

P1 Structures and Magnetic Properties of $\text{Na}_5[\text{MO}_2][\text{CO}_3]$ ($\text{M} = \text{Ni}^+, \text{Co}^+$), $\text{Na}_{10}\text{Mn}_4\text{O}_9$, $\text{InCu}_{2/3}\text{V}_{1/3}\text{O}_3$, InCuGaO_4 , $\text{In}_2\text{CuGa}_2\text{O}_7$, and In_2VO_5

A. Möller¹, T. Taetz¹, O. Fastje¹, N. Hollmann², D. Senff², M. Braden² and J.A. Mydosh²

Institute for Inorganic Chemistry¹ and Institute of Physics II², University of Cologne

P2 Oligomers and Chains in the Sc/Z/X Systems

Sina Zimmermann, Gerd Meyer

Institute for Inorganic Chemistry, University of Cologne

P3 Crystal growth, dielectric and magnetic investigation of 3d transition metal tungstates MWO_4 ($\text{M} = \text{Mn, Fe, Co, Ni}$)

D. Khomskii^a, P. Becker^b, L. Bohatý^b, O. Heyer^a, N. Hollmann^a, S. Jodlauk^b, H. Kierspel^a, I. Klassen^a, T. Lorenz^a and J.A. Mydosh^a

^a*Institute of Physics II and ^bInstitute of Crystallography, University of Cologne*

P4 Magnetoelastic coupling of multiferroic manganites

J. Rohrkamp¹, J. Baier¹, D. Meier¹, K. Berggold¹, O. Heyer¹, J. Hemberger², A. Balbashov³, N. Aliouane⁴, D. Argyriou⁴, A. Freimuth¹, J. A. Mydosh¹, and T. Lorenz¹

¹*Institute of Physics II, University of Cologne, Germany*, ²*Institute of Physics, University of Augsburg, Germany*, ³*Moscow Power Engineering Institute, Moscow, Russia*, ⁴*Hahn-Meitner-Institute, Berlin, Germany*

P5 Magnetic excitations of complex ordered structures

D. Senff¹, M. Cwik¹, O. Schumann¹, M. Benomar¹, F. Krüger^{2,3}, S. Scheidl², and M. Braden¹

¹*Institute of Physics II and ²Institute for Theoretical Physics, University of Cologne*;

³*Instituut-Lorentz, Universiteit Leiden, NL*

P6 Interplay between transport, magnetism and structure in RniO_3 under high pressure

R. Lengsdorf¹, J.A. Alonso², D.I. Khomskii¹, Mazin³, M. Mostovoy⁴, R.M. Ibberson⁵, K.S. Knight⁵, W.G. Marshall⁵ and M.M. Abd-Elmeguid¹

¹*Institute of Physics II, University of Cologne, 50937 Cologne, Germany*; ²*European Synchrotron Radiation Facility, BP 220, F-38043 Grenoble, France*; ³*NRL, code 6390, 4555 Overlook Ave SW, Washington, DC 20375*; ⁴*Materials Science Center, Univ. of Groningen, 9747 AG Groningen, The Netherlands*; ⁵*ISIS Neutron Facility, Rutherford Appleton Laboratory, Chilton, Didcot, Oxon OX11 0QX, UK*

P7 Nernst effect of Ni-doped $\text{NdBa}_2\text{Cu}_3\text{O}_{7-\delta}$ and thermal conductivity of single-layered cuprates R_2CuO_4

N. Johannsen¹, K. Berggold¹, Th. Wolf², J. Baier¹, T. Lorenz¹, S. Barilo³, A. Freimuth¹ and J.A. Mydosh¹

¹*Institute of Physics II, University of Cologne, Germany*, ²*Forschungszentrum Karlsruhe, IFP, Germany*, ³*Inst. of Solid State & Semicond. Phys., Minsk, Russia*

P8 Thermal conductivity in one-dimensional magnets CuPzN and Y₂BaNiO₅

A.V. Sologubenko¹, K. Kordonis¹, T. Lorenz¹, K. Berggold¹, A. Freimuth¹, M.M. Turnbull², S.-W. Cheong³

¹*Institute of Physics II, University of Cologne, Germany*, ²*Carlson School of Chemistry and Department of Physics, Clark University, USA*, ³*Department of Physics and Astronomy, Rutgers University, USA*

P9 Quantum critical effects in the spin-dimer system TiCuCl₃

S. Stark¹, O. Heyer¹, T. Zabel¹, K. Krämer², A. Oosawa³, H. Tanaka⁴, A. Vasiliev⁵, and T. Lorenz¹

¹*Institute of Physics II, University of Cologne, Germany; University of Bern, Department of Chemistry, Switzerland; Adv. Science Research Center, Japan Atomic Energy Research Institute, Japan*; ²*Dep. of Physics, Tokyo Institute of Technology, Japan*; ³*Low Temp. Physics Dep., Moscow State University, Russia*

P10 Thermal properties at the metamagnetic transition of Ca_{2-x}Sr_xRuO₄

J. Baier¹, E. Rose¹, M. Kriener³, S. Stark¹, S. Steffens¹, O. Schumann¹, H. Hartmann¹, T. Zabel¹, O. Friedt¹, A. Revcolevschi², S. Nakatsuji³, Y. Maeno³, A. Freimuth¹, J. A. Mydosh¹, T. Lorenz¹ and M. Braden¹

¹*Institute of Physics II, University of Cologne, Germany*, ²*Lab. de Physico-Chimie de l'Etat Solide, Université Paris-Sud, France*, ³*Dep. of Physics, Kyoto University, Japan*

P11 Magnetism in layered Ruthenates

P. Steffens¹, O. Schumann¹, Y. Sidis², S. Nakatsuji^{3,4}, Y. Maeno³ and M. Braden¹

¹*Institute of Physics II, University of Cologne*, ²*Laboratoire Léon Brillouin, Saclay, France*, ³*Kyoto University, Japan*, ⁴*ISSP, Tokyo, Japan*

P12 Orbitally Driven Spin-Singlet Dimerization in S=1 La₄Ru₂O₁₀

Hua Wu¹, Z. Hu¹, T. Burnus¹, J. D. Denlinger², P.G. Khalifah^{3,4}, D.G. Mandrus⁴, L.-Y. Jang⁵, H.H. Hsieh⁶, A. Tanaka⁷, K. S. Liang⁵, J.W. Allen⁸, R.J. Cava⁹, D.I. Khomskii¹, and L.H. Tjeng¹

¹*Institute of Physics II, University of Cologne, Germany*, ²*Advanced Light Source, Lawrence Berkeley National Laboratory, Berkeley, California 94720, USA*,

³*Department of Chemistry, University of Massachusetts, Amherst, Massachusetts 01003, USA*, ⁴*Condensed Matter Sciences Division, Oak Ridge National Laboratory, Oak Ridge, Tennessee 37831, USA*, ⁵*National Synchrotron Radiation Research Center, 101 Hsin-Ann Road, Hsinchu 30077, Taiwan*, ⁶*Chung Cheng Institute of Technology, National Defense University, Taoyuan 335, Taiwan*, ⁷*Department of Quantum Matter, ADSM, Hiroshima University, Higashi-Hiroshima 739-8530, Japan*

P13 Thermodynamic and transport properties of doped La_{2-x}Sr_xCoO₄

N. Hollmann, E. Rose, M. Reuther, M. Cwik, M. Benomar, A. Sologubenko, J. A. Mydosh, M. Haverkort, and T. Lorenz

Institute of Physics II,, University of Cologne, Germany

P14 The spin state transition in LaCoO₃; Revising a revision

M. W. Haverkort¹, Z. Hu¹, J. C. Cezar², T. Burnus¹, H. Hartmann¹, M. Reuther¹
C. Zobel¹, T. Lorenz¹, A. Tanaka³, N. B. Brookes², H. H. Hsieh^{4,5}, H.-J. Lin⁵,
C. T. Chen,⁵ and L. H. Tjeng¹

¹*Institute of Physics II, University of Cologne, Germany, ²European Synchrotron Radiation Facility, Boîte Postale 220, 38043 Grenoble Cedex, France, ³Department of Quantum Matter, ADSM, Hiroshima University, Higashi-Hiroshima 739-8530, Japan, ⁴Chung Cheng Institute of Technology, National Defense University, Taoyuan 335, Taiwan, ⁵National Synchrotron Radiation Research Center, 101 Hsin-Ann Road, Hsinchu 30076, Taiwan*

P15 Valence, Spin and Orbital State in the 1-D Ca₃Co₂O₆, Ca₃CoRhO₆ and Ca₃FeRhO₆

Hua Wu¹, Z. Hu¹, T. Burnus¹, M.W. Haverkort¹, J.C. Cezar², D. Flahaut³, V. Hardy³,
A. Maignan³, N. Brookes², S. Niitaka^{4,5}, H.Takagi^{4,5}, C.F. Chang¹, A. . Tanaka⁶
H.H. Hsieh⁷, H.-J. Lin⁸, L.Y. Jang⁸, K. Liang⁸, C.T. Chen⁸, D. Khomskii¹ and H. Tjeng¹
¹*Institute of Physics II, University of Cologne, Germany, ²ESRF, BP 220, Grenoble 38043, France, ³CRISMAT, UMR 6508, Caen Cedex 14050, France, ⁴RIKEN, ⁵CREST, Saitama, Japan, ⁶Department of Quantum Matter, Hiroshima Univ., Japan ⁷Chung Cheng Inst. of Technology, Taoyuan 335, Taiwan, ⁸NSRRC, 101 Hsin-Ann Road, Hsinchu 30077, Taiwan*

P16 Charge & Magnetic ordering in transition metal oxides with low d-level occupation

A. C. Komarek¹, M. Isobe², W.-D. Stein¹, T. Möller¹, M. Meven³, M. Hölzel³, A. Senyshyn³, A. Cousson⁴, F. Bouree⁴, G. Andre⁴, T. Lorenz¹ and M. Braden¹

¹*Institute of Physics II, University of Cologne, Germany, ²Institute for Solid State Physics, The University of Tokyo, Japan, ³TU Munich, FRM-II, Garching, Germany, ⁴LLB, CEA/CNRS, Saclay, France*

P17 Direct observation of charge and orbital order in magnetite

J. Schlappa¹, C. Schüssler-Langeheine¹, C. F. Chang¹, H. Ott¹, A. Tanaka¹, Z. Hu¹,
M. W. Haverkort¹, E. Schierle², E. Weschke², G. Kaindl², and L. H. Tjeng¹

¹*Institute of Physics II, University of Cologne, ²Institut für Experimentalphysik, Freie Universität Berlin*

P18 Spectral weight distribution of 3d¹ transition metal oxides: Metal-Insulator Transition in VO₂; Dimers in Ti₂O₃; Small gap insulators LaTiO₃ and YTiO₃

T.C. Koethe¹, C.F. Chang¹, H. Roth¹, Z. Hu¹, M.W. Haverkort¹, C. Schüßler-Langeheine¹, T. Lorenz¹, F. Venturini², N. B. Brookes², O. Tjernberg³, W. Reichelt⁴
H. H. Hsieh⁵, H.-J. Lin⁶, C. T. Chen⁶, and L. H. Tjeng¹

¹*Institute of Physics II, University of Cologne, Germany, ²ESRF Grenoble, France, ³Royal Inst.of Technology, Sweden, ⁴Inst. For Inorganic Chemistry, TU Dresden, Germany, ⁵Chung Cheng Inst. of Technology, Taiwan, ⁶NSRRC, Taiwan*

P19 Dynamical correlation in ferromagnetic transition metal compounds: a view from LDA+DMFT

L. Craco and E. Müller-Hartmann

Institute for Theoretical Physics, University of Cologne

P20 (I) Evidence for collective orbital excitations in YVO₃ & (II) electron-phonon interaction in YMnO₃

(I) E. Benckiser¹, R. Rückamp², T.T.M. Palstra³, A.A. Nugroho³, J.A. Mydosh¹, and M. Grüninger²

(II) T. Möller¹, U. Adem³, T.T.M. Palstra³, J.A. Mydosh¹, and M. Grüninger²

¹*Institute of Physics II, University of Cologne, Germany*, ²*Institute of Physics II, RWTH Aachen, Germany*, ³*Materials Science Centre, Rijksuniversiteit Groningen, The Netherlands*

P21 Electronic structure of transition metal oxides probed by ellipsometry

C. Hilgers¹, A. Gössling¹, U. Ammerahl³, M. Benomar¹, M. Reuther¹, P. Reutler³, P. Ribeiro⁴, H. Roth¹, T. Lorenz¹, J.A. Mydosh¹, and M. Grüninger²

¹*Institute of Physics II, University of Cologne, Germany*, ²*Institute of Physics II, RWTH Aachen, Germany*, ³*Laboratoire de Physico-Chimie de l'Etat Solide, Université Paris, France*, ⁴*Institut für Festkörper- und Werkstoffforschung (IFW), Germany*

P22 Resonant soft-x-ray diffraction and optical constants: a detailed model study.

J. Schlappa¹, C. Schüßler-Langeheine¹, Z. Hu¹, C.-F. Chang¹, E. Schierle², E. Weschke², G. Kaindl², P. Abbamonte^{3,4}, A. Rusydi³, M. Huijben⁵, G. Rijnders⁵, D. H. A. Blank⁵, and L.H. Tjeng¹

¹*Institute of Physics II, University of Cologne, Germany*, ²*Institut für Experimentalphysik, Freie Universität Berlin, Germany*, ³*NSLS, Brookhaven National Laboratory, USA*,

⁴*University of Illinois, Urbana, USA*, ⁵*University of Twente, The Netherlands*

P23 Challenges in growing FeO thin films and Fe²⁺ impurities in MgO

H. Ott¹, R. Sutarto¹, T. Haupricht¹, M. W. Haverkort¹, H.-H. Hsieh², H.-J. Lin³, C. T. Chen³ and L. H. Tjeng¹

¹*Institute of Physics II, University of Cologne, Germany*. ²*Chung Cheng Ins. of Technology, Taoyuan, Taiwan*. ³*National Synchrotron Research Center, Hsinchu, Taiwan*.

P24 Epitaxial growth and magnetic properties of Gd doped EuO thin films

T. Haupricht¹, R. Sutarto¹, H. Ott¹, N. Hollmann¹, T. Lorenz¹, H.H. Hsieh², H.J. Lin³, C.T. Chen³, and L.H. Tjeng¹

¹*Institute of Physics II, University of Cologne, Germany*, ²*Chung Cheng Institute of Technology, National Defense University, Taoyuan 335, Taiwan*, ³*National Synchrotron Radiation Research Center, 101 Hsin-Ann Road, Hsinchu 30076, Taiwan*

P25 Simultaneous ferromagnetic and semiconductor-metal transition in EuO

Michael Arnold and Johann Kroha
Institute of Physics, University of Bonn, Germany

P26 Geometry and electronic transport through transition metal Kondo atoms

C. Kolf and J. Kroha
Institute of Physics, University of Bonn, Germany

P27 Adiabatic connection between Mott and band insulators: String order, Haldane phase and Luttinger theorem.

Fabrizio Anfuso and Achim Rosch
Institute for Theoretical Physics, University of Cologne

P28 Micro Domain Formation near the First Order Metal-Insulator Transition of the Hubbard Model

Qinyong Liu
Institute of Physics, University of Bonn, Germany.

P29 Metallic Magnets without Inversion Symmetry: MnSi

I. Fischer and A. Rosch
Institute for Theoretical Physics, University of Cologne

P30 Coulomb blockade and transport in disordered nanowires

T. Nattermann and C. Deroulers
Institute for Theoretical Physics, University of Cologne

P31 Low dimensional quantum spin systems

Ute Löw and Andreas Schadschneider
Institute for Theoretical Physics, University of Cologne

P32 Domain Walls in the Hubbard model

Helmes, L. Craco and A. Rosch
Institute for Theoretical Physics, University of Cologne

P33 Heat Conduction in Spin Chain Compounds

Peter Jung, Rolf Helmes, Efrat Shimshoni and Achim Rosch
Institute for Theoretical Physics, University of Cologne