex Cores of the beta-pyrochlore KOs_2O_6

arXiv:0704.0529 (2007).

Groups: Giamarchi, Fischer, Karpinski / Projects: 1, 2

G. LEVY DE CASTRO, C. BERTHOD, A. PIRIOU, E. GIANNINI, AND Ø. FISCHER

Preeminent role of the Van Hove singularity in the strong-coupling analysis of scanning tunneling spectroscopy for two-dimensional cuprates

cond-mat/0703131 (2007).

Groups: Fischer, Giamarchi, van der Marel / Projects: 1, 2

M. A. CAZALILLA, A. F. HO, AND T. GIAMARCHI

Interacting Bose gases in quasi-one dimensional optical lattices

in *Series on advances in Quantum Many-Body theories vol. 10, "Recent progress in many body theories"*, S. HERNANDEZ AND H. CATALDO, eds. (World Scientific, 2006), preprint cond-mat/0605419.

Group: Giamarchi / Project: 1

G. LEON AND T. GIAMARCHI

Hall Effect in Quasi One-Dimensional Organic Conductors

Journal of Low Temperature Physics **142**, 319 (2006).

Group: Giamarchi / Project: 1

Group of M. Hasler

F. ROY, B. DUTOIT, F. GRILLI, AND F. SIROIS
2D Magneto-Thermal Modeling of Coated High-Temperature Superconductors

in *Proceedings of the European COMSOL Conference 2007* (2007), vol. 1, pp. 273–277.

Group: Hasler / Project: 6

Group of J. Karpinski

C. DUBOIS, G. SANTI, I. CUTTAT, C. BERTHOD, N. JENKINS, A. P. PETROVIĆ, A. A. MANUEL, Ø. FISCHER, S. M. KAZAKOV, Z. BUKOWSKI, AND J. KARPINSKI

Scanning Tunneling Spectroscopy in the Superconducting State and Vortex Cores of the beta-pyrochlore KOs_2O_6

arXiv:0704.0529 (2007).

Groups: Giamarchi, Fischer, Karpinski / Projects: 1, 2

R. KHASANOV, A. SHENGELAYA, A. BUSSMANN-HOLDER, J. KARPINSKI, H. KELLER, AND K. A. MÜLLER

s-wave symmetry along the c-axis and s + d in-plane superconductivity in bulk $YBa_2Cu_4O_8$

arXiv:0705.0577 (2007).

Groups: Keller, Karpinski / Project: 2

Group of H. Keller

R. KHASANOV, A. SHENGELAYA, A. BUSSMANN-HOLDER, J. KARPINSKI, H. KELLER, AND K. A. MÜLLER

s-wave symmetry along the c-axis and s + d in-plane superconductivity in bulk $YBa_2Cu_4O_8$

arXiv:0705.0577 (2007).

Groups: Keller, Karpinski / Project: 2

Group of D. van de Marel

G. LEVY DE CASTRO, C. BERTHOD, A. PIRIOU, E. GIANNINI, AND Ø. FISCHER

Preeminent role of the Van Hove singularity in the strong-coupling analysis of scanning tunneling spectroscopy for two-dimensional cuprates

cond-mat/0703131 (2007).

Groups: Fischer, Giamarchi, van der Marel / Projects: 1, 2

F. MARSIGLIO, E. VAN HEUMEN, AND A. B. KUZMENKO

Impact of a finite cut-off for the optical sum rule in the superconducting state.

arXiv:0710.5941 (2007).

Group: van der Marel / Project: 2

► J. L. M. VAN MECHELEN, D. VAN DER MAREL, C. GRIMALDI, A. B. KUZMENKO, N. P. ARMITAGE, N. REYREN, H. HAGEMANN, AND I. I. MAZIN

Electron-phonon interaction and charge carrier mass enhancement in $SrTiO_3$

arXiv:0712.1607 (2007).

Group: van der Marel / Projects: 1, 5

Group of G. Margaritondo

N. BARIŠIĆ, A. AKRAP, H. BERGER, AND L. FORRÓ

Hysteretic behavior at the collapse of the metal-insulator transition in $BaVS_3$

arXiv:0712.3395 (2007).

Groups: Forró, Margaritondo / Project: 1

N. BARIŠIĆ, A. AKRAP, H. BERGER, AND L. FORRÓ

The evolution of the Non-Fermi Liquid behavior of $BaVS_3$ under high pressure

arXiv:0712.3393 (2007).

Groups: Forró, Margaritondo / Project: 1

T. IVEK, T. VULETIC, S. TOMIC, A. AKRAP, H. BERGER, AND L. FORRÓ

Collective Charge Excitations below the Metal-to-Insulator Transition in $BaVS_3$

arXiv:0706.2079 (2007).

Groups: Forró, Margaritondo / Project: 1

D. CLOETTA, D. ARIOSIA, M. ABRECHT,
C. CANCELLIERI, S. MITROVIC, M. PAPAGNO,
AND D. PAVUNA

*Systematic Studies of $La_{2-x}Sr_xCuO_4$ in Direct
Synchrotron Light: On the Role of Compressive
against Tensile Strain*

in *Correlated Electron Systems* (SPIE, 2005), vol.
5932.

Group: Margaritondo / Project: 5

A. PERUCCHI, L. DEGIORGI, AND H. BERGER
Charge density wave gap in $ZrTe_3$

Journal de Physique IV **131**, 305 (2005).

Groups: Margaritondo, Degiorgi / Project: 3

Group of J. Mesot

O. ZAHARKO, J. MESOT, L. A. SALGUERO,
R. VALENTÍ, M. ZBIRI, M. JOHNSON, Y. FIL-
INCHUK, B. KLEMKE, K. KIEFER, M. MYS'KIV,
T. STRASSLE, AND H. MUTKA

*Tetrahedra system $Cu_4OCl_6daca_4$: magnetic
exchange against molecular vibrations*

arXiv:0801.1507 (2008).

Group: Mesot / Project: 1

C. KRAEMER

*Magnetische Eigenschaften von $LiErF_4$ – Eine
Untersuchung mittels Neutronenstreuung*

Master's thesis, ETHZ (2006).

Group: Mesot / Project: 1

Group of R. Nesper

F. KRUMEICH AND R. NESPER

*Elemental Analysis of nm-sized Particles and
Segregations*

Chimia **60**, 34 (2006).

Group: Nesper / Projects: 4, 6

F. KRUMEICH AND R. NESPER

*Zur Charakterisierung von $Nb_4W_{13}O_{49}$ mittels
HAADF-STEM*

*Zeitschrift für Anorganische und Allgemeine
Chemie* **632**, 2096 (2006).

Group: Nesper / Projects: 4, 6

Group of H.-R. Ott

A. SACCHETTI, M. WELLER, J. L. GAVILANO,
R. MUDLIAR, B. PEDRINI, K. MAGISHI, H. R.
OTT, R. MONNIER, B. DELLEY, AND Y. ÖNUKI

*$^{63,65}Cu$ NMR and NQR evidence for an un-
usual spin dynamics in $PrCu_2$ below 100 K*

arXiv:0709.3009 (2007).

Group: Ott / Project: 1

Group of T. M. Rice

C. INIOTAKIS, S. FUJIMOTO, AND M. SIGRIST
*Fractional flux quanta at intrinsic metallic in-
terfaces of noncentrosymmetric superconduc-
tors*

arXiv:0801.1373 (2008).

Groups: Rice, Sigrist / Project: 2

N. HAYASHI, C. INIOTAKIS, M. MACHIDA,
AND M. SIGRIST

*Josephson Effect between Conventional and
Rashba Superconductors*

arXiv:0711.3241 (2007).

Groups: Rice, Sigrist / Project: 2

H. ADACHI AND M. SIGRIST

*Anomalous Thermal Conductivity of Semi-
Metallic Superconductors with Electron-Hole
Compensation*

arXiv:0710.3110 (2007).

Groups: Rice, Sigrist / Project: 2

T. YOKOYAMA, C. INIOTAKIS, Y. TANAKA,
AND M. SIGRIST

*Chirality sensitive effect on surface states in chi-
ral p-wave superconductors*

arXiv:0710.4204 (2007).

Groups: Rice, Sigrist / Project: 2

Group of A. Schilling

H. BARTOLF, A. ENGEL, AND A. SCHILLING
Superconducting Single Photon Detectors

Raith application note, Physics Institute of the
University of Zurich, Switzerland (2006).

Group: Schilling / Project: 5

Group of M. Sigrist

C. INIOTAKIS, S. FUJIMOTO, AND M. SIGRIST
*Fractional flux quanta at intrinsic metallic in-
terfaces of noncentrosymmetric superconduc-
tors*

arXiv:0801.1373 (2008).

Groups: Rice, Sigrist / Project: 2

H. ADACHI AND M. SIGRIST

*Anomalous Thermal Conductivity of Semi-
Metallic Superconductors with Electron-Hole
Compensation*

arXiv:0710.3110 (2007).

Groups: Rice, Sigrist / Project: 2

N. HAYASHI, C. INIOTAKIS, M. MACHIDA,
AND M. SIGRIST

*Josephson Effect between Conventional and
Rashba Superconductors*

arXiv:0711.3241 (2007).

Groups: Rice, Sigrist / Project: 2

T. YOKOYAMA, C. INIOTAKIS, Y. TANAKA,
AND M. SIGRIST

Chirality sensitive effect on surface states in chiral p -wave superconductors

arXiv:0710.4204 (2007).

Groups: Rice, Sigrist / Project: 2

Group of M. Troyer

L. POLLET, C. KOLLATH, K. VAN HOUCKE,
AND M. TROYER

Temperature changes when adiabatically ramping up an optical lattice

arXiv:0801.1887 (2008).

Group: Troyer / Project: 1

S. TREBST, E. ARDONNE, A. FEIGUIN, D. A. HUSE,
A. W. W. LUDWIG, AND M. TROYER

Collective states of interacting Fibonacci anyons

arXiv:0801.4602 (2008).

Group: Troyer / Project: 1

A. F. ALBUQUERQUE, H. G. KATZGRABER,
M. TROYER, AND G. BLATTER

Engineering exotic phases for topologically-protected quantum computation by emulating quantum dimer models

arXiv:0708.0191 (2007).

Groups: Troyer, Blatter / Project: 1

S. GUERTLER, , M. TROYER, AND F.-C. ZHANG

Quantum Monte-Carlo study of a two-species boson Hubbard model

arXiv:0712.2504 (2007).

Group: Troyer / Project: 1

P. N. MA, L. POLLET, M. TROYER, AND F. C. ZHANG

A classical picture of the role of vacancies and interstitials in Helium-4

arXiv:0710.3940 (2007).

Group: Troyer / Project: 1

S. TREBST, D. A. HUSE, E. GULL, H. G. KATZGRABER, U. H. E. HANSMANN, AND M. TROYER

Ensemble Optimization Techniques for the Simulation of Slowly Equilibrating Systems

in *Computer Simulation Studies in Condensed Matter Physics XIX*, D. P. LANDAU, S. P. LEWIS, AND H.-B. SCHÜTTLER, eds. (Springer, 2007), Springer Proceedings in Physics.

Group: Troyer / Project: 1

8.5.3 Books and scientific articles in anthologies

R. FLÜKIGER, D. UGLIETTI, C. SENATORE,
F. BUTA, AND B. SEEBER

Microstructure, Composition and Critical Current Density of Nb_3Sn multifilamentary wires

in *Special Issues on Superconductivity*, L. BOTTURA AND R. HELLER, eds. (Elsevier, Amsterdam, 2008, to be published), Cryogenics.

Group: Flükiger / Project: 6

P. GEISER, J. KARPINSKI, AND B. BATLOGG

High pressure crystal growth and characterization of $Al_xGa_{1-x}N$ wide gap semiconductors

in *III-Nitrides, Devices and Nano-Engineering*, Z. C. FENG, ed. (Imperial College Press (ICP), 2008).

Group: Karpinski / Projects: 3, 4

A. BUSSMANN-HOLDER AND H. KELLER

Polaron Effects in High-Temperature Cuprate Superconductors

in *Polarons in Advanced Materials*, A. S. ALEXANDROV, ed. (Canopus Publishing, Bristol, 2007), vol. 103 of *Springer Series in Materials Science*, p. 599.

Group: Keller / Project: 2

J. FINK, S. BORISENKO, A. KORDYUK,

A. KOITZSCH, J. GECK, V. ZABOLOTNYY,
M. KNUPFER, B. BÜCHNER, AND H. BERGER

Dressing of the charge carriers in high- T_c superconductors

in *Very high resolution photoemission spectroscopy, Lecture Notes in Physics 715*, S. HÜFNER, ed. (Springer, Berlin, Heidelberg, 2007), p. 295.

Group: Margaritondo / Project: 3

E. VAN HEUMEN AND D. VAN DER MAREL

Optical probes of electron correlations in solids

in *LECTURES ON THE PHYSICS OF STRONGLY CORRELATED SYSTEMS XI: Eleventh Training Course in the Physics of Strongly Correlated Systems*, F. MANCINI AND A. AVELLA, eds. (AIP, 2007), AIP Conference Proceedings Volume 918, Materials Physics and Applications, p. 203.

Group: van der Marel / Projects: 1, 2, 5

J. KARPINSKI

20 years High Pressure Materials Synthesis Group Activity After Discovery of High- T_c Superconductors

in *High- T_c Superconductors and Related Transition Metal Oxides*, A. BUSSMANN-HOLDER AND H. KELLER, eds. (Springer-Verlag, Berlin, Hei-

delberg, 2007), pp. 167–175.

Group: Karpinski / Projects: 3, 4

R. KHASANOV, A. SHENGELAYA,
A. BUSSMANN-HOLDER, AND H. KELLER

Two-gap superconductivity in the cuprate superconductor $La_{1.83}Sr_{0.17}CuO_4$

in *High- T_c Superconductors and Related Transition Metal Compounds*, A. BUSSMANN-HOLDER AND H. KELLER, eds. (Springer, Berlin, 2007), p. 177.

Group: Keller / Project: 2

C. LICHTENSTEIGER, M. DAWBER, AND J.-M. TRISCONI

Ferroelectric Size Effects

in *Physics of Ferroelectrics: A Modern Perspective*, K. RABE, C. H. AHN, AND J.-M. TRISCONI, eds. (Springer, 2007), Topics in Applied Physics, pp. 305–338.

Group: Triscone / Project: 5

P. PARUCH, T. GIAMARCHI, AND J.-M. TRISCONI

Nanoscale Studies of Domain Walls in Epitaxial Ferroelectric Thin Films

in *Physics of Ferroelectrics: A Modern Perspective*, K. RABE, C. H. AHN, AND J.-M. TRISCONI, eds. (Springer, 2007), Topics in Applied Physics, pp. 339–362.

Groups: Triscone, Giamarchi / Project: 5

A.-B. POSADAS, M. LIPPMAA, F. J. WALKER,
M. DAWBER, C. H. AHN, AND J.-M. TRISCONI

Growth and Novel Applications of Epitaxial Oxide Thin Films

in *Physics of Ferroelectrics: A Modern Perspective*, K. RABE, C. H. AHN, AND J.-M. TRISCONI, eds. (Springer, 2007), Topics in Applied Physics, pp. 219–304.

Group: Triscone / Project: 5

K. M. RABE, M. DAWBER, C. LICHTENSTEIGER, C. H. AHN, AND J.-M. TRISCONI

Modern Physics of Ferroelectrics: Essential Background

in *Physics of Ferroelectrics: A Modern Perspective*, K. RABE, C. H. AHN, AND J.-M. TRISCONI, eds. (Springer, 2007), Topics in Applied Physics, pp. 1–30.

Group: Triscone / Project: 5

A. SHENGELAYA, B. I. KOCHELAEV, K. CONDER, AND H. KELLER

Electronic phase separation and unusual isotope effects in $La_{2-x}Sr_xCuO_4$ observed by electron paramagnetic resonance

in *High- T_c Superconductors and Related Transi-*

tion Metal Compounds, A. BUSSMANN-HOLDER AND H. KELLER, eds. (Springer, Berlin, 2007), p. 287.

Group: Keller / Project: 2

A. ENGEL, A. SEMENOV, H.-W. HÜBERS,
K. IL'IN, AND M. SIEGEL

Electric noise and local photon-induced nonequilibrium states in a current-carrying nanostructured superconductor

in *New Frontiers in Superconductivity Research*, B. P. MARTINS, ed. (Nova Science Publishers, Inc., 2006), p. 153.

Group: Schilling / Project: 5

T. GIAMARCHI

Strong correlations in low dimensional systems in *AIP Conf. Proc., Volume 846, Lectures on the physics of highly correlated electron systems X, Tenth Training Course in the Physics of Correlated Electron Systems and High T_c Superconductors*, F. MANCINI AND A. AVELLA, eds. (American Institute of Physics, Melville, New York, 2006), vol. 846, p. 94.

Group: Giamarchi / Project: 1

▶ A. PODLESNYAK, K. CONDER, E. POM-JAKUSHINA, AND A. MIRMELSTEIN

Layered Cobalt Perovskites: Current Topics and Future Promises

in *Frontal Semiconductor Research*, O. T. CHANG, ed. (Nova Publishers, 2006), p. 171.

Group: Mesot / Project: 3

A. BUSSMANN-HOLDER, H. KELLER, AND M. K. A.

Evidences for polaron formation in cuprates

in *Superconductivity in Complex Systems*, A. BUSSMANN-HOLDER AND K. A. MÜLLER, eds. (Springer, Berlin, 2005), vol. 114 of *Structure and Bonding*, p. 367.

Group: Keller / Project: 2

L. DEGIORGI

Semiconductors, Optical and infrared properties of

in *Encyclopedia of Condensed Matter Physics*, F. BASSANI, G. L. LIEDL, AND P. WYDER, eds. (Elsevier, Oxford, 2005), vol. 5, p. 334.

Group: Degiorgi / Project: 1

E. GIANNINI, N. CLAYTON, N. MUSOLINO,
R. GLADYSHEVSKII, AND R. FLÜKIGER

Bi-based superconducting cuprates: materials aspects, crystal growth and properties

in *Frontiers in superconducting materials*, A. V. NARLIKAR, ed. (Springer, Berlin, 2005), vol. 1, p. 739.

Groups: van der Marel, Flükiger / Project: 3

H. KELLER

Unconventional isotope effects in cuprate superconductors

in *Superconductivity in Complex Systems*, A. BUSSMANN-HOLDER AND K. A. MÜLLER, eds. (Springer, Berlin, 2005), vol. 114 of *Structure and Bonding*, p. 143.

Group: Keller / Project: 2

R. NESPER

Zintl Phases of Tetralides – Old Problems and Their Solution

in *Inorganic Chemistry in Focus II*, G. MEYER, D. NAUMANN, AND L. WESEMANN, eds. (Wiley, Weinheim, 2005).

Group: Nesper / Projects: 4, 6