

1978 -1987

1. G. Vogl, W. Mansel, W. Petry, V. Gröger
A comparison of Binding and caging of $^{57}\text{Co}/^{57}\text{Fe}$ impurities and trapped interstitials in Aluminium and silver
Hyperfine Interactions **4**, 681-684 (1978)
2. S. Mantl, W. Petry, G. Vogl
Anisotropy of the Diffusional Broadening of the Mössbauer resonance in Al $^{57}\text{Co}/^{57}\text{Fe}$
Proceedings of the 7th Div. Conference on Nucl. Phys. Div. of the EPS 'Nucl. Phys. Methods
Mater. Res., Darmstadt 1980, Vieweg, 427 (1980)
3. W. Petry, G. Vogl, W. Mansel
Determination of Interstitial Sites for Localized Diffusion from Interference of Mössbauer-Radiation
Phys. Rev. Lett. **45**, 1862-1865 (1980)
4. W. Petry, G. Vogl, W. Mansel
Restricted Diffusion of Iron in Aluminium after Electron Irradiation
Hyperfine Interactions **10**, 639-642 (1981)
5. S. Klaumünzer, W. Petry
Electron Radiation Damage in Amorphous $\text{Pd}_{80}\text{Si}_{20}$ at 4.6 K
Phys. Lett. A **87**, 314-316 (1982)
6. W. Petry, G. Vogl
Mössbauer Study of Localized Diffusion in an Interstitial Cage, I. Model Calculations
Z. Phys. B **45**, 207-213 (1982)
7. W. Petry, G. Vogl, W. Mansel
Mössbauer Study of Localized Diffusion in an Interstitial Cage, II. Experiment: Iron in an Aluminium Host Lattice
Z. Phys. B **46**, 319-329 (1982)
8. K. Sassa, W. Petry, G. Vogl
Mössbauer Study of Defect Trapping at ^{57}Co in Cold Worked Aluminium
'Point Defects and Defect Interactions in Metals', Eds. J.I. Takamura, M. Doyama, M. Kiritani,
University of Tokyo Press, Tokyo, 213 (1982)
9. G. Vogl, W. Petry, K. Sassa, S. Mantl
Mössbauer Study of Defect - Impurity Interaction and Impurity Diffusion in Metals
Point Defects and Defect Interactions in Metals, Eds. J.I. Takamura, M. Doyama, M. Kiritani,
University of Tokyo Press, Tokyo, 33-40 (1982)
10. S. Mantl, W. Petry, K. Schröder, G. Vogl
Diffusion of Iron in Aluminium Studied by Mössbauer Spectroscopy
Phys. Rev. B **27**, 5313-5331 (1983)
11. W. Petry
Diffusion in metals studied by quasielastic Mössbauer spectroscopy on single crystals
Trends in Mössbauer Spectroscopy, ed by Gütlich, G.M. Kalvius, University of Mainz, 193 (1983)
12. W. Petry, M. Brüssler, V. Gröger, H.G. Müller, K. Sassa, G. Vogl
The nature point defects produced by cold working of metals studied with Mössbauer spectroscopy and perturbed γ - γ angular correlation
Hyperfine Interactions **15/16**, 371-374 (1983)
13. K. Sassa, W. Petry, G. Vogl
The Nature of Point Defects in Plastically Deformed Aluminium
Philos. Mag. A **48**, 41-61 (1983)

14. I.S. Anderson, A. Heidemann, W. Petry
Note on the possibility of installing IN13 on a thermal beam tube
ILL Technical Report 84AN07T (1984)
15. J.F. Barthelemy, I.S. Anderson, A. Heidemann, W. Petry
IN13 monochromator furnace with a fixed temperature gradient
ILL Technical Report 84BA06T (1984)
16. B. Toudic, R.E. Lechner, H. Cailleau, W. Petry
Critical phenomena in $C_{18}D_{10}H_4$ observed by incoherent neutron scattering
Proceedings of the International Symposium on 'Neutron Scattering', Berlin, Aug. 1984
HMI Report HMI-B, 411 (1984)
17. G. Vogl, W. Miekeley, A. Heidemann, W. Petry
Anomalous fast diffusion of cobalt in β -Zirconium: evidence for two different jump frequencies from quasielastic neutron scattering
Phys. Rev. Lett. **53**, 934-937 (1984)
18. G. Schumacher, W. Petry, S. Klaumünzer, G. Wallner, G. Weck
Defect production by fast neutrons and thermal recovery in amorphous $Pd_{80}Si_{20}$
3th Int. Conf. Structure of Non-Cryst. Materials, J. Phys. Colloques **46-C8**, 603-608 (1985)
19. G. Vogl, W. Petry
Diffusion in metals studied by Mössbauer spectroscopy and quasielastic neutron scattering
'Festkörperprobleme' (Adv. Solid State Phys., Ed. P. Grosse, Vieweg, **25**, 655-667 (1985)
20. W. Petry, G. Vogl, T. Flottmann, A. Heidemann
Quasielastic neutron scattering study of fast diffusion on Co in β -Zr
Atomic Transport and Defects in Metals by Neutron Scattering, Eds. C. Janot et.al., Springer
Proceedings in Physics **10**, 134-138 (1986)
21. K.H. Steinmetz, G. Vogl, W. Petry, K. Schroeder
Diffusion of iron in copper studied by Mössbauer spectroscopy on single crystals
Phys. Rev. B **34**, 107-116 (1986)
22. B. Toudic, H. Cailleau, R.E. Lechner, W. Petry
Direct observation of critical phenomena by incoherent neutron scattering
Phys. Rev. Lett. **56**, 347-350 (1986)
23. T. Flottmann, W. Petry, R. Serve, G. Vogl
A combined furnace for crystal growth and neutron scattering
Nucl. Instrum. Methods in Phys. Res. A **260**, 165-170 (1987)
24. T. Flottmann, W. Petry, G. Vogl, A. Heiming
Direct evidence for self-diffusion in β -titanium via vacancies
Mater. Science Forum **15-18**, 463-468 (1987)
25. F. Fujara, W. Petry
Fast local motion around T_g in a molecular glass as observed by incoherent neutron scattering
Europhys. Lett. **4**, 921-927 (1987)
26. W. Petry, G. Vogl
Potential and limits of nuclear methods in diffusion studies
Mater. Science Forum **15-18**, 323-348 (1987)
27. W. Petry, G. Vogl, A. Heidemann, K.H. Steinmetz
Anomalously fast diffusion of cobalt in β -zirconium. A quasi-elastic neutron scattering (QNS) study
Philos. Mag. A **55**, 183-201 (1987)

28. B. Toudic, H. Cailleau, R.E. Lechner, J. Gallier, W. Petry, D. Perrin
Local critical dynamics in a molecular crystal studied by incoherent neutron scattering and nuclear magnetic resonance
'Dynamics of Molecular Crystals', Ed. J. Lascombe, Elsevier, 529-534 (1987)
29. W. Wagner, M McL Ferguson, H. Wollenberger, W. Petry
A new application of small angle neutron scattering in materials research
Z. Metallk. **78**, 603-606 (1987)
30. Y. Yoshida, W. Miekeley, W. Petry, R. Stehr, K.H. Steinmetz, G. Vogl
Anomalous fast diffusion of Fe in β -Zr-Fe alloys, a Mössbauer study
Mater. Science Forum **15-18**, 487-492 (1987)

1988

31. B. Frick, D. Richter, W. Petry, U. Buchenau
Study of the glass transition order parameter in amorphous polybutadiene by incoherent neutron scattering
Z. Phys. B **70**, 73-79 (1988)
32. F. Fujara, W. Petry
Dynamics of the glass instability of a molecular glass as observed by incoherent neutron scattering
Polymer Motion in Dense Systems, Eds. D. Richter, T. Springer, Springer Proceedings in Physics **29**, 149-153 (1988)
33. F. Fujara, W. Petry, W. Schnauss, H. Sillescu
Reorientation of benzene in its crystalline state: a model case for the analogy between nuclear magnetic resonance spin alignment & quasielastic incoherent neutron scattering
J. Chem. Phys. F **89**, 1801-1806 (1988)
34. W. Petry, T. Flottmann, A. Heimig, J. Trampenau, M. Alba, G. Vogl
Atomistic study of anomalous self-diffusion in bcc titanium
Phys. Rev. Lett. **61**, 722-725 (1988)
35. A.R. Rennie, W. Petry, B. Stühn
Motion of long alkanes in polyethylene melts
Polymer Motion in Dense Systems, Eds. D. Richter et.al., Springer Proceedings in Physics **29**, 235-239 (1988)
36. G. Schumacher, S. Klaumünzer, W. Petry, U. Dedek
Irradiation induced compositional and topological defects in glassy $Cu_{64}Ti_{36}$
J. Phys. F **18**, 1681-1688 (1988)
37. G. Schumacher, S. Klaumünzer, W. Petry, G. Wallner, W. Weck, U. Dedek
Irradiation induced compositional and topological defects in glassy CuTi and CuZr alloys
Proc. 6th Int. Conf. on Liquid & Amorphous Metals, Z. Phys. Chem. **157**, 313-318 (1988)
38. W. Wagner, R. Lang, H. Wollenberger, W. Petry
Decomposition kinetics of Cu-24at% Ni-8at% Fe investigated by SANS and APFIM, Ed. G.W. Lorimer, The Institute of Metals
Phase Transformations **87**, 566-569 (1988)

1989

39. P. Ageron, H.G. Börner, Th. Brückel, R. Gähler, R. Golub, B. Hamelin, J. Jolie, G.J. Kearley, G. Kögel, B. Krusche, H.J. Lauter, M.S. Lehmann, D.K. Liss, A. Magerl, W. Petry, A. Robert, S. Robinson, P. Schillebeeckx, K. Schreckenbach, F. Tasset, W. Trifthauser, C. Vettier, P.J. Webster, C. Wilkinson
Proposals for the "3ème souffle"
Presentation on 31 August 1989, ILL Technical Report
40. E. Bartsch, F. Fujara, M. Kiebel, W. Petry, H. Sillescu
Inelastic neutron scattering experiments on Van der Waals glasses - A test of recent microscopic theories of the glass transition
Ber. Bunseng. Phys. Chem. **93**, 1252-1259 (1989)
41. E. Bartsch, M. Kiebel, F. Fujara, H. Sillescu, W. Petry
Dynamics of ortho-terphenyl in its glassy and supercooled liquid state as observed by incoherent neutron scattering
Dynamics of Disordered Materials, Springer Proceedings in Physics **37**, 135-139 (1989)
42. H.D. Carstanjen, X.Y. Huang, W. Kieninger, R. Kirchheim, J. Rush, T. Udovic, J. Glinka, W. Petry
A neutron scattering study of deuterium trapping by dislocations
Z. Phys. Chem. **163**, 203-204 (1989)
43. W. Doster, S. Cusack, W. Petry
Scaling properties of fast motions in a globular protein
Dynamics of Disordered Materials, Springer Proceedings in Physics **37**, 120-124 (1989)
44. W. Doster, S. Cusack, W. Petry
Dynamical transition of myoglobin revealed by inelastic neutron scattering
Nature **337**, 754-756 (1989)
45. F. Guillaume, G. Coddens, A.J. Dianoux, W. Petry, M. Rey-Lafon, C. Sourisseau
Molecular motions of decylammonium chains in the perovskite type layered compound $(C_{10}H_{21}NH_3)_2MnCl_4$
Mol. Phys. **67**, 665-679 (1989)
46. A. Heiming, W. Petry, J. Trampenau, M. Alba, C. Herzig, G. Vogl
Phonons and martensitic phase transitions in pure bcc Ti and bcc Zr
Phys. Rev. B **40**, 11425-11428 (1989)
47. E. Jorra, H. Franz, J. Peisl, G. Wallner, W. Petry, R. Birringer, H. Gleiter, T. Haubold
Small angle neutron scattering for nanocrystalline Pd
Philos. Mag. B **60**, 159-168 (1989)
48. G. Meier, J. Fujara, W. Petry
Local side group dynamics of Poly(methyl-phenyl-siloxane) PMPS as studied by quasielastic neutron scattering
Macromolecules **22**, 4421-4425 (1989)
49. W. Petry, A. Heiming, J. Trampenau, M. Alba, C. Herzig, H.R. Schober
Phonons at martensitic phase transitions
Phonons 89, World Scientific, Singapore (Proceedings of the 3rd Conference on 'Phonon Physics' and the 6th International Conference on 'Phonon Scattering in Condensed Matter', Heidelberg, Aug, 1989), 1095 (1989)
50. W. Petry, A. Heiming, J. Trampenau, M. Alba, G. Vogl
Strong phonon softening in the bcc phase of titanium
Physica B **156 & 157**, 56-58 (1989), Proceedings of the Int. Conf. on Neutron Scattering, ICNS'88, Grenoble, France
51. W. Petry, A. Heiming, J. Trampenau, G. Vogl
On the diffusion mechanism in the bcc phase of the group 4 metals
Defect and Diffusion Forum **66-69**, 157-174 (1989)

52. W. Petry, M. Kiebel, H. Sillescu
Primary glass transition in a molecular glass as observed by incoherent neutron scattering
Dynamics of Disordered Materials, Springer Proceedings in Physics **37**, 58-63 (1989)
53. W.A. Phillips, U. Buchenau, N. Nücker, A.J. Dianoux, W. Petry
The dynamics of glassy and liquid selenium
Phys. Rev. Lett. **63**, 2381-2384 (1989)
54. G. Vogl, W. Petry, T. Flottmann, A. Heiming
Direct determination of the self-diffusion mechanism in bcc β -titanium
Phys. Rev. B **39**, 5025-5034 (1989)
55. G. Wallner, E. Jorra, H. Franz, J. Peisl, R. Birringer, H. Gleiter, T. Haubold, W. Petry
Small angle scattering from nanocrystalline Pd
Mater. Res. Soc., Symp. Proc. **132**, 149-153 (1989)
56. P. Wochner, E. Burkel, J. Peisl, C.M.E. Zeyen, W. Petry
Quasielastic broadening of the coherent diffuse scattering from the orientational glass $(KBr)_{1-x}(KCN)_x$
Dynamics of Disordered Materials, Springer Proceedings in Physics **37**, 280-285 (1989)
- 1990**
57. K. Hilfrich, W. Kölker, W. Petry, O. Schärpf, E. Nembach
Revision of the Fe-Si phase diagram: no B2-phase for 7,6 at% < cSi < 10.2 at%
Scripta Metallurgica et Materialia **24**, 39-44 (1990)
58. W. Petry, A. Heiming, J. Trampenau
Phonons at martensitic phase transitions of bcc-Ti, bcc-Zr and bcc-Hf
MRS Proceedings Series (Proceedings of the Symposium on 'Neutron Scattering for Materials Science', Boston, Nov. 27 - Dec. 2.1989), **166**, 161-173 (1990)
59. W. Doster, S. Cusack, W. Petry
Dynamic instability of liquid-like motions in a globular protein observed by inelastic neutron scattering
Phys. Rev. Lett. **65**, 1080-1083 (1990)
- 1991**
60. T. Albrecht, R. Jaeger, W. Petry, R. Steiner, G. Strobl, B. Stühn
Molecular dynamics in perfluoro-n-icosane. III., Oscillatory and diffusive translational motion
J. Chem. Phys. **95**, 2817-2822 (1991)
61. M. Besnard, M. Fouassier, J.C. Lassegues, A.J. Dianoux, W. Petry
Incoherent Neutron Scattering Study of the Pseudorotational and Diffusive Motions of Cyclopentane in Condensed State
Mol. Phys. **73**, 5, 1059-1076 (1991)
62. J.C. Cook, W. Petry, A. Heidemann, B. Frick
IN10B: High energy resolution measurements over extended energy transfer ranges on IN10
ILL-Report 91 **CO06T** (1991)
63. O. Debus, H. Zimmermann, E. Bartsch, F. Fujara, M. Kiebel, W. Petry, H. Sillescu
Comparative study of the Debye-Waller factor anomaly at the glass transition of isotopically substituted orthoterphenyls
Chem. Phys. Lett. **180**, 271-274 (1991)
64. W. Doster, S. Cusack, W. Petry
Structural dynamics of proteins, scaling behaviour and liquid glass transition
J. Non-Crystalline Solids **131**, Part 1, 357-361 (1991)

65. F. Fujara, W. Petry, R.M. Diehl, W. Schnauss, H. Sillescu
Localized motion in supercooled glycerol as measured by 2H-NMR spin-lattice relaxation and incoherent neutron scattering
Europhys. Lett. **14**, 563-568 (1991)
66. A. Heiming, W. Petry, J. Trampenau
Are martensitic phase transitions in pure Group 3 and 4 metals driven by lattice vibrations?
J. Phys. IV - Colloque C4 - Supplément au J. Phys. III **1**, C4/83-88 (1991)
67. A. Heiming, W. Petry, J. Trampenau, M. Alba, C. Herzig, H.R. Schober, G. Vogl
Phonon dispersion of the bcc-phase of the Group 4 metals. II. bcc-Zirconium, a model case of dynamical precursors of martensitic transitions
Phys. Rev. B **43**, 10948-10962 (1991)
68. A. Heiming, W. Petry, G. Vogl, J. Trampenau, W. Miekeley, J. Cockcroft
The temperature dependence of the lattice parameters of pure bcc-Zr and bcc-Zr-2at%Co
J. Phys. Condensed Matter, **4**, 727-733 (1991)
69. A. Heiming, W. Petry, G. Vogl, J. Trampenau, H.R. Schober, J. Chevrier, O. Schärpf
The local displacement field around Co and Nb solutes in ω -phase forming bcc-Zr at high temperatures
Z. Phys. B **85**, 239-248 (1991)
70. K. Hilfrich, T. Ebel, W. Petry, O. Schärpf, E. Nembach
Order in Iron - 30 at % Aluminium investigated by neutron scattering
Scripta Metallurgica et Materialia **25**, 8, 1857-1862 (1991)
71. S. Klaumuenzer, W. Petry, G. Schumacher
A search for particle tracks in the metallic glass Pd₈₀Si₂₀
Nucl. Tracks Radiat. Meas. **19**, 1-4, 907-910 (1991)
72. M. Müller-Stach, H. Franz, U. Herr, J. Peisl, W. Petry, G. Wallner
Microstructure of nanocrystalline TiO₂ and Ni at different degrees of compactness
J. Appl. Crystallogr. **24**, 603-606 (1991)
73. W. Petry
Phonons at martensitic phase transitions of bcc-Ti, bcc-Zr and bcc-Hf
Proceedings of the "3ème colloque d'expression française sur les transitions de phase" Djerba (Tunisie), March 19-24.1990
Phase Transitions **31**, 119-136 (1991)
74. W. Petry, E. Bartsch, F. Fujara, M. Kiebel, H. Sillescu and B. Farago
Dynamic anomaly in the glass transition region of orthoterphenyl
Z Phys. B - Condens.Matter **83**, 175-184 (1991)
75. W. Petry, A. Heiming, C. Herzig, J. Trampenau
On the diffusion mechanism in bcc metals, a neutron scattering approach
Trans.Tech.Publ. (Proceedings Symposium on 'Atomic Migration and Defects in Materials', Indianapolis, Oct. 2-6, 1989)
Defect and Diffusion Forum **75**, 211-228 (1991)
76. W. Petry, A. Heiming, J. Trampenau, M. Alba, C. Herzig, H.R. Schober, G. Vogl
Phonon dispersion of the bcc-phase of the group 4 metals. I. bcc-Titanium
Phys. Rev. B **43**, 10933-10947 (1991)
77. J. Trampenau, A. Heiming, W. Petry, M. Alba, C. Herzig, W. Miekeley, H.R. Schober, G. Vogl
Phonon dispersion of the bcc-phase of the Group 4 metals. III. bcc-Hafnium
Phys. Rev. B **43**, 10963-10969 (1991)

78. W. Wagner, R.S. Averback, H. Hahn, W. Petry, A. Wiedenmann
Sintering characteristics of nanocrystalline TiO₂ - A study combining small angle neutron Scattering and Nitrogen Absorption-BET
J. Mater. Res. **6**, 2193-2198 (1991)
79. W. Wagner, A. Wiedenmann, W. Petry, A. Geibel, H. Gleiter.
Magnetic microstructure of nanophase Fe, studied by small angle neutron scattering
Mater. Res. **6**, 2305-2311 (1991)

1992

80. E. Bartsch, O. Debus, F. Fujara, M. Kiebel, W. Petry, H. Sillescu
Dynamic anomalies at the glass transition of the van der Waals glass tri- α -naphthylbenzene
Physica B **180 & 181**, 808-810 (1992)
81. J.C. Cook, W. Petry, A. Heidemann, J-F. Barthélemy
A dynamic range upgrade for neutron backscattering spectroscopy
Nucl. Instrum. & Methods in Phys. Res. **A 312**, 553-560 (1992)
82. J. Etrillard, B. Toudic, H. Cailleau, M.H. Lemée, G. Coddens, W. Petry
Incoherent neutron scattering around displacive incommensurate structural phase transitions
Physica B **180 & 181**, Part A, 342-344 (1992)
83. F. Guillaume, M. Rey-Lafon, W. Petry, A.J. Dianoux, F. Rieutord
Reorientational motions of the alkyl chains in C₁₀H₂₁ND₃Cl bidimensional crystal
Physica B **180 & 181**, Part B, 717-719 (1992)
84. K. Hilfrichs, K. Nembach, W. Petry, O. Schärpf, E. Nembach
Superlattices in iron-rich iron aluminium-alloys
Physica B **180 & 181**, Part B, 588-590 (1992)
85. G. Hohlweg, B. Holzer, W. Petry, G. Strobl, B. Stühn
Neutron scattering study of segmental dynamics in the disordered regions of partially crystalline polyethylene
Macromolecules **25**, 23, 6248-6254 (1992)
86. M. Kiebel, E. Bartsch, O. Debus, F. Fujara, W. Petry, H. Sillescu
Secondary relaxation in the glass-transition regime of ortho-terphenyl observed by incoherent neutron scattering
Phys. Rev. B **45**, 18, 10301-10305 (1992)
87. W. Petry
Martensitic transitions in bcc metals: diffusion and phonons
Habilitationsschrift, Sektion Physik, LMU München (1992)
88. H.R. Schober, W. Petry, J. Trampenau
Migration enthalpies in FCC and BCC metals
J. Phys. Cond. Matter **4**, 47, 9321-9338 (1992)
89. J. Trampenau, W. Petry, A. Heiming
Phonons in the bcc phase of Sc
Physica B **180 & 181**, Part A, 363-365 (1992)
90. W. Wagner, P. Böni, A. Wiedenmann, W. Petry
Neutron scattering study of magnetic correlations in nanostructured Fe
Physica B **180 & 181**, Part A, 105-107 (1992)
91. A. Wiedenmann, Q. Li, W. Wagner, W. Petry
Fractal aggregation in Fe-Ni alloys during high temperature annealing
Physica B **180 & 181**, Part B, 793-794 (1992)

1993

92. E. Bartsch, F. Fujara, B. Geil, M. Kiebel, W. Petry, W. Schnauss, H. Sillescu, J. Wuttke
Signatures of the glass transition in a van-der-Waals liquid seen by neutrons and NMR
Physica A **201**, 223-236 (1993)
93. A.J. Dianoux, W. Petry, D. Richter, (Hrsg.)
Proceedings of the 2nd International Workshop "Dynamics of disordered materials"
Grenoble, France, March 22.-24. 1993
Physica A **201**, 1-3, R13 – R14 (1-456) (1993)
94. M. Ferrand, A.J. Dianoux, W. Petry, G. Zaccai
Thermal motions and function of bacteriorhodopsin in purple membranes: Effects of temperature and hydration studied by neutron scattering
Proc. Natl. Acad. Sci. USA, Biophysics Vol. **90**, 9668-9672 (1993)
95. M. Ferrand, W. Petry, A.J. Dianoux, G. Zaccai
Dynamical transition of bacteriorhodopsin in purple membranes revealed by neutron scattering: a relation between structure, dynamics and function
Physica A **201**, 1-3, 425-429 (1993)
96. F. Güthoff, W. Petry, C. Stassis, A. Heiming, B. Hennion, C. Herzig, J. Trampenau
Phonon dispersion of bcc La
Phys. Rev. B **47**, 5, 2563-2572 (1993)
97. K. Hilfrich, W. Kölker, W. Petry, O. Schärpf, E. Nembach
Growth of antiphase domains in DO3 long-range ordered iron-rich iron-silicon alloys
Z. Metallkunde **84**, 4, 255-258 (1993)
98. W. Petry
Warum sind Festkörperforscher so sehr an Neutronen interessiert?
TUM 125 Jahre, Mitteilungen der Technischen Universität München **4**, 35-37 (1992/93)
99. W. Petry, J. Trampenau, C. Herzig
Phonon dispersion of β -Sc
Phys. Rev. B **48**, 2, 881-886 (1993)
100. H.R. Schober, W. Petry
Lattice vibrations
Mater. Science and Tech., Eds. R.W. Cahn, P. Haasen, E.J. Kramer, **1**, 289-355 (1993)
101. J. Trampenau, W. Petry, C. Herzig
Temperature dependence of the lattice dynamics of chromium
Phys. Rev. B **47**, 6, 3132-3137 (1993)
102. G. Vogl, O.G. Randl, W. Petry, J. Hünecke
Quasielastic neutron scattering study of the Ni diffusion mechanism in the intermetallic alloy NiSb
J.Phys. Condens. Matter **5**, 39, 7215-7230 (1993)
103. J. Wuttke, M. Kiebel, E. Bartsch, F. Fujara, W. Petry, H. Sillescu
Relaxation and phonons in viscous and glassy orthoterphenyl by neutron scattering
Z. Phys. B **91**, 3, 357-365 (1993)

1994

104. F. Güthoff, B. Hennion, C. Herzig, W. Petry, H.R. Schober, J. Trampenau
Lattice dynamics and self-diffusion in niobium at elevated temperatures
Journal of Physics, Condensed Matter **6**, 31, 6211-6220 (1994)
105. K. Hilfrich, W. Kölker, W. Petry, O. Schärpf, E. Nembach
The states of order and the phase diagram of $Fe_{1-x}Si_x$, $0.06 \leq x \leq 0.20$, investigated by neutron scattering
Acta metall. et mater. **42**, 3, 743-748, (1994)

106. K. Hilfrich, W. Petry, O. Schärpf, E. Nembach
Phase diagram, superlattices and antiphase domains of Fe_3Al_x , $0.75 \leq x \leq 1.3$, investigated by neutron scattering
Acta metall. et mater. **42**, 3, 731-741, (1994)
107. H. Leyser, T. Olden, A. Schulte, W. Doster, W. Petry
Volume effects on the relaxation of supercooled liquids probed by high pressure di-electric spectroscopy
Bull.Am.Soc.Phys. **39**, 1808 (1994)
108. W. Petry
Editorial
Nuclear Physics News, Europe Vol. **4**, No 3, 4 (1994)
109. G. Vogl, W. Petry
Wie springen die Atome in Metallen?
Physikalische Blätter **50**,10, 925-928 (1994)
110. J. Wuttke, J. Hernandez, G. Li, G. Coddens, H.Z. Cummins, F. Fujara, W. Petry, H. Sillescu.
Neutron and light scattering study of supercooled glycerol
Phys. Rev. Lett. **72**, 19, 3052-3055 (1994)

1995

111. E. Bartsch, F. Fujara, J.F. Legrand, W. Petry, H. Sillescu, J. Wuttke,
Dynamics in viscous orthoterphenyl: Results from coherent neutron scattering
Phys. Rev. E **52**, 1, Part B, 738-745 (1995)
112. E. Kentzinger, M.C. Cadeville, V. Pierron-Bohnes, W. Petry, B. Hennion.
Migration enthalpy in intermetallic compounds
Calphad XXIV - Kyoto, May 21-26, 1995 (Conference Proceedings)
113. H. Leyser, A. Schulte, W. Doster, W. Petry
High-pressure specific-heat spectroscopy at the glass transition in o-terphenyl
Phys. Rev. E **51**, 6, 5899-5905 (1995)
114. W. Petry
Dynamical Precursors of Martensitic Transitions
Journal de Physique IV, **5**, C2, 15-28 (1995)
115. W. Petry, J. Wuttke
Quasielastic neutron scattering in glass forming viscous liquids
Transp. Theory Statt. Phys. **24**, 6-8, 1075-1095 (1995)
116. O.G. Randl, G. Vogl, W. Petry, B. Hennion, B. Sepiol, K. Nembach
Lattice dynamics and related diffusion properties of intermetallics: I. Fe_3Si
Phys. Cond. Matter **7**, 30, 5983-5999 (1995)
117. J. Wuttke, W. Petry, G. Coddens, F. Fujara
Fast dynamics of glass-forming glycerol
Phys. Rev. E **52**, 4, 4026-4034 (1995)
118. J. Trampenau, K. Bauszus, W. Petry, U. Herr
Vibrational behaviour of nanocrystalline Ni
Nanostr. Mat. **6**, 5-8, 551-554 (1995)

1996

119. E. Bartsch, F. Fujara, J.F. Legrand, W. Petry, H. Sillescu, J. Wuttke.
Dynamics in viscous orthoterphenyl: results from coherent neutron scattering
Phys. Rev. E **53**, 2, 2011 (1996)

120. H. Franz, G. Mathe, F. Ciuchi, W. Petry, W. Schmidt,
Dynamics of guanosine self-assembled aggregates in the hexagonal columnar phase by quasielectric neutron scattering
Molecular Crystals Science and Liquid Crystals Science and Technology Section a-molecular and Liquid Crystals **290**, 155-162 (1996)
121. E. Kentzinger, M.C. Cadeville, V. Pierron-Bohnes, W. Petry, B. Hennion
Lattice dynamics and migration enthalpies in iron-rich Fe-Al alloys and ordered DO₃ and B2 compounds
J.Phys.Cond. Matter **8**, 30, 5535-5553 (1996)
122. M. Köppe, P. Hank, J. Wuttke, W. Petry, R. Gähler, R. Kahn
Performance and future of a Neutron Resonance Spin Echo Spectrometer
J.Neutr.Res. **4**, 261-273 (1996)
123. A. Meyer, H. Franz, B. Sepiol, J. Wuttke, W. Petry
Fast relaxation in a metastable metallic melt
Eur.Phys.Lett. **36**, 5, 379-384 (1996)
124. A. Meyer, J. Wuttke, W. Petry, A. Peker, R. Bormann, G. Coddens, L. Kranich, O.G. Randl, H. Schober
Harmonic behavior of metallic glasses up to the metastable melt
Phys. Rev. B **53**, 18, 12107-12111 (1996)
125. W. Petry.
Streuung mit kernresonanter Stahlung
Vorlesungsmanuskripte des 27. IFF-Ferienkurses, Forschungszentrum Jülich, 4.-15.3.96, D4.1-D4.16 (1996)
126. W. Petry, J. Neuhaus.
Martensitic Phase Transitions
PSI Proceedings of 4th Summerschool in Zuos, Switzerland August 18-24. 1996
New Instruments and Science around SINQ, 293-315 (1996)
127. O.G. Randl, G. Vogl, M. Kaisermayr, W. Bührer, J. Pannetier, W. Petry
Unusually high vacancy concentrations in Ni₃Sb
J.Phys.Cond.Matt. **8**, 41, 7689-7698 (1996)
128. O.G. Randl, G. Vogl, W. Petry
Phonons - A diffusion motor in intermetallics?
Conference of the 4th International Conference on Phonon Physics and the 8th International Conference on Phonon Scattering in Condensed Matter, Phonons 95, Sapporo
Physica B **219-220**, 499-501 (1996)
129. B. Strauß, F. Frey, W. Petry, J. Trampenau, K. Nicolaus, S.M. Shapiro, J. Bossy
Martensitic phase transformation and lattice dynamics of fcc cobalt
Phys. Rev. B **54**, 9, 6035-6038 (1996)
130. J. Wuttke, W. Petry, S. Pouget
Structural relaxation in viscous glycerol: Coherent neutron scattering
J.Chem.Phys. **105**, 12, 5177-5182 (1996)
131. J. Wuttke, I. Chang, O. Randl, F. Fujara, W. Petry.
Tagged-particle motion in viscous glycerol: Diffusion-relaxation crossover
Phys.Rev. E **54**, 5, 5364-5369 (1996)
- 1997**
132. A.Q.R. Baron, H. Franz, A. Meyer, R. Ruffer, A.I. Chumakov, E. Burkel, W. Petry.
Quasielastic Scattering of Synchrotron Radiation by Time Domain Interferometry
Phys.Rev.Lett. **79**, 15, 2823-2826 (1997)

133. F. Demmel, W. Doster, W. Petry, A. Schulte
Vibrational frequency shifts as a probe of hydrogen bonds: thermal expansion and glass transition of myoglobin in mixed solvents
Eur. Biophys. J. **26**, 4, 327-335 (1997)
134. M. Diehl, W. Doster, W. Petry, H. Schober
Water-coupled low frequency modes of myoglobin and lysozyme observed by inelastic neutron scattering
Biophys. J. **73**, 5, 2726-2732, (1997)
135. A. Meyer, H. Franz, J. Wuttke, W. Petry, N. Wiele, R. Ruffer, C. Hübsch
Nuclear resonant scattering of synchrotron radiation for the study of dynamics around the glass transition
Z. Phys. B **103**, 3-4, 479-484 (1997)
136. A. Meyer, H. Franz, J. Wuttke, B. Sepiol, O.G. Randl, W. Petry
Dynamics of metastable metallic melts
Defect and Diffusion Forum **143**, 821-824 (1997)
137. J. Neuhaus, W. Petry, A. Krimmel
Phonon softening and martensitic transformation in α -Fe
Physica B **234-236**, 897-899 (1997)
138. W. Petry.
Blick in den Reaktor
TUM Mitteilungen **4 - 96/97**, 28-32 (1997)
139. O.G. Randl, H. Franz., T. Gerstendörfer, W. Petry., G. Vogl., A. Magerl.
How to rejuvenate an old lady: New crystals for the backscattering spectrometer IN10
First European Conference on Neutron Scattering ECNS'968.-11.10.96, Interlaken, Switzerland
Eds. Bauer G.S., P. Böni., Fischer P.
Physica B **234-236**, 1064-1065 (1997)
140. O.G. Randl, W. Petry, G. Vogl, W. Bühner, B. Hennion
Lattice dynamics and related diffusion properties of intermetallics: II. Ni₃Sb
Journal of Physics Cond.Matt. **9**, 10283-10292 (1997)
141. J. Wuttke, I. Chang, F. Fujara, W. Petry.
Viscous glycerol
Physica B **234-236**, 431-432 (1997)

1998

142. K. Al Usta, P. Böni, R. Gähler, P. Hank, R. Kahn, M. Köppe, A. Menelle, W. Petry
A new polarizing neutron guide for the resonance spin echo spectrometer at Saclay
Neutron News **9**, 29-33 (1998)
143. K. Al Usta, R. Gähler, P. Böni, P. Hank, R. Kahn, M. Köppe, A. Menelle, W. Petry
A new polarizing guide at LLB
Physica B **241-243**, 77-78 (1998)
144. W. Besenböck, R. Gähler, P. Hank, R. Kahn, M. Köppe, C.-H. de Novion, W. Petry, J. Wuttke
First Scattering Experiment on MIEZE: A Fourier Transform Time-of-Flight Spectrometer using Resonance Coils
J. Neutr. Res. **7**, 65-74 (1998)
145. O. Dubos, W. Petry, J. Neuhaus, B. Hennion
Anharmonic dynamical behaviour in bcc zirconium
Eur. Phys. J. B **3**, 447-454 (1998)

146. H. Franz, S. Dante, Th. Wappmannsberger, W. Petry, M. de Rosa, F. Rusticelli
An X-ray reflectivity study of monolayers and bilayers of archae lipids on solid substrate
Thin Solid Films **327-329**, 52-55 (1998)
147. Th. Kleinert, W. Doster, H. Leyser, W. Petry, W. Schwarz, M. Settles
Solvent composition and viscosity effects on the kinetics of CO-binding to horse myoglobin
Biochemistry **37**, 717-733 (1998)
148. A. Meyer, J. Wuttke, W. Petry, O.G. Randl, H. Schober
Slow motion in a metallic liquid
Phys. Rev. Lett. **80**, 4454-4457 (1998)
149. J. Wuttke, M. Seidl, G. Hinze, A. Tölle, W. Petry, G. Coddens
Mode-coupling crossover in viscous toluene revealed by neutron and light scattering
Eur. Phys. J. B **1**, 169-172 (1998)
- 1999**
150. J. Kästner, J. Neuhaus, E.F. Wassermann, W. Petry, B. Hennion, H. Bach
 $TA_1[110]$ phonon dispersion and martensitic phase transition in ordered alloys Fe_3Pt
Eur. Phys. J. B **11**, 75-81 (1999)
151. J. Kästner, W. Petry, S.M. Shapiro, A. Zheludev, J. Neuhaus, Th. Roessel, E.F. Wassermann, H. Bach
Influence of atomic order on $TA_1[110]$ phonon softening and displacive phase transition in $Fe_{72}Pt_{28}$ Invar alloys
Eur. Phys. J. B **10**, 641-648 (1999)
152. A. Meyer, J. Wuttke, W. Petry
Two-step relaxation in a viscous metallic liquid
J. of Non-Crystalline Solids **250-252**, 116-119 (1999)
153. C. Notthoff, H. Franz, M. Hanfland, D.M. Herlach, D. Holland-Moritz, G. Jacobs, R. Lippok, W. Petry, D. Platzek
Energy-Dispersive X-Ray Diffraction on undercooled metallic melts
J. of Non-Crystalline Solids, 250-252, 632-636 (1999)
154. N. Wiele, H. Franz, W. Petry
Temperature dependent phonon density of states of the invar alloy $Fe_{72}Pt_{28}$
Physica B **263-264**, 716-718 (1999)
155. H. Franz, W. Petry, A.Q.R. Baron
Quasielastic scattering: slow dynamics of glasses
Hyperfine Interactions **123/124**, 865-879 (1999)
- 2000**
156. W. Gläser, W. Petry
The new neutron source FRM-II
Physica B **276-278**, 30-32 (2000)
157. W. Doster, M. Diehl, W. Petry, C. Pfister, H. Schober
Time-resolved mean square displacements of protein-water hydrogens
Eur. Biophys. J **29**, 390 (2000)
158. A. Tölle, H. Zimmermann, F. Fujara, W. Petry, W. Schmidt, H. Schober, J. Wuttke
Vibrational states of glassy and crystalline orthoterphenyl
Eur.Phys. J. B **16**, 73-80 (2000)
159. S. Roth, A. Zirkel, J. Neuhaus, W. Schneider, W. Petry
Optimization of the Neutron Guide System for the time-of-Flight Spectrometer at the FRM II
Physica B **283**, 439 - 442 (2000)

160. P. Müller-Buschbaum, J.S. Gutmann, M. Stamm, R. Cubitt, S. Cunis, G. von Krosigk, R. Gehrke, W. Petry
Dewetting of thin polymer blend films examined with GISAS
Physica B **283**, 53-59 (2000)
161. Notthoff, H. Franz, M. Hanfland, D. Herlach, D. Holland-Moritz, W. Petry *Electromagnetic levitation apparatus for investigations of the phase selection in undercooled melts by energy-dispersive x-ray diffraction*
Review of Scientific Instruments **71**, 10, October (2000)
162. W. Petry
Neutronen bringen Licht ins Dunkel in „Unter jedem Stein liegt ein Diamant, Struktur-Dynamik Evolution“, ed. Ernst-Ludwig Winnacker, Hirzel Verlag, Stuttgart, ISBN 3-7776-1122-0
Gesellschaft Deutscher Naturforscher und Ärzte **121**, 55 – 61 (2000)
163. W. Petry
The new German Neutron Source FRM II IAEA-SM-360/39, Proc. of Int. Symp. on Research Reactor Utilisation, Safety and Management, Lisbon, 1999 (2000)
- 2001**
164. G.V. Smirnov, V.G. Kohn, W. Petry
Dynamics of electron density in a medium revealed by Mössbauer time-domain interferometry
Phys. Rev. B **63**, 144303-1 – 9 (2001)
165. A. Meyer, St. Roth, W. Petry
Relaxation and Diffusion in Glass-Forming Metallic Liquids
Defect and Diffusion Forum, DIAMT 2000, 13.7.2000
Defect Diff. Forum **194 – 199**, 891-894 (2001)
166. P. Müller-Buschbaum, J.S. Gutmann, C. Lorenz-Haas, B. Mahltig, M. Stamm, W. Petry
Early Stages of Film Creation in Thin Diblock Copolymer Films
Macromolecules **34**, 21, 7463 – 7470 (2001)
167. P. Müller-Buschbaum, J.S. Gutmann, C. Lorenz-Haas, B. Mahltig, M. Stamm, W. Petry
Solvent induced surface morphology of thin polymer films
Macromolecules **34**, 1369 – 1375 (2001)
168. P. Müller-Buschbaum, M. Wolkenhauer, O. Wunnike, M. Stamm, R. Cubitt, W. Petry
Structure Formation in Two-Dimensionally Confined Diblock Copolymer Films
Langmuir **17**, 18, 5567 – 5575, (2001)
169. K. Nikolaus, J. Neuhaus, W. Petry, J. Bossy
Phonon dispersion of bcc cerium
Eur. Phys. J. B. **21**, 357 – 361 (2001)
170. T. Asthalter, I. Sergueev, H. Franz, R. Rüffer, W. Petry, K. Messel, P. Härter, A. Huwe
Quasielastic nuclear forward scattering as a background-free probe of slow glass dynamics in confined geometries
Eur. Phys. J. B **22**, 301-306 (2001)
171. M. Goldammer, C. Losert, J. Wuttke, W. Petry, F. Terki, H. Schober, P. Lunkenheimer
Calcium rubidium nitrate: Mode-coupling β scaling without factorisation
Phys. Rev. E **64**, p. 021303-1 – 021303-8 (2001)

172. W. Petry
High Resolution Spectroscopy at FRM II, Neutron Resource Spin Echo, Back Scattering and Time-of-Flight Instrumentation
J. Phys. Soc. Jpn. **70**, Suppl. A, 423-427 (2001)
173. K. Böning, W. Petry, C. Schanzer, E. Steichele
Neutronenleitersysteme am FRM-II jenseits der Totalreflexion
Jahrestagung Kerntechnik, 15.-17. Mai 2001, 22-28 (2001)
174. W. Doster, M. Diehl, W. Petry, M. Ferrand
Elastic resolution spectroscopy: a method to study molecular motions in small biological samples
Physica B **301**, 65 – 68 (2001)

2002

175. W. Petry
FRM II, ein einzigartiges Mikroskop für Naturwissenschaften, Technik und Medizin
TUM Mitteilungen **2**, Jahrgang 2001/2002 (2002)
176. W. Petry
Neutronen bringen Licht ins Dunkel in und Er würfelt doch! von der Erforschung des ganz Großen, des ganz Kleinen und der ganz vielen Dinge
edt. by H. Müller-Krumbhaar, H.-F. Wagner, Wiley-Vch, Weinheim,
ISBN 3-527-40328-0, 482 – 493 (2002)
177. W. Doster, M. Diehl, H. Schober, W. Petry, J. Wiedersich
Effects of pressure and pressure-denaturation on fast molecular motions of solvated myoglobin
Elsevier Science B.V., 107 – 110 (2002)
178. P. Müller-Buschbaum, J.S. Gutmann, C. Lorenz-Haas, O. Wunnike, M. Stamm, W. Petry
Dewetting of Thin Diblock Copolymer Films, Spinodal Dewetting Kinetics
Macromolecules 2002, **35**, 2017 – 2023 (2002)
179. I. Sergueev, H. Franz, T. Asthalter, W. Petry, U. van Bürck, G. V. Smirnov
Structural relaxation in a viscous liquid studied by quasielastic nuclear forward scattering
Phys. Rev. B **66**, 184210-1 - 8 (2002)
180. P. Müller-Buschbaum, R. Cubitt, W. Petry
Phase separation of weakly incompatible polymer blends confined into isolated droplet
Applied Phys. **74**, 342-344 (2002)
181. St. Roth, A. Zirkel, J. Bossy, J. Neuhaus, J. Peters, H. Schober, W. Petry
Measurement and Simulation of the Inelastic Resolution Function of a Time-of-Flight Spectrometer
Proceeding of the International Conference on Neutron Scattering 2001, Applied Physics A. Material Science & Processing **74**, Part 2, suppl. S, 1449 – 1451 (2002)
182. I. Köper, M.-C. Bellissent-Funel, W. Petry
Hindered protein dynamics in the presence of a cryoprotecting agent
Proceeding of the International Conference on Neutron Scattering 2001, Applied Physics A. Material Science & Processing **74**, Part 2, Suppl. S, 1257 – 1259 (2002)

2003

183. St. Longeville, W. Doster, M. Diehl, R. Gähler, W. Petry
Neutron Resonance Spin-Echo: oxygen transport in crowded protein solutions
Lecture Notes in Physics **601**, 325 - 335 (2003)

184. T. Asthalter, I. Sergueev, H. Franz, W. Petry, K. Messel., R. Verbeni
Glass dynamics and scaling behaviour under pressure using quasielastic nuclear forward scattering
Hyperfine Interactions C5, 29 – 32 (2003)
185. W. Petry
Advanced Neutron Instrumentation at FRM-II
Proceedings of IGORR9, Sydney (2003)
186. W. Petry
Advanced Neutron Instrumentation at FRM-II
ATW Internationale Zeitschrift für Kernenergie **48**, 315-318 (2003)
187. P. Müller-Buschbaum, R. Cubitt, W. Petry.
Nano-structured diblock copolymer films: A grazing incidence small-angle neutron scattering study
Langmuir **19**, 7778 – 7782 (2003)
188. V. Lauter-Pasyuk, H.J. Lauter, G.P. Gordeev, P. Müller-Buschbaum, B.P. Toperverg, M. Jernenkov, W. Petry
Nanoparticles in diblock copolymer films investigated by off-specular neutron scattering
Langmuir **19**, 7783 - 7788 (2003)
189. A. Meyer, W. Petry, M. Koza, M.-P. Macht
Fast Diffusion in ZrTiNiCuBe Melts
Appl. Phys. Lett. **83**, 3894 - 3896 (2003)

2004

190. A. I. Chumakov, I. Sergueev, U. van Bürck, W. Schirmacher, T. Asthalter, R. Ruffer, O. Leupold and W. Petry
Collective Nature of the Boson Peak and Universal Transboson Dynamics of Glasses
Phys. Rev. Lett. **92** (24), 245508-1 – 4 (2004)
191. A. I. Chumakov, R. Ruffer, O. Leupold, I. Sergueev, U. van Bürck, W. Schirmacher, W. Petry
Universal dynamics of glasses
ESRF Newsletter **39**, 20 – 21 (2004)
192. P. Müller-Buschbaum, J.S. Gutmann, R. Cubitt, W. Petry
Grazing incidence small-angle neutron scattering - an advanced scattering technique for the investigation of nanostructured polymer films
Physica B Condensed Matter **350** (1-3), 207-210 (2004)
193. P. Müller-Buschbaum, T. Ittner, W. Petry
Tackiness of pressure-sensitive adhesives: An ultra-small-angle X-ray scattering investigation
Europhys. Lett. **66**, 4, 513 – 519 (2004)
194. P. Müller-Buschbaum, N. Hermsdorf, J.S. Gutmann, M. Stamm, S. Cunis, R. Gehrke, W. Petry
Dewetting of confined diblock copolymer films
J.Macromol.Sci.Phys. B **43** (1), 29 – 42 (2004)
195. V. Lauter-Pasyuk, H. Lauter, G. Gordeev, P. Müller-Buschbaum, B.P. Toperverg, W. Petry, M. Jernenkov, A. Petrenko, V. Aksenov
Parallel and perpendicular lamellar phases in copolymer-nanoparticle multilayer structures
Physica B **350**, e939 – e 942 (2004)
196. K. Böning, W. Petry, A. Röhrmoser, Chr. Morkel
Conversion of the FRM-II
8th International Topical Meeting on Research Reactor Fuel Management RRFM in Munich (2004)

197. A. Röhrmoser, W. Petry, K. Böning, N. Wieschalla
Reduced Enrichment Program for the FRM-II, Status 2004
8th International Meeting on Reduced Enrichment for Research and Test Reactors (RERTR)
München 21.-24.03. (2004)
198. A. Röhrmoser, W. Petry, K. Böning, N. Wieschalla
Increasing depletion
Nuclear Engineering International **49**, 605 (2004)

2005

199. A. Röhrmoser, W. Petry, N. Wieschalla
Reduced Enrichment Program for the FRM-II, Status 2004/05
9th International Meeting on Reduced Enrichment for Research and Test Reactors (RERTR)
Budapest 10.-13.03. (2005)
201. E. Gutschmiedl, W. Petry, K. Schreckenbach
Status of the new research reactor FRM-II
Proceedings of the International Symposium on Research Reactor and Neutron Science- In
Commemoration of the 10th Anniversary of HANARO – Daejeon, Korea, April (2005)
202. Köper, M.-C. Bellissent-Funel, W. Petry
*Dynamics from picoseconds to nanoseconds of trehalose in aqueous solutions as seen by
quasielastic neutron scattering*
J. of Chemical Physics **122**, 014514-1-6 (2005)
203. Sergueev, U. van Bürck, A.I. Chumakov, T. Asthalter, G.V. Smirnov, H. Franz, R. Ruffer, and W.
Petry
Rotational and Translational Glass Dynamics studied by nuclear resonant scattering
Solid state physics, magnetism and lattice dynamics
ICAME 2005

2006

204. Sergueev, I., van Bürck, U., Chumakov, A.I., Asthalter, T., Smirnov, G.V.,
Franz, H., Ruffer, R., Petry, W.
*Synchrotron-radiation-based perturbed angular correlations used in the investigation of rotational
dynamics in soft matter*
Physical Review B **73**, 024203, (2006)
205. C. Jousse, P. Lemoine, W. Petry, A. Röhrmoser
Monolithic UMO Full Size Prototype Plates Manufacturing Development
The 2005 International Meeting on Reduced Enrichment for Research and Test Reactors RERTR,
Boston (Mass., USA), November 6-10, 2005, Proceedings (2006)
206. N. Wieschalla, K. Böning, W. Petry, A. Röhrmoser, P. Böni, G. Dollinger, G. R. & J., S. (2005),
Heavy Ion Irradiation of U-Mo/Al Dispersion Fuel
The 2005 International Meeting on Reduced Enrichment for Research and Test Reactors RERTR,
Boston (Mass., USA), November 6-10, 2005, Proceedings (2006)
207. Wieschalla N., Bergmaier A., Böni P., Böning K., Dollinger G., Großmann R., Petry W.,
Röhrmoser A., Schneider J.,
Heavy ion irradiation of U-Mo/Al dispersion
Journal of Nuclear Materials **357**, 1-3, 191-197 (2006)
208. R. Gilles, A. Ostermann, C. Schanzer, B. Krimmer and W. Petry
The concept of the new small-angle scattering instrument SANS-1 at the FRM-II
Proceedings of ICNS 2005 Physica B **385-386**, 1174 (2006).
209. H. Palanchar, P. Martin, C. Sabathier, S. Dubois, C. Valot, N. Wieschalla, A. Röhrmoser, W. Petry,
C. Jousse, M. Grasse and R. Tucoulou

Heavy Ion Irradiation as a Method to Discriminate Research Reactor Fuels
Proceedings on the 'International Conference on Research Reactor Fuel Management RRFM 2006', May 04, 2006, Sofia (Section 2), 99 – 103 (2006).

210. A. Röhrmoser and W. Petry
Reduced enrichment program for FRM II, actual status & principal study of monolithic fuel for FRM II
Proceedings on the 10th International Topical Meeting on Research Fuel Management, RRFM 2006, Sofia (2006)
211. G. Smirnov, U. van Bürck, A. Franz, T. Asthalter, O. Leupold, E. Schreier and W. Petry
Nuclear gamma resonance time-domain interferometry: Quantum beat and radiative coupling regimes compared in revealing quasielastic scattering
Phys. Rev. B **73**, 184126-1-9 (2006).
212. N. Wieschalla, A. Bergmaier, P. Böni, K. Böning, G. Dollinger, R. Großmann, W. Petry, A. Röhrmoser and J. Schneider
Heavy ion irradiation of U-Mo/Al dispersion fuel
Journal of Nuclear Materials **357** Issues 1-3, 191-197 (2006).
213. K. Zeitelhack, C. Schanzer, A. Kastenmüller, Röhrmoser, C. Daniel, J. Franke, E. Gutmiedl, V. Kudryashov, D. Maier, D. Päthe, W. Petry, T. Schöffel, K. Schreckenbach, A. Urban and U. Wildgruber
Measurement of neutron flux and beam divergence at the cold neutron guide system of the new Munich research reactor FRM-II
Nuclear Instruments and Methods in Physics Research A **560**, 444-453, 2006.
- 2007**
214. H. Breitzkreutz, F. Wagner and W. Petry
Spektrale Charakterisierung des Spaltneutronenstrahls der Neutronentherapieanlage MEDAPP am FRM II
Conference Proceedings of the Three-Country-Convention of the German, Austrian and Swiss Societies of Medical Physics, Bern, Switzerland, 2 pp, 2007.
215. R. Gilles, A. Ostermann and W. Petry
Monte Carlo simulations of the new Small-Angle Neutron Scattering instrument SANS-1 at the Heinz Maier-Leibnitz Forschungsneutronenquelle
J. Appl. Cryst. **40**, s428 - s432, 2007.
216. C. Jarousse, P. Lemoine, P. Boulcourt, A. Röhrmoser and W. Petry
Monolithic UMO full size prototype plates for IRIS V Irradiation
Proceedings of IGORR - RRFM 2007, March 11 - 15, 2007, Lyon, France, 7 pp, 2007.
217. R. Jungwirth, N. Wieschalla, W. Schmid, A. Röhrmoser, W. Petry and C. Pfeleiderer
Thermal conductivity of heavy-ion-bombarded U-Mo/AL dispersion fuel
Proceedings on the 11th International Topical Meeting in Research Fuel Management (RRFM) 2007, Lyon, France 7pp, 2007.
218. M. A. Kashem, J. Perlich, L. Schulz, S. Roth, W. Petry and P. Müller-Buschbaum
Maghemite nanoparticles on supported diblock copolymer nanostructures
Macromolecules **40**, 5075-5083, 2007.
219. P. Müller-Buschbaum, T. Ittner, E. Mauerer, V. Körstgens and W. Petry
Pressure-sensitive adhesive blend films for low-tack applications
Macromol. Mater. Eng. **292**, 825-834, 2007.
220. J. Neuhaus and W. Petry
Forschungsneutronenquelle Heinz Maier-Leibnitz (FRM II)
Neutron News **18** issue 2, 13 - 15, 2007.

221. W. Petry and J. Neuhaus
Neutronen nach Maß
Physik-Journal **6/7**, 31-37, 2007.
222. A. Röhrmoser, W. Petry, P. Boulcourt, A. Chabre, S. Dubois, P. Lemoine, C. Jarousse and J. Falgoux
Status of UMo full size plates irradiation program IRIS-TUM
Proceedings of the RRFM - IGORR 2007, March 11 - 15, 2007, Lyon, 8pp, 2007.
223. G. Smirnov, U. van Bürck, J. Arthur, G. S. Brown, A. Chumakov, A. Baron, W. Petry and S. Ruby
Currents and fields reveal the propagation of nuclear polaritons through a resonant target
Phys. Rev. A **76**, 043811, 2007.
224. T. Unruh, A. Meyer, J. Neuhaus and W. Petry
The time-of-flight spectrometer TOFTOF
Neutron News **18** issue, 22 - 24, 2007

2008

225. T. Unruh, J. Neuhaus and W. Petry
The high-resolution time-of-flight spectrometer TOFTOF
Nuclear Instruments and Methods in Physics Research A **580**, 1414-1422, 2007 and & erratum **585**, 201, 2008.
226. H. Breitzkreutz, F. Wagner, A. Röhrmoser and W. Petry
Spectral fluence rate of the fast reactor neutron beam MEDAPP at FRM II
Nuclear Instruments and Methods in Physics Research A **593**, 466 - 471, 2008.
227. R. Jungwirth, W. Petry, W. Schmid, L. Beck and A. Bergmaier
Progress in heavy-ion bombardement of U-Mo/Al dispersion fuel
Transactions of the RRFM 2008, Hamburg, Germany, March 2008.
228. I. Köper, S. Comet, W. Petry and M. Bellissent-Funel
Dynamics of C-Phycocyanin in various deuterated Threhalose/Water environments by quasielastic and elastic neutron scattering
European Biophysical Journal **37**, 739-748, 2008.
229. A. Leenaers, S. VanDenBerghe, M. Anselmet, J. Noiret, P. Lemoine, A. Röhrmoser and W. Petry
Irradiation behavior of atomized and ground U(Mo) dispersion fuel
Transactions of RERTR 2008 - 30th International Meeting on Reduced Enrichment for Research and Test Reactors, 5 - 9 October, 2008.
230. T. Mehaddene, J. Neuhaus, W. Petry, K. Hradil, P. Bourges and A. Hiess
Interplay of structural instability and lattice dynamics in Ni₂MnAl
Phys. Rev. B **78**, 104110-1-9, 2008.
231. J. Repper, M. Hofmann, C. Krempasky, R. Wimpory, W. Petry and E. Werner
Micro strain accumulation in multiphase superalloys
Proceedings of the ICRS8: The 8th International Conference on Residual Stresses, August 6-8, 2008, Marriott Tech Center, Denver, Colorado, USA, 7pp, 2008.
232. J. Repper, M. Hofmann, C. Krempaszky, W. Petry and E. Werner
Influence of microstructural parameters in macroscopic residual stress analysis of complex materials by neutron diffraction method
Proceedings of MECA-SENS, Vienna, 24 - 26 September 2007; Materials Science Forum **571-572**, 39-44, 2008.
233. A. Röhrmoser, W. Petry, P. Boulcourt, A. Chabre, S. Dubois, P. Lemoine, C. Jarousse, J. Falgoux, S. van den Berghe and A. Leenaers
UMo full plate size irradiation experiment IRIS - TUM - a progress report
Transactions of the RRFM 2008, Hamburg, Germany, March 2008, 11pp, 2008.

234. W. Schmid, R. Jungwirth, W. Petry, P. Böni and L. Beck
Manufacturing of thick monolithic layers by DC-magnetron sputtering
Transactions of the RRFM 2008, Hamburg, Germany, March 2008, 4pp, 2008.
235. T. Unruh, S. Smuda, C. and Busch, J. Neuhaus and W. Petry
Diffusive motions in liquid medium-chain n-alkanes as seen by quasielastic time-of-flight neutron spectroscopy
J. Chem. Phys. **129**, 121106-1-4, 2008.
236. F. Wagner, P. Kneschaurek, A. Kastenmüller, B. Loeper-Kabasakal, S. Kampfer, H. Breitzkreutz, W. Waschowski, M. Molls and W. Petry
The Munich fission neutron therapy facility MEDAPP at FRM II
Strahlentherapie und Onkologie (Urban & Vogel) **12**, 643 - 646, 2008.
237. Mehaddene T. , Neuhaus J. , Petry W. , Hradil K.
Phonon dispersions in NiAlMn shape memory alloy
Materials Characterization Science and Engineering A **481-482**:197-200 (2008)
- 2009**
238. J. Repper, T. Keller, M. Hofmann, C. Kremaszky, W. Petry and E. Werner
Neutron larmor diffraction for the determination of absolute lattice spacing
Advances in X-Ray Analysis, **52**, 201-208, ISSN: 1097-0002, 2009
239. M. A. Abul Kashem, J. Perlich, A. Diethert, W. Wang, M. Memesa, J. Gutmann, J. Gutmann, E. Majkova, I. Capek, S. V. Roth, W. Petry and P. Müller-Buschbaum
Array of magnetic nanoparticles via particle co-operated self-assembly in block copolymer thin films
Macromolecules **42**, 6202-6208, 2009.
240. K. Böning and W. Petry
Test irradiations of full sized U₃Si₂-Al fuel plates up to very high fission densities
Journal of Nuclear Materials **383**, 254-263, 2009.
241. R. Jungwirth, H. Breitzkreutz, W. Petry, A. Röhrmoser, W. Schmid, . H. Palancher et al., CEA and C. Jarousse et al., AREVA-CERCA
Optimization of the Si content in UMo/AL(Si) fuel plates
Transactions 31st RERTR meeting, November 1-5, 2009 Beijing, China, 2009.
242. A. Leenaers, S. van den Berghe, F. Charollais, P. Lemoine, C. Jarousse, A. Röhrmoser and W. Petry
Microstructural analysis of ground U (Mo) fuel with and without Si in the matrix, irradiated to high burn-up
Transactions 31st RERTR meeting, November 1-5, 2009 Beijing, China, 2009.
243. H. Palancher, N. Wieschalla, P. Martin, R. Tucoulou, C. Sabathier, W. Petry, J. Berar, C. Valot and S. Dubois
Uranium-molybden nuclear fuel plates behaviour under heavy ion irradiation: An x-ray diffraction analysis
Journal of Nuclear Materials **385**, 449-455, 2009.
244. W. Petry
Nicht zu schaffen - Die für 2010 vereinbarte Umrüstung des Forschungsreaktors FRM II auf Brennelemente mit geringerer Urananreicherung muss bis mindestens 2016 verschoben werden.
Physik Journal **2**, 7, 2009.
245. W. Petry
Neutrons made in Garching
Public Service Review (Science and Technology), 330-331, 2009.

246. J. Repper, M. Hofmann, C. Krempaszky, R. Wimpory, E. Werner and W. Petry
Micro stress accumulation in multiphase superalloys
Powder Diffraction Journal **24**, 65-67, 2009.
247. A. Röhrmoser and W. Petry
Fuel plate temperatures during operation of FRM II
Transaction of RRFM 2009, March 23 - 25, Vienna, Austria, 7pp, 2009.
248. W. van Renterghem, A. Lennaers, S. van den Berghe, M. Anselmet, F. Charollais, P. Lemoine and W. Petry
TEM Investigation of irradiated atomised and ground U(Mo) dispersion fuel, with or without Si added to the matrix
Transactions 31st RERTR meeting, November 1-5, 2009 Beijing, China, 2009.
249. F. Wagner, B. Loeper, T. Bücherl, H. Breitzkreutz and W. Petry
Use of fission radiation in life sciences and materials characterisation
Transactions of RRFM 09, Vienna/Austria, March 22 - 25, 2009.
250. E. Welcomme, H. Palancher, C. Sabathier, P. Martin, J. Allenou, C. Valot, F. Charollais, M. Anselmet, R. Jungwirth, W. Petry, L. Beck, C. Jarousse, R. Tucoulou and P. Lemoine
Heavy ion irradiation of UMo₇/Al fuel: methodological approach
Transactions of RRFM 09, Vienna/Austria, March 22 - 25, 2009.

2010

251. A. Leenaers and S. van den Berghe, SCK•CEN, F. Charollais and P. Lemoine, CEA; C. Jarousse, AREVA CERCA; A. Röhrmoser and W. Petry, FRM II
EPMA of ground UMo fuel with and without Si added to the matrix, irradiated to high burn up
Transactions of RRFM 2010, Marakech/Morocco, March 21-25, 2010
252. H.-G. Brokmeier, C. Randau, W. Tekouo, M. Hofmann, W. Gan, M. Müller, A. Schreyer and W. Petry
The robot concept at STRESS-SPEC for the characterisation of semi-finished products
Mater. Sci Forum **652**, pp 197-201, 2010
doi: <http://dx.doi.org/10.4028/www.scientific.net/MSF.571-572.39>
253. H. Breitzkreutz, F. M. Wagner and W. Petry
Die Messung schneller Neutronenspektren und darauf aufbauende Entwicklungen in der Neutronentherapie
StrahlenschutzPRAXIS, (2 / 2010):48-53 Mai 2010
ISSN: 0947-434 http://www.strahlenschutz...nzeige&ARTIKEL_ID=551
254. B. Loeper-Kabasakal, A. Posch, Th. Auberger Thomas, F.M. Wagner, S. Kampfer, P. Kneschaurek, W. Petry, P. Lukas and M. Molls
Fission neutron therapy at FRM II: Indications and first results
Radiation Measurements, in press, 2010
DOI: [10.1016/j.radmeas.2010.04.006](https://doi.org/10.1016/j.radmeas.2010.04.006)
255. F. Wagner, B. Loeper-Kabasakal and W. Petry
Radiation therapy by use of fast reactor neutrons
In: M.G. Avrorin und V.A. Simonenko, Editor, Xth Zababakhin Scientific Talks, page 245. Editor: RFNC - VNIITF, Snezhinsk, Russia, 2010
ISBN: 978-5-902278-39-9
256. J. Repper, Th. Keller, M. Hofmann, Chr. Krempaszky, W. Petry and E. Werner
Neutron Larmor diffraction measurements for materials science
Acta mater. **58**(9):3459-3467, 2010
DOI: [10.1016/j.actamat.2010.02.020](https://doi.org/10.1016/j.actamat.2010.02.020)
257. J. Repper, P. Link, M. Hofmann, Chr. Krempaszky, E. Werner and W. Petry
Interphase microstress measurements in IN718 by cold neutron diffraction

- Appl. Phys. A, **99**(3):565-569, 2010
DOI: [10.1007/s00339-010-5607-2](https://doi.org/10.1007/s00339-010-5607-2)
258. R.M. Hengstler, L. Beck, H. Breitzkreutz, C. Jarousse, R. Jungwirth, W. Petry, W. Schmid, J. Schneider and N. Wieschalla
Physical properties of monolithic U8 wt.%-Mo
J.Nucl.Mat., **402**:74-80, 2010
DOI: [10.1016/j.jnucmat.2010.04.024](https://doi.org/10.1016/j.jnucmat.2010.04.024)
259. L. Schulz, W. Schirmacher, A. Omran, V.R. Shah, P. Böni, W. Petry and P. Müller-Buschbaum
Elastic torsion effects in magnetic nanoparticle diblock-copolymer structures
J. Phys.: Condens. Matter **22**, 346008, 6 pp, 2010
DOI: [10.1088/0953-8984/22/34/346008](https://doi.org/10.1088/0953-8984/22/34/346008)
260. H. Breitzkreutz, M. Jungwirth, R. Schenk, Franz M. Wagner and W. Petry
Measurements and Simulations of Fission Neutron Spectra at the MEDAPP Beam at FRM II and subsequent developments, Conference proceedings, IRPA, Helsinki 2010.
261. R. Hengstler, L. Beck, H. Breitzkreutz, C. Jarousse, R. Jungwirth, W. Petry, W. Schmid, J. Schneider and N. Wieschalla
Physical properties of monolithic U8 wt.%-Mo
J.Nucl.Mat. **402**, 74-80, 2010.
262. R. Jungwirth, W. Petry, H. Breitzkreutz, W. Schmid, H. Palancher and C. Sabathier
Study of heavy ion irradiated UMo/Al miniplates: Si and Bi addition to Al and UMo ground powders, RRFM 2010 Marrakech, Conference Proceedings, 2010.
263. R. Jungwirth, W. Petry, A. Röhrmoser, J. Allenou and X. Iltis
IRIS-TUM: Microstructure of the unirradiated plates
RERTR 2010 Lissabon, Conference Proceedings, 2010.
264. A. Leenaers, SCK.CEN, S. van den Berghe, SCK.CEN, F. Charollais, CEA, P. Lemoine, CEA, C. Jarousse, AREVA CERCA, A. Röhrmoser, FRM II and W. Petry, FRM II
EPMA of ground UMo fuel with and without Si added to the matrix, irradiated to high burn up
Transactions of RRFM 2010, Marrakech, 2010.
265. K. Rolfs, R.C. Wimpory, W. Petry, R. Schneider
Effect of alloying Ni-Mn-Ga with Cobalt on thermal and structural properties, International Conference on Neutron Scattering 2009
J.Phys.: Conference Series 251, 012046-1-4, 2010
DOI: [10.1088/1742-6596/251/1/012046](https://doi.org/10.1088/1742-6596/251/1/012046)
- 2011**
266. A. Leenaers, S. van den Berghe, W. van Renterghem, F. Charollais, P. Lemoine, C. Larousse, A. Röhrmoser and W. Petry
Irradiation behavior of ground U(mo) fuel with and without Si added to the matrix
J.Nucl.Mat. **412**, 41-52, 2011.
DOI: [10.1016/j.jnucmat.2011.02.002](https://doi.org/10.1016/j.jnucmat.2011.02.002)
267. V. Lauter, P. Müller-Buschbaum, H. Lauter and W. Petry
Morphology of thin nanocomposite films of asymmetric diblock co-polymer and magnetite nanoparticles
J.Phys.C, **23/25**, 6 pp, 2011
DOI: [10.1088/0953-8984/23/25/254215](https://doi.org/10.1088/0953-8984/23/25/254215)
268. R. Stoepler, A. Frei, S. Paul, H. Gerstenberg and W. Petry
The ultracold laboratory at the FRM II
Transactions of RRFM 2011, 204-209
2011

269. F. Schulz, V. Sumerin, B. Pedersen, S. Heikkinnen, C. Wang, M. Atsumi, M. Leskela, R. Repo, P. Pyykko, W. Petry and B. Rieger
Molecular hydrogen tweezers: Structure and mechanisms by neutron diffraction, NMR, and deuterium labelling studies in solid, and solution
J. Am. Chem. Soc. **133**, 20245-20257, 2011
DOI: [10.1021/ja206394w](https://doi.org/10.1021/ja206394w)

2012

270. R.M. Hengstler-Eger, P. Baldo, L. Beck, J. Dorner, K. Ertl, P.B. Hoffmann, C. Hugenschmidt, M.A. Kirk, W. Petry et al.
Heavy ion irradiation induced dislocation loops in AREVA's M5@ alloy
Journal of Nuclear Materials **423**, 170-182, 2012
<http://dx.doi.org/10.1016/j.jnucmat.2012.01.002>
271. K. Rolfs, M. Chiemlus, J.M. Guldbakke, R.C. Wimpory, A. Raatz, W. Petry, P. Müllner und R. Schneider
Key properties of Ni-Mn-Ga based single crystals grown with the SLARE-technique
Advanced Engineering Materials **14/8**, 614-635, 2012,
<http://dx.doi.org/10.1002/adem.201200065>
272. S. Ener, J. Neuhaus, W. Petry, R. Mole, K. Hradil, M. Siewert, M.E. Gruner, P. Entel, I. Titov, M. Acet
Effect of temperature and compositional changes on the phonon properties of Ni-Mn-Ga shape memory alloys
Physical Review B **86**, 144305, 9 pages, 2012,
DOI: [10.1103/PhysRevB.86.144305](https://doi.org/10.1103/PhysRevB.86.144305)
273. J. Repper, M. Hofmann, C. Kremaszky, B. Regener, E. Bernhuber, W. Petry und E. Werner
Effect of macroscopic relaxation on residual stress analysis by diffraction methods
Journal of Applied Physics, **112**:064906 2012,
DOI: [10.1063/1.4752877](https://doi.org/10.1063/1.4752877)
274. Tanja Huber, Winfried Petry, Matthiew Fig, Rory Kennedy, Adam Robinson und Daniel Wachs
First Results of Scanning Thermal Diffusivity Microscope (STDM) Measurements on Irradiated Monolithic and Disperse Fuel, Transactions of RERTR 2012 (Oct 2012, Prague)
275. Alexander Heldmann, Rainer Jungwirth, Harald Breikreutz und Winfried Petry
Energy and lattice damage distribution at the interface UMo-Al: Comparison of fission fragments and heavy-ions, Transactions of RERTR 2012 (Oct 2012, Prague)

2013

276. Rainer Jungwirth, Tobias Zweifel, Hsin-Yin Chiang, Winfried Petry, Sven van den Berghe und Anne Lennaers
Heavy ion irradiation of UMo/Al samples PVD coated with Si and ZrN layers
Journal of Nuclear Materials, 434(1-3):296–302, 2013
DOI: [10.1016/j.jnucmat.2012.11.032](https://doi.org/10.1016/j.jnucmat.2012.11.032)
277. R. Jungwirth, H. Palancher, A. Bonnin, C. Bertrand-Drira, C. Borca, V. Honkomäki, C. Jarousse, B. Stepnik, S. H. Park, X. Iltis et al.
Microstructure of as-fabricated Umo/Al (Si) plates prepared with ground and atomized powder
Journal of Nuclear Materials, in press, 2012
DOI: [10.1016/j.jnucmat.2013.03.021](https://doi.org/10.1016/j.jnucmat.2013.03.021)
278. Y.J. Jeong, J.M. Park, H.J. Ryu, Y.S. Lee, W.J. Kim, R. Jungwirth, H-Y Chiang, T. Zweifel, W. Petry
Heavy ion irradiation of nitride and silicon coated UMo/Al and UMoTi/Al fuel
Transactions RRFM 2013, St. Petersburg, Russia, 21. – 25. April 20
279. H.-Y. Chiang, M. Mayer, T. Zweifel, R. Jungwirth, W. Petry
RBS studies on heavy ion irradiation induced diffusion in UMo/Transition metal/Al fuel
Transactions RRFM 2013, St. Petersburg, Russia, 21 – 25. April 2013
280. T. Zweifel, H.-Y. Chiang, H. Palancher, A. Bonnin, L-. Beck, P. Weiser, M. Döblinger, C. Sabathier, R. Jungwirth, F. Charollais, P. Lemoine, W. Petry
Heavy ion irradiation on monolithic UMo/Al layer systems: Interdiffusion layer analysis using TEM and NANO-XRD
Transactions RRFM 2013, St. Petersburg, Russia, 21 – 25. April 2013
281. H. Breitreutz, A. Röhrmoser, W. Petry
Monolithic UMo based fuel element designs for FRM II
Transactions RRFM 2013, St. Petersburg, Russia, 21 – 25. April 2013
282. R. Schenk, W. Petry, B. Stepnik, C. Jarousse, G. Bourdat, C. Moyroud, M. Grasse
FRMII/CERCA UMo atomizer project status
Transactions RRFM 2013, St. Petersburg, Russia, 21 – 25. April 2013
283. H. Breitreutz, R. Jungwirth, A. Röhrmoser, W. Petry, S. Van den Berghe, A. Leenaers, E. Koonen, P. Lemoine, M. Rpiert, H. Palancher, M.-C. Anselmet, C. Jarousse, B. Stepnik, D. Geslin, Y. Calzavara, H. Guyon
The development of dispersed UMo as a high performance research reactor fuel in Europe
Transactions RRFM 2013, St. Petersburg, Russia, 21 – 25. April 2013
284. T.K. Huber, H. Breitreutz, F. Charollais, S. Elegeti, C. Jarousse, R. Jungwirth, P. Lemoine, A. Röhrmoser, W. Petry, D. Staicu et al.
Thermal Conductivity of IRIS-TUM and IRIS-4 Mo dispersion fuel
Transactions RRFM 2013, St. Petersburg, Russia, 21 – 25. April 2013
285. H-Y. Chiang, T. Zweifel, H. Palancher, A. Bonnin, L. Beck, P. Weiser, M. Döblinger, C. Sabathier, R. Jungwirth, W. Petry
Evidence of amorphous interdiffusion layer in heavy-ion irradiated U-8wt%Mo/Al interfaces
JNM, **440** (2013) 117-123
286. R. Jungwirth, H. Palancher, A. Bonnin, C. Bertrand-Drira, C. Borca, V. Honkimäki, C. Jarousse, B. Stepnik, S.-H. Park, X. Iltis, W.W. Schmahl, W. Petry
Microstructure of as-fabricated UMo/Al (Si) plates prepared with ground and atomized powder
JNM, **438**, 2013, p246-260
287. R. Jungwirth, T. Zweifel, H.-Y. Chiang, W. Petry, S. Van den Berghe, A. Leenaers
Heavy ion irradiation of UMo/Al samples PVD coated with Si and ZrN Layers
JNM **434** (2013) 296 – 302, DOI: [10.1016/j.jnucmat.2012.11.032](https://doi.org/10.1016/j.jnucmat.2012.11.032)

288. W. Petry, Neutronenstrahlung
Buchbeitrag in: H. Bullinger, H. Jürgens, W. Rohmert (Herausg.) bearbeitet von H. Schmidtke
 Handbuch der Ergonomie
 Bundesamt für Wehrtechnik und Beschaffung, ISBN: 978-3-927038-70-, 2013
289. T. Zweifel, H. Palancher, A. Leenaers, A. Bonnin, V. Honkimaki, R. Tucoulou, S. van den Berghe, R. Jungwirth, F. Charollais, W. Petry
Crystallographic study of Si and Zrn coated U-Mo atomised particles and of their interaction with Al under thermal annealing
 JNM, **442**(1–3):124-132, 2013, ISSN:0022-3115,DOI: [10.1016/j.jnucmat.2013.08.050](https://doi.org/10.1016/j.jnucmat.2013.08.050)
290. R. Tietze, S. Dürr, S. Lyer, N. Taccardi, P. Wasserscheid, L. Canella, F. Wagner, W. Petry, C. Alexiou
Phantom studies of neutron capture of boron containing magnetic nanoparticles
 Biomed Tech (Berlin), 7 September 2013; doi: 10.1515/bmt-2013-4045
291. S. Ener, T. Mehaddene, B. Pedersen, M. Leitner, J. Neuhaus, W. Petry
Vibrational properties of Ni–Mn–Ga shape memory alloy in the martensite phases
 New Journal of Physics, 15(12):123016 , 2013
 DOI: [10.1088/1367-2630/15/12/123016](https://doi.org/10.1088/1367-2630/15/12/123016)
292. F.M. Wagner, H. Breitzkreutz, P. Kneschaurek, J. Wilkens, W. Petry, J. Kummermehr, E. Schmid, K.-R. Trott
Fission neutrons for radiation therapy: Physical and biological aspects
 Conference: Research Reactors Users Networks – Advances in Neutron Therapy, 1 – 4 July 2013, Mainz Germany, IAEA-F1-TM-44771
293. Humphrey Morhenn, Sebastian Busch, Hendrik Meyer, Dieter Richter, Winfried Petry und Tobias Unruh
Collective intermolecular motions dominate the picosecond dynamics of short polymer chains
 Physical Review Letters, **111**(17): 173003, 2013,

2014

294. J. Neuhaus, M. Leitner, K. Nicolaus, W. Petry, B. Hennion, A. Hiess
Role of vibrational entropy in the stabilization of the high-temperature phases of iron
 Physical Review B89 , 184302, 2014 DOI: <http://dx.doi.org/10.1103/PhysRevB.89.184302>
295. M. Reihle, M. Hofmann, U. Wasmuth, W. Volk H. Hoffmann und W. Petry, *In situ strain measurements during casting using neutron diffraction*
 Materials Science Forum, 768-769: 484-491, 2014,
 DOI: [10.4028/www.scientific.net/MSF.768-769.484](https://doi.org/10.4028/www.scientific.net/MSF.768-769.484)
296. M. Philipp, K. Kyriakos, L. Silvi, W. Lohstroh, W. Petry J. Krüger, Chr. M. Papadakis, P. Müller-Buschbaum
From molecular dehydration to excess volumes of phase-separating PNIPAM solutions,
 Journal of Physical Chemistry B, 2014, 118(15):4253-4260, DOI: [10.1021/jp501539z](https://doi.org/10.1021/jp501539z)
297. T. Zweifel, Ch. Valot, Y. Pontillon, J. Lamontagne, A. Vermersch, L. Barallier, T. Blay, H. Palancher, W. Petry
Annealing test of in-pile irradiated oxide coated U-Mo/Al-Si dispersed nuclear fuel
 Journal of Nuclear Materials 452 (1-3), 533-547 (2014), DOI: [10.1016/j.jnucmat.2014.05.052](https://doi.org/10.1016/j.jnucmat.2014.05.052)
298. R. Tietze, H. Unterweger, B. Weigl, S. Lyer, N. Taccardi, P. Kudejova, L. Canella, F.M. Wagner, W. Petry und C. Alexiou
Boron containing magnetic nanoparticles for neutron capture therapy: An innovative approach for specifically targeting tumors
 International Congress on Neutron Capture Therapy, Editor: International Congress on Neutron Capture Therapy, Helsinki, Finland, June 2014 <http://icnct16.org>

299. H. Breitskreutz, A. Röhrmoser, W. Petry
Influence of depleted Molybdenum-95 on monolithic UMo fuel plate designs for FRM II
Transactions of RRFM 2014, Ljubljana, Slovenia, April 2014
300. R. Schenk, W. Petry, B. Stepnik, M. Grasse, G. Bourdat, C. Moyroud, C. Coullomb, C. Jarousse
FRM II/CERCA UMo-atomizer project progress
Transactions of RRFM 2014, Ljubljana, Slovenia, April 2014
301. B. Stepnik, M. Grasse, C. Coullomb, C. Jarousse, D. Geslin, W. Petry, R. Jungwirth, H. Breitskreutz, A. Röhrmoser, T. Huber, D. Wachs
UMo monolithic fuel development progress in CERCA-AREVA
Transactions of RRFM 2014, Ljubljana, Slovenia, April 2014
302. T. Zweifel, C. Valot, Y. Pontillon, J. Lamontagne, T. Blay, W. Petry, H. Palancher
In-pile irradiated U-Mo/Al(Si) dispersed nuclear fuel behaviour under thermal annealing: fission gas release and microstructure evolutions.
Transactions of RRFM 2014, Ljubljana, Slovenia, April 2014
303. S. Säubert, R. Jungwirth, T. Zweifel, H.-Y. Chiang, H. Breitskreutz, W. Petry
Isothermal transformation kinetics in uranium molybdenum alloys
Transactions of RRFM 2014, Ljubljana, Slovenia, April 2014
304. H.-Y. Chiang, M. Döblinger, S.-H. Park, L. Beck und W. Petry
Ion beam induced spinodal decomposition and amorphization in the immiscible bilayer system UMo/Mg
Journal of Nuclear Materials, 453 (1-3): 41-47, 2014, DOI: [10.1016/j.jnucmat.2014.06.036](https://doi.org/10.1016/j.jnucmat.2014.06.036)
305. W. Schmid, S. Dirndorfer, H. Juranowitsch, M. Kress, W. Petry
Adhesion strength of sputter deposited diffusion barrier layer coatings for the use of U-Mo nuclear fuels
Nuclear Engineering and Design, 276, 2014, p. 115-123
306. P. Neibecker, M. Leitner, G. Benka, W. Petry
Increasing the achievable state of order in Ni-based Heusler alloys via quenched in vacancies
Applied Physics Letters, 105, 261904 (2014)
<http://dx.doi.org/10.1063/1.4905223>

2015

307. W. Petry,
Neutrons for Industry
The European Physical Journal, 104, 01001 (2015)
<http://dx.doi.org/10.1051/epjconf/201510401001>
308. R. Tietze, H. Unterweger, St. Dürr, St. Lyer, L. Canella, P. Kudejova, F. Wagner, W. Petry, et al.,
Boron containing magnetic nanoparticles for neutron capture therapy—an innovative approach for specifically targeting tumors,
Applied Radiation and Isotopes, 106, 151-155 [doi:10.1016/j.apradiso.2015.07.028](https://doi.org/10.1016/j.apradiso.2015.07.028)
309. T. Huber, H. Breitzkreutz, W. Petry, C. Reiter, S. Elgeti, D.E. Burkes, A.J. Casella, A.M. Casella, F.N. Smith, D.M. Wachs
The thermal properties of fresh and spent U-Mo fuels: An Overview
Proceeding of RRFM 2015, 19 - 23 April 2015, Bucharest, Romania
310. St. Döge, Chr. Herold, St. Müller, Chr. Morkel, E. Gutmiedl, P. Geltenbort, Th. Lauer, P. Fierlinger, W. Petry, P. Böni
Scattering cross sections of liquid deuterium for ultracold neutrons: Experimental results and a calculation model
Physical Review B **91**, 21, 214039 (2015)
<http://dx.doi.org/10.1103/PhysRevB.91.214309>
311. A. M. Specht, T. Neff, W. Reuschel, F.M. Wagner, S. Kampfer, J.J. Wilkens, W. Petry, St. E. Combs
Paving the road for Modern Particle Therapy – What we learn from the experience gained with Fast Neutron Therapy in Munich
Frontiers in oncology 5, 2015
<http://dx.doi.org/10.3389/fonc.2015.00262>
312. B. Stepnik, M. Grasse, C. Jarousse, et al.
Manufacturing progress status of EMPIRE UMo irradiation experiment
International Meeting on Reduced Enrichment for Research and Test Reactors 2015, RERTR-2015, Seoul, Korea, 11 Oct 2015 - 14 Oct 2015
313. H. Breitzkreutz, T. Huber, T. Zweifel et al.
HERACLES-CP: Towards the Conversion of High Performance Research Reactors in Europe,
International Meeting on Reduced Enrichment for Research and Test Reactors 2015, RERTR-2015, Seoul, Korea, 11 Oct 2015 - 14 Oct 2015 (2015)
314. HY Chiang, SH Park, M. Mayer, K. Schmid, M. Balden, U. Bösenberg et al. Bösenberg et al., *Swift heavy ion irradiation induced interactions in the UMo/X/al trilayer system (X= Ti, Zr, Nb, and Mo): RBS and μ -XRD studies*
Journals of alloys and compounds, Volume 626, 25 March 2015, Pages 381–390
<http://dx.doi.org/10.1016/j.jallcom.2014.12.041>

2016

315. Säubert, R. Jungwirth, T. Zweifel, M. Hofmann, M. Hölzel, W. Petry, *Neutron and hard X-ray diffraction studies of the isothermal transformation kinetics in the research reactor fuel candidate U-8wt% Mo*, Journal of applied crystallography 49 (3), Journal of Applied Crystallography (2016), 49, 923-933 (2016), <https://doi.org/10.1107/S1600576716005744>
316. K. Kyriakos, M. Philipp, L. Silvi, W. Lohstroh, W. Petry, P. Müller-Buschbaum, et al.
Solvent Dynamics in Solutions of PNIPAM in Water/Methanol Mixtures - A Quasi-Elastic Neutron Scattering Study
The Journal of Physical Chemistry B, 120 (20), 4679-4688,
<http://dx.doi.org/10.1016/j.nima.2016.06.105>

317. Luca Silvi, Eva Röhm, Maximilian Fichtner, Winfried Petry, Wiebke Lohstroh, *Hydrogen dynamics in β -Mg (BH 4) 2 on the picosecond timescale*, *Physical Chemistry Chemical Physics* 18, 14323-14332 (2016), DOI: [10.1039/C6CP00995F](https://doi.org/10.1039/C6CP00995F)
318. S. Mühlbauer, A. Heinemann, A. Wilhelm, L. Karge, A. Ostermann, I. Defendi et al., *The new small-angle neutron scattering instrument SANS-1 at MLZ—characterization and first results*, *Nuclear Instruments and Methods in Physics Research Section A: Accelerators, Spectrometers, Detectors and Associated Equipment*, 832, 297-305 (2016), <http://dx.doi.org/10.1016/j.nima.2016.06.105>
319. T. Hollmer, B. Baumeister, C. Steyer, W. Petry
PVD-Based Manufacturing Process of Monolithic LEU foil targets for 99Mo- Production, Proceedings of RRFM 2016, ISBN 978-92-95064-2, RRFM 2016, 13-17 March, Berlin, Germany
320. C. Reiter, H. Breitzkreutz, A. Röhrmoser, W. Petry
First Steps towards a coupled code system for transient calculations, Proceedings of RRFM 2016, ISBN 978-92-95064-2, RRFM 2016, 13-17 March, Berlin, Germany
321. C. Schwarz, T. Dirks, Ba. Baumeister, C. Steyer, W. Petry
All-in-one chemical cleaning and deoxidation process for monolithic uranium-molybdenum foils, Proceedings of RRFM 2016, ISBN 978-92-95064-2, RRFM 2016, 13-17 March, Berlin, Germany
322. T. Hollmer and W. Petry, *A novel monolithic LEU foil target based on a PVD manufacturing process for 99Mo production via fission* Applied Radiation and Isotopes, 2016, DOI: [10.1016/j.apradiso.2016.10.003](https://doi.org/10.1016/j.apradiso.2016.10.003)

2017

323. P Neibecker, ME Gruner, X Xu, R Kainuma, W Petry, R Pentcheva, et al.
Ordering tendencies and electronic properties in quaternary Heusler derivatives
arXiv preprint arXiv:1704.08100, 2017
<http://dx.doi.org/10.1103/PhysRevB.96.165131>
324. L Karge, R Gilles, D Mukherji, P Strunz, P Beran, M Hofmann, J Gavilano, et al
The influence of C/Ta ratio on TaC precipitates in Co-Re base alloys investigated by small-angle neutron scattering
Acta Materialia 132, 354 - 366 (2017) [10.1016/j.actamat.2017.04.029]
<https://doi.org/10.1016/j.actamat.2017.04.029>
325. W Petry, B Frick, V García Sakai
Workshop on '50 Years of Neutron Backscattering Spectroscopy' Neutron News 28 (1), 6-7, 2017
326. A. Glensk, B. Grabowski, T. Hickel, J. Neugebauer, M. Leitner, J. Neuhaus, W. Petry
Ab initio determination of phonon lifetimes up to the melting point
EMRS Spring 2017, May 2017
327. H. Breitzkreutz, J. Hingerl, J. Shi, W. Petry
Ion-irradiation induced inter diffusion layer growth in UMo/Al fuels
AccApp'17 (13th International Topical Meeting on the Nuclear Applications of Accelerators), Québec, Kanada
328. C. Reiter, H. Breitzkreutz, A. Röhrmoser, A. Seubert, W. Petry
High precision neutronic calculations for transient simulations for FRM II
RRFM 2017, Rotterdam, Niederlande
329. Ch. Steyer, B. Baumeister, H. Breitzkreutz, W. Petry, B. Stepnik, M. Grasse, C. Moyroud
Characterization of monolithic UMo foils and Zr coatings for the EMPIRE irradiation experiment
RRFM 2017, Rotterdam, Niederlande
330. H. Breitzkreutz, R. Jungwirth, T. Zweifel, H.-Y. Chiang, J. Shi, W. Petry
Heavy ions irradiation as a tool to minimize the number of in-pile tests in UMo fuel development

2018

331. K. Rathinam, Y. Oren, W. Petry, D. Schwahn, R. Kasher
Calcium phosphate scaling during wastewater desalination on oligoamide surfaces mimicking reverse osmosis and nanofiltration membranes
Water Research 128 (2018), 271-225)
[doi: https://doi.org/10.1016/j.watres.2017.10.055](https://doi.org/10.1016/j.watres.2017.10.055)
332. H.-Y. Chiang, T. Wiss, S.-H. Park, O. Dieste-Blanco, W. Petry
TEM-Analysis for irradiation-induced interaction layers in coated UMo/X/Al trilayer systems (X1/4 Ti, Nb, Zr and Mo)
Journal of Nuclear Materials 499, 588 – 566 (2018)
<https://doi.org/10.1016/j.jnucmat.2017.12.015>
333. L. Karge, D. Lang, J. Schatte, R. Gilles, S. Busch, P. Leibenguth, H. Clemens, et al.
Characterization of anisotropic pores and spatially oriented precipitates in sintered Mo-base alloys using small-angle neutron scattering
Journal of Applied Crystallography 51 (6), 1706-1714 (2018)
<https://doi.org/10.1107/S1600576718014474>
334. H. Breitzkreutz, A. Heldmann, J. Hingerl, R. Jungwirth, J. Shi, W. Petry
Quantitative comparability of heavy ion and in-pile irradiations on UMo fuel systems
Journal of Nuclear Materials 507, 276-287 (2018)
<https://doi.org/10.1016/j.jnucmat.2018.04.007>
335. R.E. Stene, B. Scheibe, C. Pietzonka, A.J. Karttunen, W. Petry, F. Kraus
MoF5 revisited. A comprehensive study of MoF5
Journal of Fluorine Chemistry 211, 171-179 (2018)
<https://doi.org/10.1016/j.jfluchem.2018.05.002>
336. P. Böni, W. Petry
Neutron Science with Highly Brilliant Beams
315-332 in:
eds. Paul R. Bolton, Katia Pardi, Jörg Schreiber
Applications of Laser-Driven Particle Acceleration
CRC Press, ISBN 9781498766418 (2018)
337. H. Breitzkreutz, J. Shi, R. Jungwirth, T. Zweifel, H.Y. Chiang, W. Petry
Heavy Ions Irradiation as a Tool to Minimize the Number of In-Pile Tests in UMo Fuel Development
ATW-INTERNATIONAL JOURNAL FOR NUCLEAR POWER 63 (5), 325 (2018)
338. T.K. Huber, H. Breitzkreutz, D.E. Burkes, A.J. Casella, A.M. Casella, S. Elgeti, et al.
Thermal conductivity of fresh and irradiated U-Mo fuels
Journal of Nuclear Materials 503, 304-313 (2018)
<https://doi.org/10.1016/j.jnucmat.2018.01.056>
339. X.H. Li, P. Saal, W.M. Gan, M. Hoelzel, W. Volk, W. Petry, M. Hofmann
Strain-Induced Martensitic Transformation Kinetic in Austempered Ductile Iron (ADI)
Metallurgical and Materials Transactions A 49 (1), 94-104
<https://doi.org/10.1007/s11661-017-4420-3>
340. C. Reiter, H. Breitzkreutz, W. Petry
High precision neutronic calculations for transient simulations of compact cores

Proceedings of Physor 2018, Cancun, Mexiko

341. J. Shi, H. Breitskreutz, J. Hingerl, W. Petry
Quantitatively simulating fission-enhanced diffusion in U-Mo/Al systems by swift heavy ion irradiation
Proceedings RRFM 2018, München
342. B. Stepnik, M. Grasse, C. Rontar, D. geslin, Y. Guinard, S. Van den Berghe, A. Leenaers, H. Breitskreutz, W. Petry, H. Palancher, E. Hervieu, Y. Calzavara, H. Guyon
Manufacturing of the SEMPER FIDELIS UMo irradiation experiment
Proceedings RRFM 2018, München
343. P. Y. Thro, J. P. Coulon, G. Krzysztoszek, R. Schram, H. van der Lugt, J. Milcak, L. Sannen, B. Ponsard, W. Petry, H. Gerstenberg
Scenario for sustainable Molybdenum-99 production in Europe - European Research Reactor Position Paper by CEA, NCBJ, PALLAS, NRG, SCK•CEN, TUM, AND RCR 15 JUNE 2018
https://ec.europa.eu/euratom/docs/European%20Research%20Reactor%20Position%20Paper%20for%20DGE%20Energy%20%202018%20report_20180801.pdf
344. B. Baumeister, C. Schwarz, Ch. Steyer, H. Breitskreutz, W. Petry
Manufacturing Processes for Inert Monolithic Mini-Size Fuel Foils with Thickness Gradient
Proceedings RRFM 2018, München
345. B. Baumeister, Ch. Schwarz, CH. Steyer, W. Petry, J. Allenou, B. Stepnik
Production of Surrogate Fuel Plates with Monolithic Gradient Foils
Proceeding RERTR 2018, Edinburgh

2019

346. V. Pipich, K. Schlenstedt, M. Dickmann, R. Kasher, J. Meier-Haack, et al.
Morphology and porous structure of standalone aromatic polyamide films as used in RO membranes—An exploration with SANS, PALS, and SEM
Journal of Membrane Science 573, 167-176 (2019)
<https://doi.org/10.1016/j.memsci.2018.11.055>
347. L. Silvi, Z. Zhao-Karger, E. Röhm, M. Fichtner, W. Petry, W. Lohstroh
A quasielastic and inelastic neutron scattering study of the alkaline and alkaline-earth borohydrides LiBH₄ and Mg (BH₄)₂ and the mixture LiBH₄ + Mg (BH₄)₂
Phys. Chem. Chem. Phys., 2019, 21, 718-728
<https://doi.org/10.1039/C8CP04316G>
348. Reiter, Christian; Breitskreutz, Harald; Röhrmoser, Anton; Seubert, Armin; Petry, Winfried
Neutronic simulations for the FRM II
Annals of Nuclear Energy 131, S. 1–8.
<https://www.sciencedirect.com/science/article/pii/S0306454919301355>
349. R. Stene, B. Scheibe, A. Karttunen, W. Petry, F. Kraus, Florian
Lewis Acidic Behavior of MoOF₄ towards the Alkali Metal Fluorides in Anhydrous Hydrogen Fluoride Solutions.
Eur. J. Inorg. Chem. 26, S. 767
<https://chemistry-europe.onlinelibrary.wiley.com/doi/full/10.1002/ejic.201900595>
350. R. Stene, B. Scheibe, A. Karttunen, W. Petry, F. Kraus, Florian
Lewis Acidic Behaviour of MoOF₄ towards the Alkali Metal Fluorides in Anhydrous Hydrogen Fluoride Solutions
Eur. J. Inorg. Chem 26, S.767
<https://chemistry-europe.onlinelibrary.wiley.com/doi/full/10.1002/ejic.201900595>

351. A. Glensk, B. Grabowski, T. Hickel, J. Neugebauer, J. Neuhaus, K. Hradil, W. Petry, and M. Leitner
Phonon Lifetimes throughout the Brillouin Zone at Elevated Temperatures from Experiment and ab initio
PHYSICAL REVIEW LETTERS 123, 235501 (2019)
<https://journals.aps.org/prl/abstract/10.1103/PhysRevLett.123.235501>
352. A. Heldmann, M. Hoelzel, M. Hofmann, W. Gan, W. Schmahl, E. Griesshaber, T. Hansen, N. Schellb, W. Petry
Diffraction-based determination of single-crystal elastic constants of polycrystalline titanium alloys
J. Applied Crystallography, Volume 52| Part 5| October 2019| Pages 1144-1156
<http://scripts.iucr.org/cgi-bin/paper?S1600576719010720>
353. P. Y. Thro, W. Petry
Securing the European Supply of 19.75% enriched Uranium Fuel - a revised assessment
Euratom Supply Agency (ESA), May 2019
https://ec.europa.eu/euratom/docs/ESA_HALEU_report_2019.pdf
354. Winfried Petry
Neutrons for Research, Engineering and Medicine in Germany
In: atw International Journal for Nuclear Power, Vol. 64 (2019) Issue 10 October 2019 p. 455 – 462
355. K. Rathinam, S. Abraham, Y. Oren, D. Schwahn, W. Petry,, Y. Kaufmann, et al.
Surface –Induced Silica Scaling during Brackish Water Desalination: The Role of Surface Charge and Specific Chemical Groups
Environmental science & technology 53(9), 5202-5211 (2019)
- X Li, J.N. Wagner, A. Stark, R., Kroos, M. Landsberger, M. Hiofmann, G. Fan, et al.
Carbon Redistribution Process in Austempered Ductile Iron (ADI) DDuring Heat Treatment – APT and Synchrotron Diffraction Study
Metals 9(7) 789

2020

356. R. Stene, T. Chemnitz, W. Petry, F. Kraus
Reductive photo-chemical separation of the hexafluorides of uranium and molybdenum
Journal of Fluorine Chemistry 240, 109655 (2020)
<https://doi.org/10.1016/j.jfluchem.2020.109655>
357. J. Shi, C. Onofri, H. Palancher, X. Iltis, D. Drouan, H. Breikreutz, W. Petry
Microstructure evolution and phase transformation of heavy-ion irradiated U–Mo/Al fuels
Journal of Nuclear Materials 541, 152399 (2020)
<https://doi.org/10.1016/j.jnucmat.2020.152399>
358. V. Kochetov, M. J. Mühlbauer, A. Schökel, T. Fischer, T. Müller, et al.
Powder diffraction computed tomography: a combined synchrotron and neutron study
J. Phys.: Condens. Matter, 2020
<https://iopscience.iop.org/article/10.1088/1361-648X/abccb0>
359. B. Ye, Y. Miao, J. Shi, D. Salvato, K. Mo, et.al.
Temperature Effects on Interdiffusion of Al and U-Mo under Irradiation
Journal of Nuclear Materials, 152684 (2020)
<https://doi.org/10.1016/j.jnucmat.2020.152684>
360. Y. Miao, L.A. Nimmagadda, M.C. Rajagopal, K. Mo, J. Shi, et al.
Thermal conductivity measurement of the interaction layer between UMo and Al produced by high-energy heavy ion irradiation

- Journal of Nuclear Materials 539, 152262 (2020)
<https://doi.org/10.1016/j.jnucmat.2020.152262>
361. R. Stene, B. Scheibe, A.J. Karttunen, W. Petry, F. Kraus
Syntheses and Characterization of A [W₂O₂F₉](A= Li–Cs)
 European Journal of Inorganic Chemistry 23, 2260-2269 (2020)
<https://doi.org/10.1002/ejic.202000289>
362. R. Stene, B. Scheibe, W. Petry, F. Kraus
 Front Cover: *Synthesis and Characterization of the Hexafluoridomolybdates(V) A[MoF₆] (A = Li – Cs)*
 Eur. J. Inorg. Chem./2020
363. R. Stene, B. Scheibe, W. Petry, F. Kraus
Synthesis and Characterization of the Hexafluoridomolybdates (V) A [MoF₆](A= Li–Cs)
 European Journal of Inorganic Chemistry 19, 1834-1843 (2020)
<https://doi.org/10.1002/ejic.202000141>
364. K. H. Andersen, D.N. Argyriou, A.J. Jackson, J. Houston, P.F. Henry, W. Petry, et al.
The instrument suite of the European Spallation Source
 Nuclear Instruments and Methods in Physics Research Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, Vol. 957, 21 March 2020, 163402 (2020)
<https://doi.org/10.1016/j.nima.2020.163402>
365. V. Pipich, M. Dickmann, H. Frielinghaus, R. Kasher, C. Hugenschmidt, et al.
 Morphology of Thin Film Composite Membranes Explored by Small-Angle Neutron Scattering and Positron-Annihilation Lifetime Spectroscopy
 Membranes 10 (3), 48 (2020)
<https://doi.org/10.3390/membranes10030048>
366. M. Landesberger, R. Koos, M. Hofmann, X. Li, T. Boll, W. Petry, W. Volk
Phase Transition Kinetics in Austempered Ductile Iron (ADI) with Regard to Mo Content
 Materials 13 (22), 5266 (2020)
<https://doi.org/10.3390/ma13225266>
367. M. Molls, J. Eberspächer, H. Auernhammer, G. Färber, B. Herbst-Gaebel, et al.
Wissenschaft, Vernunft & Nachhaltigkeit, Zorneding 2020
<https://mediatum.ub.tum.de/doc/1548492/file.pdf>
368. G. Färber, T. Hamacher, W. Petry
Energie - Post-Corona
 Wissenschaft, Vernunft & Nachhaltigkeit, 102-105 (2020)
<https://mediatum.ub.tum.de/doc/1548492/file.pdf>
369. S. Valance, B. Baumeister, W. Petry, J. Höglund
Innovative and safe supply of fuels for reactors
 EPJ N-Nuclear Sciences & Technologies 6, 40 (2020)
<https://doi.org/10.1051/epjn/2019013>
370. Shehu, Kaltrina; Bojanowski, Cezary; Bergeron, Aurelien; Petry, Winfried; Reiter, Christian (2020):
 First steps to coupled hydraulic and mechanical calculations within a parameter study to define possible core designs for the conversion of FRM II. In: American Nuclear Society (Hg.): Physor 2020. Physor. Cambridge, UK.
https://drive.google.com/file/d/1mY6PJezcrxM7T-vRnem6lrCFE3j2WU_P/view
371. Shehu, Kaltrina; Mertz, Julius; Petry, Winfried; Reiter, Christian (2020): Mechanical Evaluations to Define Possible Fuel Element Designs for the Conversion of FRM II. In: Société Française d'Énergie Nucléaire (Hg.): ATH 2020. Palaiseau, Frankreich.
(online noch nicht verfügbar)

