

Martin Rotter - Summary of Scientific Work

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1 Publications

1.1 Handbook Articles

1. A. Lindbaum and M. Rotter, “Spontaneous Magnetoelastic Effects in Gadolinium Compounds“, in: *Ferromagnetic Materials* Vol. 14, ed. K. H. J. Buschow and E. P. Wohlfarth, Elsevier Sci. Pub. Amsterdam, The Netherlands (2002) 307–362
2. M. Doerr, M. Rotter, A. Lindbaum “Magnetostriction in Rare Earth based Antiferromagnets“ *Adv. Phys.* 54 (2005) no.1, p.1-66 (impact factor: 9.4)
3. E. Bauer and M. Rotter, “Magnetism of Complex Metallic Alloys: Crystalline Electric Field Effects“, Book Series on Complex Metallic Alloys - Vol. 2, edited by Esther Belin-Ferrero, World Scientific, 2009
4. M. Rotter, Duc Manh Le, A. T. Boothroyd, J. A. Blanco ” DMD Formalism for calculation of Dispersive Excitations in Correlated Electron Systems”, Topical Review, *J Phys Cond Mat* 24 21 (2012) 213201

1.2 Editions

1. P. Rogl, M. Rotter, Proceedings of the 25th International Conference on Thermoelectrics, The Institute of Electrical and Electronics Engineers (IEEE), Piscataway, USA, ISBN 1-4244-0810-5, ISSN 1094-2734

C1 - Journal Papers (peer reviewed)

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- [2] E. Gratz, M. Rotter, A. Lindbaum, H. Müller, E. Bauer and H. Kirchmayr, “The influence of the crystal field on the anisotropic thermal expansion in $ErCu_2$ and $NdCu_2$ “, *J.Phys.: Cond. Mat. (IF=2.038)* **5** (1993) 567–572, 14 times cited (web of knowledge 20.5.08)
- [3] E. Bauer, R. Hauser, E. Gratz, G. Schaudy, M. Rotter and A. Lindbaum, “ $CePd_2Ga_3$: A new ferromagnetic Kondo lattice“, *Zeitschrift für Physik (IF=1.651)* **B 92**(1993) 411–416, 30 times cited according to web of knowledge 20.5.08
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2. M. Rotter, “Thermische Ausdehnung in intermetallischen Selten- Erd- Verbindungen“, PhD thesis Technische Universität Wien (October 1994)
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2. Austrian Science Foundation (FWF) Project P17226, "Magnetostriction of the light rare earth metals" 2004-2006, 2 Project annual reports and final report
3. Austrian Science Foundation (FWF) Project P11239, "Forced Magnetostriction measured by Capacitance Dilatometry" 1996-98, 2 Project annual reports and final report
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59. G. E. Johnstone, M. Rotter, A. T. Boothroyd, *Test of a Zhang-Rice singlet state in a half-doped manganite* ILL Experimental Report, D3/D9, 5-51-419

2 Lectures, Presentations and Activities

2.1 Lectures and Presentations at Scientific Conferences (invited)

1. M. Rotter *Magnetic and Magnetoelastic interactions in RCu_2 compounds* 5th Prague Colloquium on f-Electron Systems (2000), The Czech Republic
2. M. Rotter *McPhase- a Simulation Tool for Magnetic Properties of Solids*, Korrelationstage 2001 (14.-17.2.01), Max-Planck-Institut für Physik Komplexer Systeme, Dresden, Germany
3. M. Rotter *Neutron Spectroscopy of Magnetic Excitations* 53. Jahrestagung der ÖPG (Fachtag der FKP/NESY), Salzburg (2003), Austria
4. M. Rotter, R. Schedler, M. Doerr, A. Kreyssig, M. Loewenhaupt, P. Rogl, J. Vejpravova, P. Svoboda, W. Schmidt *Inelastic Neutron Scattering in High Magnetic Fields on orbital modes of Jahn Teller Compound $PrCu_2$* Deutsche Neutronenstreutagung (DN), Dresden (2004), Germany
5. M. Rotter *Magnetic Neutron Scattering* NESY Winter School, Plannersalm (2005), Austria
6. M. Rotter, S. Rotter, V. Bayer, K. Fellner, K. Podloucky *Physik der Musikinstrumente* 55. Jahrestagung der ÖPG, Spielraum Physik, Wien (2005), Austria
7. M. Rotter *The Magnetoelastic Paradox* 21. workshop on novel materials and superconductivity, Plannersalm (2006), Austria
8. M. Rotter, A. Barcza, H. Michor, A. Lindbaum, M. Doerr, M. Loewenhaupt, M. Zschintzsch, B. Beuneu, M. el Massalami, J. Prokleska *The Magnetoelastic Paradox* Workshop on Magnetocaloric Materials and Magnetic Refrigeration (MMMR), Cambridge University, June 2006
9. M. Rotter, S. Raasch, M. Doerr, A. Kreyssig, J.-U. Hoffmann, M. Loewenhaupt *The Paramagnetic Shape Memory Effect in RCu_2 Compounds* MMMR Workshop, Cambridge University, June 2006
10. M. Rotter *Magnetic Neutron Scattering* NESY Winter School, Plannersalm (2007), Austria
11. M. Rotter *Physik der Musikinstrumente*, Verband Wiener Volksbildung, Pädagogische Konferenz - Musikwelt in den Wissenschaften, 14.3.2007, Urania - Wien, Austria
12. M. Rotter *The Magnetoelastic Paradox investigated by neutron and x-ray scattering* Jahrestagung der Österreichischen Physikalischen Gesellschaft, Krems (2007), Austria
13. M. Rotter *Magnetic Neutron Scattering* NESY Winter School, Plannersalm (2009), Austria
14. M. Rotter *Magnetic Neutron Scattering Ψ_k -Workshop on Magnetism in Complex Systems*, 16. - 18. April 2009, Vienna University of Technology, Austria
15. M. Rotter *McPhase - a versatile modelling suite for Magnetic Neutron Scattering* Reunion de la Sociedad Espanola de Tecnicas Neutronicas (SETN), Gijon, 28.-30. June 2010
16. M. Rotter and A. Severing *Spin densities and Flipping Ratios* McPhase 2011, 10.-14. May 2011
17. M. Rotter *Local Multiplet Effects and Collective Excitations in X-ray and Neutron Spectroscopy* The 4th workshop for Emergent Materials Research, Joint Workshop of Max Plank POSTECH Center for Complex Phase Materials and Asia Pacific Center for Theoretical Physics, 11.-13. July 2011

2.2 Lectures and Presentations at Scientific Conferences (contributed)

1. T.Reif, M. Loewenhaupt, M. Rotter, P. Svoboda, B. Lebech, T. Hauss *Die magnetische Struktur von $NdCu_2$* , DPG Frühjahrstagung, Regensburg, März 1996
2. R. Hauser, E. Bauer, E. Gratz, M. Rotter, H. Müller, G. Hilscher, H. Michor, A. S. Markosyan, *Evidence for separate ordering in the Rare earth and the d - sublattice of $Er_{0.6}Y_{0.4}Co_2$* , Int. Conf. on the Physics of Transition metals, 24.-27.9.96, Osaka, Japan
3. R. Hauser, E. Bauer, M. Rotter, H. Müller, G. Hilscher, H. Michor, A. S. Markosyan, *Decoupling of the magnetic sublattices in the $Er_{1-x}Y_xCo_2$ compounds driven by substitution*, Int. Workshop Kumamoto on Novel Physical Properties of Rare Earth intermetallics, 18.-20.9.1996, Kumamoto, Japan

4. T. Reif, M. Loewenhaupt, P. Svoboda, W. Schweika, E. Gratz, M. Rotter, G. McIntyre *Diffuse magnetic neutron scattering in NdCu₂*, ECNS Interlaken, 1996
5. S.Kramp, N.Pyka, M. Loewenhaupt, M. Rotter *Bestimmung der F3-Phase in einem NdCu₂ Einkristall*, DPG Frühjahrstagung, Münster, März 1997
6. M.Loewenhaupt, M. Doerr, L. Jahn, T. Reif, C.Sierks, M.Rotter *Magnetic phase diagram and Ising-axis conversion of DyCu₂*, ICM, Sydney, Juli 1997
7. M.Rotter, E. Gratz, H. Müller, A. Kottar *Magnetische Instabilitäten in RNi₂ Verbindungen (R=Seltene Erde)*, DPG Frühjahrstagung, Münster, März 1997
8. M. Loewenhaupt, M. Doerr, L. Jahn, T. Reif, C. Sierks, M. Rotter *Magnetic Phase diagram and Ising axis conversion of DyCu₂* ICM, Sydney, Juli 1997
9. M. Doerr, M.Loewenhaupt, L. Jahn, A. Schneidewind, M.Rotter *Phasendiagramm und Konversion der magnetischen Ising Achse in DyCu₂ Einkristallen*, DPG Frühjahrstagung, März 1998, Regensburg
10. S. Kramp, N.M. Pyka, M. Loewenhaupt, M. Rotter, W. Schmidt, R. van de Kamp *Anisotropic Magnetic Coupling in NdCu₂* 43rd Annual Conference on Magnetism and Magnetic Materials, November 1998, Miami, Florida
11. S. Kramp, M. Rotter, N. Pyka, M. Loewenhaupt, W. Schmidt, R. van de Kamp *Anisotrope magnetische Kopplung in NdCu₂ – eine Untersuchung mit inelastischer Neutronenstreuung* Deutsche Neutronenstreutagung, Potsdam, 25.-27.5.99
12. M. Loewenhaupt, M. Rotter, S. Kramp *Magnetische Anisotropien in Selten – Erd – Verbindungen* Deutsche Neutronenstreutagung, Potsdam, 25.-27.5.99
13. M. Rotter, A. Lindbaum, E. Gratz, G. Hilscher, H. Sassik, H. Müller, *Magnetic and Magnetoelastic properties of GdCu₂* 22nd International conference on low temperature physics, Helsinki, Finland, 4.-11.8.99
14. M. Rotter, M. Loewenhaupt, A. Schneidewind, A. Lindbaum, E. Gratz, H. Sassik, M. T. Fernandez *The magnetic structure of GdCu₂* 22nd International conference on low temperature physics, Helsinki, Finland, 4.-11.8.99
15. M. Doerr, M. Rotter, M. Loewenhaupt, T. Reif, P. Svoboda *Giant magnetostriction in TbCu₂ and DyCu₂ Crystals* 22nd International conference on low temperature physics, Helsinki, Finland, 4.-11.8.99
16. M. Loewenhaupt, M. Rotter, S. Kramp *Magnetic anisotropies of rare earth compounds* 2nd European conference on neutron scattering, Budapest, Hungary, 1.-4.9.99
17. M. Rotter, M. Loewenhaupt, S. Kramp *Anisotropic long range interactions in NdCu₂* 2nd European conference on neutron scattering, Budapest, Hungary, 1.-4.9.99
18. R. Hauser, E. Bauer, L. Naber, M. Rotter, H. Michor, G. Hilscher, M. G. Berisso, P. Pedrazzini, J. Sereni, N. Tsujii, K. Yoshimura, S. Schmidt, F. Reinert *From an Intermediate Valence State towards non- Fermi Liquid Properties in Yb-based Compounds* 5th Prague Colloquium on f-Electron Systems (2000)
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21. A. Dreyhaupt, M. Doerr, A. Kreyssig, K. Krug, M. Rotter, E. Ressouche, K. Winzer, M. Loewenhaupt *Magnetisches Phasendiagramm von DyNi₂B₂C* DPG Frühjahrstagung Regensburg (2000)
22. A. Berg, M. Rotter, H. Langenberger, S. Grampp, E. Moser *High Resolution MR Imaging and Texture Analysis to differentiate osteoporotic Bone Structure* International Society for Magnetic Resonance in Medicine 8th meeting, Denver, USA (2000)

23. O. Chernyavski, K. Prokes, V. Sechovski, P. Svoboda, M. Doerr, M. Rotter, M. Loewenhaupt, A. Goukassov *Field Induced Irreversibilities in an Itinerant 5f Electron Antiferromagnet*, Nato Advanced Study Institute: Modern Trends in Magnetostriction - Study and Application, Kyiv, Ukraine (2000)
24. M. Doerr, M. Loewenhaupt, M. Rotter, R. Kratz, H. Krug, D. Eckert, H. Siegel, P. Verges *Anomalous Magnetic Behaviour of NdCu₂ in High Magnetic Fields*, RHMf2000, Porto, Portugal
25. S. Kramp, M. Rotter, M. Loewenhaupt, N. M. Pyka, W. Schmidt, R. van de Kamp *Spin Waves in the Ferrimagnetic Phase of NdCu₂*, ICM 2000, Brazil
26. M. Loewenhaupt, M. Doerr, M. Rotter, T. Reif, A. Schneidewind, A. Hoser *Magnetic field induced Ising axis conversion in Tb_{0.5}Dy_{0.5}Cu₂ single crystals* Ising Centennial Colloquium (2000), Belo Horizonte, Brazil
27. A. Berg, M. Rotter, H. Langenberger, E. Moser *Hochauflösende MR-Bildgebung an einem Hochfeld-Ganzkörpersystem: Methoden und Anwendungen*, COST B11 meeting - Heidelberg 19-21 October 2000
28. M. Rotter *Spin-Spin Exchange in Gd Compounds*, Round Table Session, 6.-7.12.2000, Saclay, France
29. V. Sechovsky, K. Prokes, P. Svoboda, O. Syhchenko, O. Chernyavski, H. Sato, T. Fujita, T. Suzuki, M. Doerr, M. Rotter, M. Loewenhaupt, A. Goukassov *Magnetic field induced irreversibility in UNiAl* The 8th Joint MMM-Intermag Conference (2001), San Antonio, Texas
30. M. Rotter, N. M. Pyka, M. Loewenhaupt, R. Schedler *McStas Simulation for PANDA*, Deutsche Neutronenstreutagung, 19.-21.2.2001, Juelich, Germany
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32. A. Sippel, M. Loewenhaupt, O. Isnard, R. Bewley, L. Jahn, M. Rotter *Inelastic neutron scattering experiments on ¹⁵⁴Sm₂Fe₁₇N_x and Gd₂Fe₁₇D_x - a method to trace magnetic interactions in permanent magnets* Deutsche Neutronenstreutagung, 19.-21.2.2001, Juelich, Germany
33. M. Doerr, M. Rotter, P. Svoboda, M. Loewenhaupt *Magnetic field induced change of lattice symmetry in rare earth intermetallics* ILL-Millennium Symposium, Grenoble, April 2001
34. H. Langenberger, M. Rotter, A. Berg, S. Grampp, H. Imhof, E. Moser *Autokorrelationsanalyse in hochaufgelösten MR-Bildern, eine Methode zur Strukturbewertung von osteoporotischem Knochen*, 82. Röntgenkongress, Gemeinsame Jahrestagung der DRG und ÖRG Wiesbaden, 23.-26.5.2001
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38. P. Svoboda, J. Vejprarova, M. Rotter, M. Doerr, M. Loewenhaupt, M. Hofmann, R. Schneider *Complex magnetic phase diagram of TmCu₂* International Conference on Neutron Scattering, München, 9.-13.9.2001
39. R. Schedler, M. Rotter, M. Loewenhaupt, N.M. Pyka *Monte Carlo Simulation of the cold triple axis spectrometer at the FRM-II* International Conference on Neutron Scattering, München, 9.-13.9.2001
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41. M. Rotter, M. Doerr, M. Loewenhaupt *Modeling Magnetostriction in RCu₂ Compounds using McPhase*, Conference on Magnetism and Magnetic Materials, Seattle, Washington, Nov 2001
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43. U. Witte, M. Rotter, R. Schedler, M. Loewenhaupt, W. Schmidt *Field dependence of spin waves in the Kondo lattice CeCu₂* SCES-02, Krakow, July 10-13, 2002
44. J. Vejprarova, P. Svoboda, M. Rotter, M. Doerr, M. Loewenhaupt, R. Schneider *Magnetic Structures of TmCu₂* ESS European Conference, Bonn, May 16-17 2002
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71. P. Svoboda, J. Vejpravarova, M. Doerr, M. Loewenhaupt, M. Rotter, I. Satoh, T. Komatsubara *Substitutional Disorder Effect on Ising Axis Conversion in Tb_{0.5}Y_{0.5}Cu₂* Czech and Slovak Conference on Magnetism, Kosice, The Czech Republic (2004)
72. S. Raasch, M. Doerr, M. Rotter, A. Kreyssig, J. U. Hoffmann, M. Loewenhaupt, *Structural Conversion in RCu₂ compounds (R=rare earth)* Summer School on Neutron Scattering Zuoz (2004), Switzerland
73. M. Rotter, M. Doerr, J. Brooks, E. Jobiliong, A. Lindbaum, H. Müller *Magnetostriction of Sm measured in high magnetic fields up to 33 tesla* 24th International Conference on Low Temperature Physics (LT24), Orlando, US (2005)
74. M. Doerr, M. Rotter, J. Brooks, E. Jobiliong, A. Lindbaum, R. Vasic, M. Loewenhaupt *Magnetoelastic Behaviour of Rare Earth based Intermetallics in High Magnetic Fields up to 33 tesla* 24th International Conference on Low Temperature Physics (LT24), Orlando, US (2005)
75. M. Rotter, A. Grytsiv, P. Rogl, M. Krisch, A. Mirone *Lattice Dynamics of Skutterudites - Inelastic X-ray scattering on CoSb₃* 3rd European Conference on Thermoelectrics, Nancy, France (2005)
76. A. Grytsiv, P. Rogl, Ch. Paul, R. Lackner, E. Bauer, A. Saccone, M. Rotter *Advanced thermoelectrics: Mischmetal-iron-nickel Skutterudites MM_y(Fe_{1-x}Ni_x)Sb₁₂* 3rd European Conference on Thermoelectrics, Nancy, France (2005)
77. A. Devishvili, M. Doerr, M. Rotter, B. Beuneu, A. Lindbaum *Neutron Diffraction Experiments on Gd Compounds* 55. Jahrestagung der Österreichischen Physikalischen Gesellschaft (ÖPG), Wien, Austria (2005)
78. A. Grytsiv, M. Rotter, P. Rogl, M. Doerr, B. Beuneu *The Magnetic Structure of EuFe₄Sb₁₂ derived from a Hot Neutron Diffraction Study* 55. Jahrestagung der Österreichischen Physikalischen Gesellschaft (ÖPG), Wien, Austria (2005)

79. M. Fröhlich, M. Rotter, M. Loewenhaupt, A. Schneidewind, R. Schedler, J. Vejprarova, P. Svoboda, W. Schmidt *Magnetic Properties and Orbital Excitations of PrCu₂* 55. Jahrestagung der Österreichischen Physikalischen Gesellschaft (ÖPG), Wien, Austria (2005)
80. A. Barcza, M. Doerr, M. Rotter, B. Beuneu *The magnetic structure of GdNi₂B₂C investigated by neutron powder diffraction* 55. Jahrestagung der Österreichischen Physikalischen Gesellschaft (ÖPG), Wien, Austria (2005)
81. H. Michor, D.T. Adroja, E. Bauer, R. Bewley, D. Dobožanov, A.D. Hillier, G. Hilscher, U. Killer, M. Koza, S. Manalo, P. Manuel, M. Reissner, P. Rogl, M. Rotter, E.-W. Scheidt *Unusual Non-Fermi Liquid Behaviour in CeNi₉Ge₄* The International Conference on Strongly Correlated Electron Systems, Wien, Austria (2005)
82. A. Grytsiv, P. Rogl, Ch. Paul, R. Lackner, E. Bauer, A. Saccone, M. Rotter *Advanced Thermoelectrics: Mischmetal-Iron-Nickel Skutterudites MM_y(Fe_{1-x}Ni_x)₄Sb₁₂* IX International Conference on Crystal Chemistry of Intermetallic Compounds (2005), Lvov, Ukraine
83. S. Raasch, M. Doerr, M. Rotter, A. Kreyssig, J. U. Hoffmann, M. Loewenhaupt, *Paramagnetic Shape Memory Effect in RCu₂* BENS user meeting, HMI Berlin (2005), Berlin, Germany
84. S. Raasch, M. Doerr, M. Rotter, A. Kreyssig, J. U. Hoffmann, M. Loewenhaupt *Magnetostructural Switch leading to a 60 deg rotation of the crystal structure* Frühjahrstagung der Deutschen Physikalischen Gesellschaft (DPG), Berlin, Germany (2005)
85. M. D. Le, K. A. McEwen, M. Rotter, A. Barcza, M. Doerr, J. Brooks, E. Jobilong, D. Fort *Magnetostriction of UPd₃ up to 33 T* Journee d'Actinides, Oxford (2006)
86. W. Lorenz, M. Böttger, M. Doerr, S. Raasch, M. Rotter, M. Loewenhaupt *Magnetic Phase Diagram of Paramagnetic Shape Memory Compounds* Frühjahrstagung der Deutschen Physikalischen Gesellschaft (DPG), Dresden, Germany (2006)
87. Sebastian Raasch, Mathias Doerr, Andreas Kreyssig, Michael Loewenhaupt, Martin Rotter, Jens-Uwe Hoffmann *Magnetic shape memory effect in the paramagnetic state of RCu₂ (R = rare earth)* Frühjahrstagung der Deutschen Physikalischen Gesellschaft (DPG), Dresden, Germany (2006)
88. N. Melnychenko-Koblyuk, A. Grytsiv, F. Röhrbacher, H. Kaldarar, E. Bauer, P. Rogl, M. Rotter, H. Schmid, G. Giester *Ternary Clathrates Ba-M-Ge (M=Cd and Zn): Phase Equilibria, Crystal Chemistry and Physical Properties*, 25th Intl. Conference on Thermoelectrics, Vienna, Austria (2006)
89. A. Grytsiv, M. Rotter, P. Rogl, M. Doerr and B. Beuneu *The Magnetic Structure of EuFe₄Sb₁₂* 25th Intl. Conference on Thermoelectrics, Vienna, Austria (2006)
90. M. Rotter, A. Grytsiv, P. Rogl, W. Wolf, M. Krisch, A. Mirone *Ab initio model for inelastic X-ray Scattering from Phonons in CoSb₃* 25th Intl. Conference on Thermoelectrics, Vienna, Austria (2006)
91. P. Wisniewski, M. Doerr, M. Rotter *Unusual Domain and Field-Forced Magnetostriction in U₃As₄ and U₃P₄* International Conference on Magnetism, Kyoto, Japan (2006)
92. P. Svoboda, J. Vejprarova, M. Doerr, M. Rotter, J. U. Hoffmann, I. Satoh, T. Komatsubara *Ising-Axis Conversion in (Tb_{0.5}Y_{0.5})Cu₂* International Conference on Magnetism, Kyoto, Japan (2006)
93. M. Rotter, M. Doerr, M. el Massalami, H. Michor *Magnetoelastic Paradox: Absence of Symmetry breaking distortions below T_N in antiferromagnets without orbital moment* International Conference on Magnetism, Kyoto, Japan (2006)
94. M. Doerr, W. Lorenz, M. Rotter, A. Barcza, M. Duc Le, J. Brooks, E. Jobilong, N. Kozlova, S. Raasch, M. Loewenhaupt *Magnetostriction of f-electron compounds up to 45 T* 8th International Conference on Research in High Magnetic Fields, Sendai, Japan (2006)
95. A. Devishvili, M. Doerr, M. Rotter, B. Beuneu, A. Lindbaum, G. Behr *Neutron Diffraction Experiments on Gd Compounds* Jahrestagung der ÖPG 2006, Graz, Austria
96. N. Melnychenko-Koblyuk, A. Grytsiv, M. Koza, A. Devishvili, E. Bauer, P. Rogl, M. Rotter, G. Giester *Ternary Clathrates Ba-M-Ge (M=Cd and Zn): Phase Equilibria, Crystal Chemistry and Physical Properties* Jahrestagung der ÖPG 2006, Graz, Austria

97. H. Michor, E. Bauer, R. Lackner, H. Kaldarar, L. Fornasari, G. Hilscher, M. Rotter, P. Rogl, M. Doerr, H. Rosner, W. Schnelle, M. Hanfland, S. Khmelevskii, P. Mohn *Pressure Effects upon the itinerant magnetism in RCO_9Si_4* , ICM satellite workshop in Fukuoka - Novel Pressure-induced Phenomena in Condensed Matter Systems, August 2006 ,Japan
98. A. Barcza, M. Rotter, A. Lindbaum, M. Doerr, Duc Le, E. Jobiliong, J. Brooks, H. Müeller *Magnetostriction of Sm measured in high magnetic fields up to 45 Tesla* 8th Prague Colloquium on *f*-electron systems (PCFES), Charles University, Prague, Sept 8-11, 2006
99. M. Zschintzsch, D. Meyer, G. Behr, J. Prokleska, H. Michor, M. Doerr, M. Loewenhaupt, M. Rotter, *The Magnetoelastic Paradox* 71 Spring meeting of the DPG, Division Condensed Matter (2007) Regensburg, Germany
100. M. Rotter, A. Grytsiv, P. F. Rogl, A. Devishvili, M. Koza, *Dynamical Response of $NdFe_4Sb_{12}$* European Conference on Neutron Scattering, (2007), Lund, Sweden
101. A. Devishvili, M. Rotter, A. Hiess, W. Schmidt, J. Vejprarova, A. Lindbaum, A. Barcza, H. Müller *Measuring Magnetostriction with Neutrons* European Conference on Neutron Scattering, (2007), Lund, Sweden
102. A. Grytsiv, N. Melnychenko-Koblyuk, Xing-Qiu Chen, P. Rogl, E. Bauer, H. Michor, E. Royanian, M. Rotter, H. Schmid, G. Giester *Formation, crystal structure and physical properties of novel skutterudites* International Conference on Thermoelectrics, ICT2007, Jeju, Korea
103. M. Doerr, M. Rotter, S.Raasch, T. Tsutaoka, M. Zschintzsch *Structural Irreversibilities in Rare Earth Compounds* Workshop Magnetostrictive Materials and Magnetic Refrigeration, 13.- 15. August 2007, Baden/Vienna, Austria
104. Anton Devishvili, Martin Rotter, Mathias Doerr, Jana Vejprarova, Jan Prokleska *Using McPhase to calculate magnetoelastic and magnetocaloric properties of $GdRu_2Si_2$* Workshop Magnetostrictive Materials and Magnetic Refrigeration, 13.- 15. August 2007, Baden/Vienna, Austria
105. H. Michor, H.Rosner, M. Doerr, J. Perenboom, M. Rotter, W. Schnelle, U. Schwarz, E. Bauer, G. Hilscher *Magneto-volume coupling of itinerant magnetism in RCO_9Si_4* Workshop Magnetostrictive Materials and Magnetic Refrigeration, 13.- 15. August 2007, Baden/Vienna, Austria
106. H. Michor, H. Rosner, M. Doerr, J. Perenboom, M. Rotter, W. Schnelle, U. Schwartz, E. Bauer, G. Hilscher *Itinerant magnetism and magneto-volume coupling in YCo_9Si_4 and $LaCo_9Si_4$* International Workshop on Exotic States in Materials with Strongly Correlated Electrons, Sinaia, Romania; 07.09.2007 - 10.09.2007
107. Mathias Doerr, Sebastian Raasch, Martin Rotter, Matthias Frontzek, Dirk C. Meyer, Manuel Zschintzsch, Pavel Svoboda, Michael Loewenhaupt *Giant Magnetostrain Based on Strong Single Ion Anisotropy of Rare Earth Materials* European Materials Research Society, E-MRS Fall Meeting 2007, Warsaw, Poland
108. A. Devishvili, M. Rotter, A. Lindbaum, H. Müller, A. Barcza, A. Hiess, W. Schmidt, J. Vejprarova *Measuring magnetostriction with neutrons* GÖCH-Symposium 2007 "Physikalische Chemie in Österreich", 19.-20. Oct. 2007, University of Vienna, Austria
109. M. Falmbigl, M. Rotter, R. Grössinger, M. Doerr, *Magnetostriction in Pulsed High Magnetic Fields* GÖCH-Symposium 2007 "Physikalische Chemie in Österreich", 19.-20. Oct. 2007, University of Vienna, Austria
110. M. Rotter, A. Grytsiv, A. Devishvili, P. F. Rogl, M. Koza, L. Capogna, W. Wolf *Neutron Spectroscopy versus *ab initio* Calculation of the Dynamical Response of $NdFe_4Sb_{12}$* GÖCH-Symposium 2007 "Physikalische Chemie in Österreich", 19.-20. Oct. 2007, University of Vienna, Austria
111. M. Rotter *Pulsed Magnetic Fields at XFEL, ESRF upgrade and XFEL workshop*, Bundesministerium f Wissenschaft und Forschung, Feb 2008, Vienna, Austria
112. M. Rotter, M. Doerr, A. Devishvili, A. Stunault, J. J. Perenboom, T. Tsutaoka, A. Tanaka, Y. Narumi, M. Zschintzsch, M. Loewenhaupt *Magnetostructural irreversibilities in R_5Ge_3 ($R=Gd,Nd$) intermetallics* Theoretical and Experimental Magnetism Meeting, 31.7.-2.8.08, Coseners House, Abingdon,U.K.

113. M. Doerr, M. Rotter, A. Devishvili, A. Stunault, M. Zschintzsch, T. Tsutaoka, and Y. Narumi *Magnetostructural irreversibilities in R_5Ge_3 ($R=Gd,Nd$) intermetallics* LT25, Amsterdam (2008)
114. M. Doerr, M. Rotter, M. Bartkowiak, A. Haase, N.V. Kozlova, J.J. Perenboom and M. Loewenhaupt *Investigations of magnetostriction of solids in high magnetic fields - an overview*, PPHMF08, Tallin (2008)
115. V. Kataev, U. Schaufuß, U. Muranyi, A. Alfonsov, B. Büchner, M. Doerr, and M. Rotter *Magnetic anisotropy of the spin-antiferromagnet $GdNi_2B_2C$ probed by high- frequency ESR*, LT25, Amsterdam (2008)
116. A. Devishvili, M. Rotter, M. Doerr, B. Beuneu, G. Behr *Magnetic Structure of $GdCu_6$* Deutsche Neutronenstreutagung 2008, FRM-II, Munich, Germany
117. M. Doerr, A. Haase, E. Kampert, M. Rotter, M. Zschintzsch, Y. Narumi, M. Loewenhaupt *New ways of magnetoelastic measurements up to very high magnetic fields* Frühjahrstagung der Deutschen Physikalischen Gesellschaft (DPG), Dresden, Germany (2009)
118. M. Doerr, S. Schönecker, E. Kampert, J.A. Perenboom, M. Richter, M. Rotter, M. Loewenhaupt *Oscillatory Magnetostriction and pressure dependence of the Fermi Surface of Palladium* Research in High Magnetic Fields Conference, Dresden, Germany (2009)
119. M. Rotter, A. Boothroyd, L. P. Regnault, D. Prabhakaran, M. Enderle, *Spin Excitation Spectrum of Na_xCoO_2* , International Conference on Neutron Scattering, Knoxville, Tennessee (2009)
120. M. Rotter *Going beyond the dipole approximation to improve the refinement of magnetic structures by neutron diffraction*, 9th Prague Colloquium on f-electron systems, May 31- June 3 Prague (2010)
121. J. A. Blanco, B. Fak, M. Rotter, *Magnetic excitations of longitudinally amplitude modulated magnetic structure in $PrNi_2Si_2$* Reunion de la Sociedad Espanola de Tecnicas Neutronicas (SETN), Gijon, 28.-30. June 2010
122. M. Rotter, B. Fak, J. A. Blanco, *McPhase - a versatile modelling suite for investigating the magnetic excitations in the longitudinally amplitude modulated magnetic structure of $PrNi_2Si_2$* JCNS-Workshop, 04. - 07.10.2010, Bernried Trends and Perspectives in Neutron Scattering: Magnetism and Correlated Electron System
123. P. P. deen, J. Taylor, A. D. Hillier, A. D. Strydom, M. Rotter, H. Mutka *Disorder in the Laves Phase Compound $ZrMn_2$* , Perspective in Terahertz Spectroscopy with Neutrons, Helmholtz Zentrum Berlin, 28.-30. Nov 2011

2.3 Invited Lectures

1. Birkbeck College, London, Dezember 1992 *Quadrupolar Interactions in UPd₃*
2. TU-Wien, November 1992 *Quadrupolwechselwirkungen in UPd₃*
3. TU-Dresden, Mai 1995 *Kapazitive Messung der thermischen Ausdehnung*
4. TU-Dresden, Jänner 1997 *Magnetische Wechselwirkungen in NdCu₂*
5. TU-Wien, März 1997 *Magnetische Wechselwirkungen in NdCu₂*
6. TU-Dresden, Juli 1997 *Magnetoelastische Eigenschaften von Selten- Erd- Verbindungen*
7. TU-Wien, Jänner 1998 *Magnetoelastische Eigenschaften von Selten- Erd- Verbindungen*
8. MPI-Stuttgart, Jänner 1998 *Magnetoelastische Eigenschaften von Selten- Erd- Verbindungen*
9. TU-Dresden, Juni 1999 *Magnetism in Gd compounds - GdCu₂*
10. TU-Dresden, April 2000 *Magnetische und Magnetoelastische Eigenschaften von RCu₂ Verbindungen*
11. TU-Wien, April 2000 *Magnetic and Magnetoelastic Properties of RCu₂ Compounds*
12. Universität Wien, Mai 2000 *Autocorrelation Analysis of Bone Structure*
13. Tables Rondes, CEA Saclay, Dezember 2000 *Spin-Spin Exchange in Gd Compounds*
14. TU-Dresden, März 2001, *Mcphase- a Simulation Tool for Magnetic Properties of Solids*
15. TU-Wien, März 2002, *Mcphase- a Simulation Tool for Magnetic Properties of Solids*
16. TU-Dresden, Physikalisches Kolloquium, Jänner 2003, *Selten-Erd-Verbindungen ohne Kristallfeldanisotropie - Magnetismus in Gd Verbindungen*
17. Universität Wien, Wissenschaftskolleg Mai 2003, *Rare Earth Compounds without Crystal Field Anisotropy - Magnetism of Gadolinium Compounds*
18. Universität Wien, University Meets Public *Neutronen mag man eben ...*, several times in 2003/2004
19. Forschungszentrum Jülich, Mai 2003, *Magnetostriktion - neue Experimente und Modelle*
20. TU-Dresden, Habilitation, July 2004, *Selten-Erd-Verbindungen ohne Kristallfeldanisotropie - Magnetismus in Gd Verbindungen*
21. TU-Dresden, Habilitation, July 2004, *Physik der Musikinstrumente*
22. European Synchrotron Radiation Facility, July 2004 *Improving the thermoelectric performance of Skutterudites by studying Phonons*
23. Max Planck Institut Stuttgart, November 2004 *Numerical Modeling in Magnetism - McPhase 2.4*
24. TU-Wien, Juni 2005 *Orbital Ordering Phenomena in Rare Earth Systems*
25. Universität Wien, University Meets Public *Physik der Musikinstrumente ...*, several times in 2004/2005
26. TU-München (FRM-II), September 2005 *Orbitale Anregungen*
27. TU-Dresden, Oktober 2005 *Das Magnetoelastische Paradoxon*
28. Charles University Prague, April 2006 *The Magnetoelastic Paradox*
29. European Synchrotron Radiation Facility, August 2006 *The Magnetoelastic Paradox*
30. Universität Wien, Oktober 2006 *The Magnetoelastic Paradox*
31. University of Rio de Janeiro, instituto de fisica, Brazil, February 2007 *Modeling of Magnetic Properties: McPhase Package*
32. University of Sao Paulo, escola de engenharia de lorena, Brazil, February 2007 *The Magnetoelastic Paradox*

33. Montanuniversität Leoben, Austria, May 2007, *The Magnetoelastic Paradox*
34. Hiroshima University, Japan, September 2007 *Magnetism of High Spin Value Compounds*
35. Nagaoka University, Japan, September 2007 *Dynamics of Open Cage Compounds investigated by Inelastic Neutron and X-ray Scattering*
36. National Institute for Materials Science (NIMS), Tsukuba, Japan September 2007 *McPhase - a Mean Field Monte Carlo Phase Diagram Program*
37. Institute for Solid State Physics (ISSP), Chiba, Tokyo, Japan, September 2007 *Exotic High Spin Value Compounds*
38. University of Oxford, UK, October 2007 *Systems with Large Spin and the Magnetoelastic Paradox*
39. Oakridge National Laboratory, Tennessee, May 2009, *Going beyond the dipole approximation to improve the refinement of magnetic structures by neutron diffraction*
40. ISIS Spallation Source, Rutherford Appleton Laboratory, Didcot, UK, July 2009, *Going beyond the dipole approximation to improve the refinement of magnetic structures by neutron diffraction*
41. Tokyo Institute of Technology, Materials and Structures Laboratory, Yokohama Campus, July 2009 *Magnetic Structures and Magnetoelastic Effects*
42. University of Osaka, Onuki Laboratory, July 2009 *Going beyond the dipole approximation to improve the refinement of magnetic structures by neutron diffraction*
43. TU-Dresden, Jan 2010 *Going beyond the dipole approximation to improve the refinement of magnetic structures by neutron diffraction*
44. University of Salzburg, Dez 2010 *Going beyond the dipole approximation to improve the refinement of magnetic structures by neutron diffraction*
45. University of Vienna, Jan 2011 *Anisotropic Formfactor Effects in Magnetic Neutron Scattering*
46. Imperial College, University of London, Feb 2011 *Anisotropic Formfactor Effects in Magnetic Neutron Scattering*
47. Paul Scherrer Institute, Villigen, May 2011 *Anisotrope Formfaktor Effekte in der magnetischen Neutronenstreuung*
48. Institute of Low Temperature and Structure Research, Polish Academy of Sciences, Wroclaw, May 2011 *Does Anisotropy in Atomic Wavefunctions affect the Interpretation of Diffraction Experiments ?*

2.4 Organization of Scientific Conferences / Workshops

1. P. Rogl, M. Rotter, A. Grytsiv, X. Chen, G. Rogl *Journée d'Actinides 2005*, <http://www.univie.ac.at/jda>, SchloßWeikersdorf, Baden, Wien, April 2005
2. P. Rogl, M. Rotter, A. Grytsiv, X. Chen, G. Rogl *International Conference on Thermoelectrics 2006*, <http://www.univie.ac.at/ICT06/>, Wien, August 2006
3. M. Rotter *Magnetostrictive Materials and Magnetic Refrigeration*, <http://www.univie.ac.at/MMMR/>, Wien, August 2007
4. M. Rotter, R. Kremer *McPhase a versatile modelling suite for Magnetic Neutron Scattering*, 3 day school at Max Planck Institute Stuttgart, 31.1.-3.2.2011
5. M. Rotter, P. Gorria and J. A. Blanco 1st Workshop on McPhase - a Software Suite for Complex Magnetism, Gijon, Spain, May 10-13,2011
6. H. Kitazawa, M. Rotter *McPhase Workshop Tsukuba 2011*, Tsukuba, Japan, Nov 4, 2011
7. M. Boehm, M. H. Johnson, M. Rotter and J. A. Blanco *McPhase 2012*, Institute Laue Langevin, 11-14.9.2012

3 Third Party Funds

3.1 Self-active acquired Third Party Funds

- "High Performance bulk nanocrystalline materials: physics of synthesis and properties", 2008-2014, FWF - Nationales Forschungsnetzwerk (NFN) S10400, 2x310 KEURO
- "Dynamische Eigenschaften von Skutterudit Verbindungen", FWF Projekt P16778, 2003-2008, 186 KEURO
- "Magnetostriktion der leichten Selten Erd Metalle" FWF Projekt P17226 (2004-2006), 63 KEURO

3.1.1 Dilatometer - Projects

- Design and fabrication of 2 miniature capacitance dilatometers DIL20 for the Max Planck Institute Stuttgart, project management, Max Planck Institute Stuttgart (2010),30 KEURO
- Design and fabrication of 2 miniature capacitance dilatometers DIL20 for the Saha Institute of Nuclear Physics, project management, Saha Institute of Nuclear Physics, Calcutta, India (2009),30 KEURO
- Design and fabrication of a miniature capacitance dilatometer DIL20 for NIMS, project management, National Institute for Materials Science (NIMS), Tsukuba, Japan (2008),15 KEURO
- Design and fabrication of a miniature capacitance dilatometer DIL20 for University of Tennessee, project management, University of Tennessee - USA (2008),15 KEURO
- Design and fabrication of a miniature capacitance dilatometer DIL20 for University of Cambridge, project management, University of Cambridge - UK (2007),15 KEURO
- Design and fabrication of a miniature capacitance dilatometer DIL20 for ETH Zürich, project management, ETH Zürich - CH (2007),15 KEURO
- Design and fabrication of a miniature capacitance dilatometer DIL22 for FAENQUIL, project management, Faculdade de Engenharia Quimica de Lorena - Brazil (2006),12 KEURO
- Design and fabrication of a miniature capacitance dilatometer DIL22 for IFW- Dresden, project management, IFW Dresden - Germany (2005),12 KEURO
- Design and fabrication of a miniature capacitance dilatometer DIL22 for Charles University Prague, project management, Charles University Prague - CZ (2002),12 KEURO

3.2 Involvement in Third Party Projects

- "Electronic Correlations in Complex Oxides: Neutron and X-ray Scattering", Royal Society project DK07/019 at Oxford University
- Design and Construction of a 15/17 T Split-Coil Cryomagnet for the PANDA Neutron-Three-Axes-Spectrometer of FRM-II, HBFZ Project (2000-2003), Application and Management, 750 KEURO
- Design and Construction of the Neutron-Three-Axes-Spectrometer (PANDA) at the research reactor FRM-II, Munich (1998-2003), - Projectmanagement: Prof. Loewenhaupt, my task was the management of a team of 5 members to design and construct the secondary spectrometer, my task involved the coordination of work in Dresden and Munich, interesting and challenging group dynamic experiences, funding: Max Planck Institute Dresden (150KEURO), FRM-II (1500KEURO)
- "Magnetic Structures and Spin excitations in low symmetry intermetallic 4f compounds" (Project management: Prof. Loewenhaupt , project B7 und "Magnetic excitations and structures of heavy fermion systems" (Project management: Prof. Loewenhaupt , project B17) of the SFB 463 of the "Deutsche Forschungsgemeinschaft" ("Rare Earth transition metal compounds: structure - magnetism - transport"), Applications and defense, contributions to the project management and scientific work 1996 and 1998-2004, B7: 545 KEURO, B17 260 KEURO
- "Forced Magnetostriktion measured by Capacitance Dilatometry", FWF Projekt P11239 (1996-1998), Project management: Prof H. Müller, application and project work , 80 KEURO

- "Capacitive Measurement of Thermal Expansion and Magnetostriction of Inter-Metallic Compounds", FWF Projekt P9203 (1992-1994), application and project work (PhD), 60KEURO

3.3 Organisation and Management of University Projects

Organisation of a laboratory for low temperature experiments at the TU Dresden 1995/96 :

After the political system change in Germany (1989) there was a major effort undertaken to build a new scientific infrastructure. I could contribute and realise new ideas. I learned about the difficulties in the management of large scale projects. Collaboration with Dr. M. Doerr, installations of a 12T-VSM, an AC susceptometer, and of 12 / 17T cryomagnet systems

Design and Fabrications of various miniature capacitance dilatometers (since 1994) : cooperation with TU Vienna (DIL20, DIL22 etc.), the TU Dresden (DIL22, DIL18), Patent at university of Vienna

Projects on numerical modelling :

- McPhase www.mcphase.de (simulation suite for magnetic properties, phase diagrams, excitations etc.), Management since 2002, Development Team:
 - Till Hoffmann, University of Oxford, Department of Physics Clarendon Laboratory, UK
 - Duc Manh Le, R. Schedler, Helmholtz-Zentrum Berlin für Materialien und Energie, Berlin, Germany
 - M. Doerr, Institut für Festkörperphysik, Technische Universität Dresden, Germany
 - P. Fabian Hoffmann, Forschungszentrum Jülich, Germany
 - S. Rotter, Wien, Austria
 - M. Banks, Max Planck Institute, Stuttgart, Germany
- Macromagnetic Simulations (Finite - Element Methods) to Optimize the guide field for polarised neutrons and the force distribution of a 15/17 T Split Coil cryomagnet in the vicinity of a highly magnetic biological neutron protective screening at PANDA (1998-2002)
- Monte Carlo Simulations of the PANDA three axes spectrometer (www.physik.tu-dresden.de/iapd/panda.php) 1998-2002.

4 Supervision of Theses

4.1 Diploma Theses

Technical University Dresden :

- A. Sippel,
- M. Frontzek,
- E. Faulhaber,
- A. Dreyhaupt,
- W. Lorenz,
- M. Zschintzsch

University Vienna :

- A. Barcza,
- Nasir Mehboob

4.2 PhD Theses

Technical University Dresden :

- A. Solodovnikov,
- R. Schedler,
- M. Frontzek,
- S. Raasch,
- C. Sierks,
- S. Kramp,
- A. Schneidewind

University Vienna :

- A. Devishvili,
- D. Manh Le (Univ. of London),
- Y. XinLin,
- L. Zhang

University of Oxford :

- Peter Babkevich
- Greame Johnstone
- Heather Lewtas

Max Planck Institute Dresden :

- Yi-Ying Chin

5 Teaching

Guest Professor at Technical University Dresden (WS 2005/06)

5.1 Lecturing

Technical University Dresden:

- SS 2003 "Introduction to neutron scattering" - 2 Wst
- WS 2005 /06 "Simulations using McPhase" - 2 Wst

University of Vienna:

- WS 2003/04 "Magnetism" - 2 Wst.
- SS 2004 "Introduction to neutron scattering" - 2 Wst
- WS 2004/05 "Magnetism" - 2 Wst.
- WS 2004/05 "Numerical Methods in Magnetism" - 1 Wst.
- WS 2006/07 "Magnetism" - 2 Wst.
- WS 2006/07 "Numerical Methods in Magnetism" - 1 Wst.
- SS 2007 "Neutron Scattering and Phase Transitions" - 2Wst.
- SS 2007 "Measurement and Interpretation of Bulk Properties" - 2Wst.
- WS 2007/08 "Physicochemical Properties of Solids" - 3Wst

Escola de Engenharia de Lorena, Brazil:

- Feb. 2007 "Magnetoelastic Properties of Solids" - 2 Wst.

University of Tennessee, Knoxville, USA:

- May 2009 "Magnetoelastic Properties of Solids" - 2 Wst.

University of Oxford, UK:

- 2009/10 Lectureship in "Atomic and Nuclear Physics" (Mansfield College) - 4 Wst.

5.2 Physics Practical Training and Seminars

TU - Vienna (1996-98): Supervision of practical training of undergraduate students, metal physics practical training

TU - Dresden (2000-2003): training of undergraduate and graduate students, seminars for students of medicine, engineers, etc. (4Wst.)

5.3 Public Outreach

Talks/Seminars in the framework of the programmes "University Meets Public", "Childrens University" and "Playroom Physics" of the University of Vienna ("We like neutrons", "Physics of musical instruments", "Physics of the clarinet", "Paradoxes in Physics", "Flying with magnetism - is this possible?")

5.4 Teaching qualification for music (clarinet) (University for Music, Vienna)

- Teaching in clarinet, piano
- Coaching of singers and instrumentalists in concerts

6 Scientific Workplaces

Austria

- Technical University of Vienna, Institute for Experimental Physics (4 years)
- University of Vienna, Institute for Physical Chemistry (4 years)

Germany

- Technical University Dresden, Institute for Solid State Physics (6 years)
- Max Planck Institute for Chemical Physics of Solids (1.5 years)
- Hahn Meitner Institute, Berlin (3 months)
- Munich research reactor FRM II, Munich (2 Months)

UK

- University of London - Birkbeck College (1 year)
- Rutherford Appleton Laboratory, Oxford (1,5 months)
- University of Oxford, Clarendon Laboratory (2 years)

France

- Institute Laue Langevin, Grenoble (6 months)
- Grenoble High Magnetic Field Laboratory (1 week)
- European Synchrotron Radiation Facility, Grenoble (2 months)
- Laboratoire Leon Brillouin, Saclay (2 weeks)

Denmark

- Riso National Laboratory (1 month)

Netherlands

- Nijmegen High Magnetic Field Laboratory (1 week)

Brazil

- University Sao Paulo, Escola de Engenharia de Lorena (1 month)

Japan

- SPRING8, Synchrotron Facility (1month)

USA

- National High Magnetic Field Laboratory, Tallahassee (1,5 month)
- University of Tennessee, Knoxville (2 weeks)

7 Science Management and Institutional Engagement

Member of the "Fakultätsrat", Faculty of Chemistry, University of Vienna

Publication in the University Newsletter, University of Vienna

Articles in Newspapers

Web Site Responsible, Max Planck Institute Dresden

Safety Representative, Max Planck Institute Dresden

Radiation Protection Officer, Max Planck Institute Dresden

Editor of Scientific Report, Max Planck Institute Dresden

Coordinator of the Max Planck (Germany) Postech (Korea) Center for Complex Phase Materials

Presentations within the framework University Programs : "University Meets Public",
"Kinderuniversität", "Spielraum Physik"

- "Neutronen mag man eben",
- "Physik der Musikinstrumente",
- "Physik der Klarinette",
- "Paradoxa in der Physik",
- "Magnetisch Fliegen - geht das ?"

7.1 Consultant and Referee

ILL Subcommittee : Evaluation of Scientific Proposals for inelastic magnetic neutron scattering (2006-2008)

ILL Beirat der österreichischen Akademie der Wissenschaften : this council consults the Austrian ministry for science on the membership at the Institute Laue Langevin, Grenoble (2004-2008)

AUSTRON : Association for the construction of an Austrian Large Scale Facility (2003-2007)

Referee for Scientific Journals (since 1996) : e.g. Phys. Rev., J. Phys. Cond. Mat. etc., ca 15 reports/year

ÖAAD (Austrian Academic Exchange Agency) : referee for scientific projects (since 2008)

Ministry of Science and Environmental Protection of the Republic of Serbia : Referee for Serbian national project proposals in basic sciences (since 2005)

Royal Society, UK : referee for scientific projects (since 2007)

Isaac Newton Trust, UK : referee for scientific projects (since 2007)

International Collaboration Center of Institute for Materials Research ,Tohoku University(ICC-IMR), Japan (since 2010)

7.2 Some Important Scientific Cooperation Partners

- Prof. K. McEwen, University of London, UK (Quadrupolar Effects in 4f und 5f systems),since 1992
- Prof. A. Boothroyd, University of Oxford, UK (Orbital order and excitations), since 2008
- Prof. J. Brooks, National High Magnetic Field Laboratory, Tallahassee, US (magnetostriction in ultrahigh magnetic fields),200-2008
- Prof. R. Settai, Osaka University, Toyonaka, Japan (development of McPhase),2002-2006
- Prof. M. Richter, IFW Dresden, Germany (ab initio Modelling of magnetostriction),1999-2004

- Prof. J. Jensen, Niels Bohr Institute, DK (Simulation techniques, Magnetoelastic Effects), since 1991
- Prof. M. Loewenhaupt, TU - Dresden (Neutron scattering), since 1991
- Prof. E. Bauer, R. Grössinger TU - Wien, A (Transport, High Magnetic Fields, Magnetostriction), since 1990
- Prof. V. Sechovsky, Charles University, Prague, CZ (single crystal fabrication, dilatometry), 1996-2004
- Dir. W. G. Stirling, European Synchrotron Radiation Facility, Grenoble, F (Magnetostriction in rare earth single crystals) ,2004-2006
- Dir. W. Press / R. Wagner, Dr. A. Hiess (ILL, support in a PhD thesis on - neutron scattering on Gd compounds), 2004-2010
- Prof. K. Sandeman, University Cambridge/London, UK (Magnetocaloric Materials), since 2006
- Prof. H. Tjeng, Max Planck Institute for Chemical Physics of Solids, Dresden, since 2010
- Prof. J. A. Blanco, Universidad de Oviedo, Spain, since 1992