

List of Publications

Prof. Dr. Dieter Richter

Observation of protein domain motions by neutron spectroscopy

M. Monkenbusch, D. Richter, R. Biehl

ChemPhysChem **11**, 1188-1194 (2010)

Chain motion in non-entangled dynamically asymmetric polymer blends: Comparison between atomistic simulations of PEO/PMMA and a generic bead-spring model

M. Brodeck, Alvarez, A.J. Moreno, J. Colmenero, D. Richter

Macromolecules **43**, 3036-3051 (2010)

Polymer dynamics under soft confinement in a self-assembled system

L. Willner, R. Lund, M. Monkenbusch, O. Holderer, J. Colmenero, D. Richter

Soft Matter **6**, 1559-1570 (2010)

Molecular observation of branch point motion in star polymer melts

M. Zamponi, W. Pyckhout-Hintzen, A. Wischnewski, M. Monkenbusch, L. Willner, G. Kali, D. Richter

Macromolecules **43**, 518-524 (2010)

Synthesis of polymer/Silica hybrid nanoparticles using anionic polymerization techniques

E. Hübner, J. Allgaier, M. Meyer, J. Stellbrink, W. Pyckhout-Hintzen, D. Richter

Macromolecules **43**, 856-867 (2010)

Dynamical properties of decorated lamellar microemulsions in the brush regime

O. Holderer, H. Frielinghaus, D. Byelov, M. Monkenbusch, J. Allgaier, D. Richter

Zeitschrift für Physikalische Chemie **224**, 243-251 (2010)

Neutron scattering study of the dynamics of a polymer melt under nanoscopic confinement
M. Krutyeva, J. Martin, A. Arbe, J. Colmenero, C. Mijangos, G.J. Schneider, T. Unruh, Y. Su, D. Richter
Journal of Chemical Physics **131**, 174901 (2009)

Structural observation and kinetic pathway in the formation of polymeric micelles
R. Lund, L. Willner, M. Monkenbusch, P. Panine, T. Narayanan, J. Colmenero, D. Richter
Phys. Rev. Lett. **102**, 188301 (2009)

Study of the dynamics of poly(ethylene oxide) by combining molecular dynamics simulations and neutron scattering experiments
M. Brodeck, F. Alvarez, A. Arbe, F. Juranyi, T. Unruh, O. Holderer, J. Colmenero, D. Richter
J. Chemical Physics **130**, 094908 (2009)

Structural properties of weakly segregated PS-PB Block copolymer micelles in n-alkanes: solvent entropy effects
R. Lund, L. Willner, P. Lindner, D. Richter
Macromolecules **42**, 2686-2695 (2009)

Polymerization of 1-octene by a pyridylamidohafnium catalyst: a SEC, ¹H-NMR and small angle neutron scattering study
A. Niu, J. Stellbrink, J. Allgaier, D. Richter, R. Hartmann, G.J. Domski, G.W. Coates, L.J. Fetters
Macromolecules **42**, 1083-1090 (2009)

Protein in action gefilmt
R. Biehl, D. Richter
Physik in unserer Zeit **40**, 9-10 (2009)

Jülich Soft Matter Days 2008 – Conference Report II
J.K.G. Dhont, G. Gompper, D. Richter
Applied Rheology **19**, 176-178 (2009)

SANS investigation and conductivity of pure and salt-containing poly (bismethoxy- phosphazene)
Y. Karatas, W. Pyckhout-Hintzen, R. Zorn, D. Richter, H.-D. Wiemhöfer
Macromolecules **41**, 2212-2218 (2008)

Unexpected power-law stress relaxation of entangled ring polymers
M. Kapnistos, M. Lang, D. Vlassopoulos, W. Pyckhout-Hintzen, D. Richter, D. Cho, T. Chang, M. Rubenstein
Nature Materials **7**, 997-1002 (2008)

Anomalous relaxation of self assembled alkyl nanodomains in high order poly(n-alkyl metacrylates)
A. Arbe, A.-C. Genix, J. Colmenero, D. Richter
Soft Matter **4**, 1792-1795 (2008)

Atomic motions in the $\alpha\beta$ -merging regime of 1-4 polybutadiene: A molecular dynamics simulation study
A. Narros, A. Arbe, F. Alvarez, J. Colmenero, D. Richter
J. Chemical Physics **128**, 224905 (2008)

Small angle neutron scattering characterization of polyhydroxyalkanoates and their bioPEGylated hybrids in solution

L.J. Foster, D. Schwahn, V. Pipich, P.J. Holden, D. Richter

Biomacromolecules **9**, 314-320 (2008)

Neutron scattering investigation of a diluted blend of poly(ethyleneoxide) in polyethersulfone

A.C. Genix, A. Arbe, S. Arres-Igor, J. Colmenero, D. Richter, B. Frick, P. Deen

J. Chem. Phys. **128**, 184901 (2008)

Polymer dynamics from synthetic polymers to proteins

D. Richter, R. Biehl, M. Monkenbusch, B. Hoffmann, R. Merkel

Pramana **71**, 729 (2008)

Direct observation of correlated interdomain motion in alcohol dehydrogenase

R. Biehl, B. Hoffmann, M. Monkenbusch, P. Falus, S. Prevost, R. Merkel, D. Richter

Physical Review Letters **101**, 138102 (2008)

The JCNS neutron spin-echo spectrometer J-NSE at the FRM II

O. Holderer, M. Monkenbusch, R. Schätzler, H. Kleines, W. Westerhausen, D. Richter

Measurement Science and Technology **19**, 034022 (2008)

Chain dynamics and viscoelastic properties of poly(ethylene-oxide)

K. Niedzwiedz, A. Wischniewski, W. Pyckhout-Hintzen, J. Allgaier, D. Richter, A. Faraone

Macromolecules **41**, 4866 (2008)

Self-concentration and interfacial fluctuation effects on the local segmental dynamics of nanostructured diblock copolymer melts

R. Lund, L. Willner, A. Alegria, J. Colmenero, D. Richter

Macromolecules Communications to the Editor **41**, 511 (2008)

Inelastic Neutronscattering study of a glass-forming liquid in soft confinement

R. Zorn, M. Majorova, D. Richter, B. Frick

Softmatter **3**, 522 (2008)

Hydrophilic alcohol ethoxylates as efficiency booster for microemulsions

C. Frank, H. Frielinghaus, J. Allgaier, D. Richter

Langmuir **24**, 6036 (2008)

Cooperative dynamics in homopolymer melts: a comparison of theoretical predictions with neutron spin echo experiments

M. Zamponi, A. Wischniewski, M. Monkenbusch, L. Willner, D. Richter, P. Falus, B. Farago, M. G. Guenza

Journal of Physical Chemistry B **112**, 16220-16229 (2008)

Polymer driven wax crystal control using partially crystalline polymeric materials

A. Radulescu, L.J. Fetters, D. Richter

Advances in Polymer Science **210**, 1-100 (2008)

Shear induced structures of soft colloids : Rheo SANS experiments on kinetically frozen PEP-PEO diblock copolymer micelles

J. Stellbrink, B. Lonetti, G. Rother, L. Willner, D. Richter

J. Phys.: Condens. Matter **20**, 404206 (2008)

Polymer chain dynamics in a random environment: heterogeneous mobilities

K. Niedzwiedz, A. Wischniewski, M. Monkenbusch, D. Richter, A.-C. Genix, A. Arbe, J. Colmenero, M. Strauch, E. Straube

Physical Review Letter **98**, 168301 (2007)

Die Megawatt-Spallationsneutronenquelle SNS: neue Chancen für die Erforschung der kondensierten Materie

F. Klose, N. Holtkamp, D. Richter

Physik Journal **1**, 23 (2007)

Analysis of polymeric methylaluminoxane (MAO) via small angle neutron scattering

J. Stellbrink, A. Niu, J. Allgaier, D. Richter, B.W Koenig, R. Hartmann, G.W. Coates, L.J. Fetters

Macromolecules **20**, 4972-4981 (2007)

High resolution neutron spectroscopy – a tool for the investigation of dynamics of polymers and soft matter

M. Monkenbusch, D. Richter

Comptes Rendus Physique **8**, 845-864 (2007)

Architecturally induced multiresponsive vesicles from well-defined polypeptides. Formation of gene vehicles.

H. Iatrou, H. Frielinghaus, S. Hanski, N. Ferderigos, J. Ruokolainen, O. Ikkala, D. Richter, J. Mays, N. Hadjichristidis

Biomacromolecules **8**, 2173-2181 (2007)

Probing lateral magnetic nanostructures by polarized GISANS

E. Kentzinger; H. Frielinghaus; U. Rücker; A. Ioffe, D. Richter, T. Brückel

Physica B: Condensed Matter **397**, 43-46 (2007)

Asymmetric poly(ethylene-alt-propylene)-poly(ethylene oxide) micelles: A system with starlike morphology and interactions

M. Laurati, J. Stellbrink, R. Lund, L. Willner, E. Zaccarelli, D. Richter

Phys. Rev. E **76**, 041503 (2007)

Hydrodynamic effects in bicontinuous microemulsions measured by inelastic neutron scattering

O. Holderer, H. Frielinghaus, M. Monkenbusch, J. Allgaier, D. Richter, B. Farago*

European Physical Journal E **22** (2007), 157-161

Unraveling the equilibrium chain exchange kinetics of polymeric micelles using small-angle neutron scattering - architectural and topological effects

R. Lund, L. Willner, D. Richter; H. Iatrou, N. Hadjichristidis, P. Lindner

Journal of Applied Crystallography **40**, S327 - S331 (2007)

Polymer dynamics: from synthetic polymers to proteins

D. Richter

Journal of Applied Crystallography **40**, 28-33 (2007)

SANS study of polymer-linked droplets

S. Maccarrone; H. Frielinghaus; J. Allgaier, D. Richter; P. Lindner

Langmuir **23**, 9559-9562 (2007)

Polymer dynamics from synthetic to biological macromolecules

D. Richter, K. Niedzwiedz, M. Monkenbusch, A. Wischnewski, R. Biehl, B. Hoffmann, R. Merkel
AIP Complex Systems: 5th International Workshop on Complex Systems
AIP Conference Proceedings **982**, 429 (2007)

Effect of nanoscopic confinement on the microscopic dynamics of glass-forming liquids and polymers studied by inelastic neutron scattering

R. Zorn, M. Mayorova, D. Richter, A. Schönhals, L. Hartmann, F. Kremer, B. Frick
AIP Complex Systems: 5th International Workshop on Complex Systems
AIP Conference Proceedings **982**, 79 (2007)

Hierarchical structures formed by partially crystalline polymers in solution: from fundamentals to application – a combined conventional, focusing and ultra-small-angle neutron scattering study

A. Radulescu, D. Schwahn, J. Stellbrink, E. Kentzinger, L. Fetters, D. Richter
J. of Applied Crystallography **40**, s97-s100 (2007)

Plasticizer effect on the dynamics of polyvinylchloride studied by dielectric spectroscopy and quasielastic neutron scattering

R. Zorn, M. Monkenbusch, D. Richter, A. Alegria, J. Colmenero, B. Farago
Journal of Chemical Physics **125**, 154904 (2006)

Equilibrium exchange kinetics in PEP-PEO block copolymer micelles. A time resolved SANS study

R. Lund, L. Willner, J. Stellbrink, D. Richter
Physica B **385**, 735 (2006)

Quasielastic neutron scattering study on the effect of blending on the dynamics of head-to-head Poly(propylene) and Poly(ethylene propylene)

R. Pérez, A. Arbe, J. Colmenero, B. Frick, L. Willner, D. Richter
Macromolecules **39**, 1060-1072 (2006)

“Frozen” polymer coils: A neutron spin-echo investigation on polynorbornenes in solution

M. Monkenbusch, J. Allgaier, D. Richter, J. Stellbrink
Macromolecules **39**, 9473-9479 (2006)

Synthesis and rheological properties of poly(5-*n*-hexyl norbornene)

K. Müller, S. Kreiling, K. Dehnicke, J. Allgaier, D. Richter, L. Fetters, Y. Jung, D.Y. Yoon, A. Greiner
Macromolecular Chemistry and Physics **207**, 193-200 (2006)

Quantitative analysis of small angle neutron scattering data from montmorillonite dispersions

H. Hermes, H. Frielinghaus, W. Pyckhout-Hintzen, D. Richter
Polymer **47**, 2147-2155 (2006)

Logarithmic chain-exchange kinetics of diblock copolymer micelles

R. Lund, L. Willner, J. Stellbrink, P. Lindner, D. Richter
Physical Review Letters **96**, 068302 (2006)

Self- and collective dynamics of syndiotactic poly(methylmethacrylate). a combined study by quasielastic neutron scattering and atomistic molecular dynamics simulations

A.-C. Genix, A. Arbe, F. Alvarez, J. Colmenero, B. Farago, A. Wischnewski, D. Richter
Macromolecules **39**, 6260-6272 (2006)

Equilibrium chain exchange kinetics of diblock copolymer micelles: Tuning and logarithmic relaxation

R. Lund, L. Willner, D. Richter, E. Dormidontova

Macromolecules **39**, 4566-4575 (2006)

Molecular observation of constraint release in polymer melts

M. Zamponi, A. Wischnewski, M. Monkenbusch, L. Willner, D. Richter, A.E. Likhtman, G. Kali, B. Farago

Physical Review Letters **96**, 238302 (2006)

Neutron spin echo for the exploration of large scale macromolecular dynamics

D. Richter

Journal of the Physical Society of Japan **75**, 111004 (2006)

Local structure of syndiotactic poly (methyl methacrylate). A combined study by neutron diffraction with polarization analysis and atomistic molecular dynamics simulations

A.-C. Genix, A. Arbe, F. Alvarez, J. Colmenero, W. Schweika, D. Richter

Macromolecules **39**, 3947-3958 (2006)

SANS studies of confined diblock copolymers in microemulsions

H. Frielinghaus, S. Maccarrone, D. Byelov, J. Allgaier; D. Richter, T. Auth; G. Gompper

Physica B: Condensed Matter **385-386**, 738-741 (2006)

Wax crystallization from solution in hierarchical morphology templated by random poly(ethylene-co-butene) self-assemblies

A. Radulescu, D. Schwahn, J. Stellbrink; E. Kentzinger; M. Heiderich; D. Richter; L. Fetters

Macromolecules **39**, 6142 - 6151(2006)

A microscopic look at the reinforcement of silica-filled rubbers

A. Botti, W. Pyckhout-Hintzen, D. Richter, V. Urban, E. Straube

Journal of Chemical Physics **124**, 174908 (2006)

Interaction of paraffin wax gels with ethylene/vinyl acetate copolymers

H.S. Ashbaugh, X. Guo, D. Schwahn, R.K. Prud'homme, D. Richter, L.J. Fetters

Energy & Fuels **19**, 138-144 (2005)

Viscoelasticity and microscopic motion in dense polymer systems

D. Richter

in *Diffusion in Condensed Matter* (2. Edition), Eds. P. Heitjans and J. Kärger, Springer Verlag Heidelberg, ISBN-10-3-540-20043-6, p. 513-554 (2005)

Aspects of neutron spin-echo spectrometer operation on a pulsed source

M. Monkenbusch, M. Ohl, D. Richter, C. Pappas, G. Zsigmond, K. Lieutenant, F. Mezei

Journal of Neutron Research **13**, 63 (2005)

Dynamic properties of microemulsions modified with homopolymers and diblock copolymers: The determination of bending moduli and renormalization effects

O. Holderer, H. Frielinghaus, D. Byelov, M. Monkenbusch, J. Allgaier, D. Richter

Journal of Chemical Physics **122**, 094908 (2005)

Neutron spin echo in polymer systems

D. Richter, M. Monkenbusch, A. Arbe, J. Colmenero

Advances in Polymer Science **174**, ISBN: 3-540-22862-4 (2005)

Star-like micelles with star-like interactions: a quantitative evaluation of structure factors and phase diagram

M. Laurati, J. Stellbrink, R. Lund, L. Willner, D. Richter and E. Zaccarelli, Phys. Rev. Letters
Phys. Rev. Lett. **94**, 195504 (2005)

An *in situ* study of the *t*-butyllithium initiated polymerization of butadiene in d-heptane via small angle neutron scattering and ^1H -NMR,

A. Niu, J. Stellbrink, J. Allgaier, L. Willner, A. Radulescu, D. Richter, B. W. König, R. P. May, L. J. Fetters
Journal of Chemical Physics **122**, 134906 (2005)

Dynamics of deuterated polystyrene-protonated butadiene diblock copolymer micelles by neutron spin echo

T. Kanaya, M. Monkenbusch, H. Watanabe, M. Nagao, D. Richter
Journal of Chemical Physics **122**, 144905 (2005)

KWS-3: the new (very) small-angle neutron scattering instrument based on focusing-mirror-optics

A. Radulescu, E. Kentzinger, J. Stellbrink, L. Dohmen, B. Alefeld, U. Rücker, M. Heiderich, D. Schwahn, T. Brückel, D. Richter
Neutron News **16**, 18-21 (2005)

Neutron scattering at the Research Center Jülich

H. Tietze-Jaensch, R. Zorn, T. Brückel, D. Richter
Neutron News **16**, 11-13 (2005)

Bending moduli of microemulsions; comparison of results from small angle neutron scattering and neutron spin-echo spectroscopy

M. Monkenbusch, O. Holderer, H. Frielinghaus, D. Byelov, J. Allgaier, D. Richter
Journal of Physics: Condensed Matter **17**, S2903-2909 (2005)

Partial structure factors in 1,4-Polybutadiene. a combined neutron scattering and molecular dynamics simulations study

A. Narros, A. Arbe, F. Alvarez, J. Colmenero, R. Zorn, W. Schweika, D. Richter
Macromolecules **38**, 9847-9853 (2005)

Contour length fluctuations in polymer melts: A direct molecular proof

M. Zamponi, M. Monkenbusch, L. Willner, A. Wischniewski, B. Farago, D. Richter
Europhysics Letters **72**, 1039-1044 (2005)

Small angle neutron scattering observation of chain retraction after a large step deformation

A. Blanchard, R. S. Graham, M. Heinrich, W. Pyckhout-Hintzen, D. Richter, A. E. Likhtman, T. C. B. McLeish, D. J. Read, E. Straube, J. Kohlbrecher
Physical Review Letters **95**, 166001 (2005)

Correction elements for ultra-high resolution NSE spectrometer

M. Ohl, M. Monkenbusch, T. Kozielowski, B. Laatsch, Ch. Tiemann, D. Richter
Physica B **356**, 234-238 (2005)

Coupled protein domain motion in *Taq* polymerase revealed by neutron spin-echo spectroscopy

Z. Bu, R. Biehl, M. Monkenbusch, D. Richter, D.J.E. Callaway
Proceedings of the National Academy of Sciences of the USA **102**, 17646-17651 (2005)

Aspects of neutron spin-echo spectrometer operation at pulsed sources

M. Monkenbusch, D. Richter, C. Pappas, G. Zsigmond, K. Lieutenant, F. Mezei
Journal of Neutron Research **13**, 63 (2005)

Dynamics of poly(ethylene oxide) in a blend with poly(methyl methacrylate): A quasielastic neutron scattering and molecular dynamics simulation study

A.-C. Genix, A. Arbe, F. Alvarez, J. Colmenero, L. Willner, D. Richter
Physical Review E **72**, 031808 (2005)

Self-atomic motions in glass-forming polymers: neutron scattering and molecular dynamics simulations results

J. Colmenero, F. Alvarez, A. Narros, A. Arbe, M. Monkenbusch, D. Richter, B. Farago
AIP (Nov. 2003), Conference Proceedings Slow Dynamics in Complex Systems, 02.-09.11.2003, ed. By M. Tokuyama and I. Oppenheim, CP708, p. 655-658 (2004)

Neutron scattering and dielectric study on the structural and dynamical peculiar properties of poly(vinyl chloride)

A. Arbe, A. Moral, A. Alegria, J. Colmenero, W. Pyckhout-Hintzen, D. Richter, B. Farago, B. Frick
AIP (Nov. 2003), Conference Proceedings Slow Dynamics in Complex Systems, 02.-09.11.2003, p. 594-597 (2004)

Rheological properties of 1,4 polyisoprene over a large molecular weight range

M. Abdel-Goad, W. Pyckhout-Hintzen, S. Kahle, J. Allgaier, D. Richter, L. Fetters
Macromolecules **37**, 8135-8144 (2004)

Direct observation of the crossover from glassy α -relaxation to Rouse dynamics in a polymer melt

D. Richter, M. Monkenbusch, L. Willner, A. Arbe, J. Colmenero
Europhysics Letters **66**, 239-245 (2004)

Structural study of the influence of partially crystalline poly(ethylene-butene) random copolymers on paraffin crystallization in dilute solutions

A. Radulescu, D. Schwahn, M. Monkenbusch, L.J. Fetters, D. Richter
Journal of Polymer Science B: Polymer Physics **42**, 3113-3132 (2004)

Hydrogen motions in the alpha relaxation regime of poly(vinyl ethylene): A molecular dynamics simulation and neutron scattering study

A. Narros, F. Alvarez, A. Arbe, J. Colmenero, D. Richter, B. Farago
J. Chem. Phys. **121**, 3282-3294 (2004)

A SANS study of the self-assembly in solution of syndio-polypropylene homopolymers, syndio-polypropylene-block-poly(ethylene-co propylene) diblock copolymers and alternating atactic-iso-multi segment polypropylene

A. Radulescu, R. T. Mathers, G. W. Coates, D. Richter, L. J. Fetters
Macromolecules **37**, 6962-6971 (2004)

Neutron scattering studies on the vibrational excitations and the structure of ordered niobium hydrides: The λ phases

B. Hauer, R. Hempelmann, T.J. Udovic, J.J. Rush, W. Kockelmann, W. Schäfer, E. Jansen
J. Phys. Condens. Matter **16**, 5205-5228 (2004)

Poly(ethylene-alt-propylene)-poly(ethylene oxide) diblock copolymer micelles: a colloidal model system with tunable softness

J. Stellbrink, G. Rother, M. Laurati, L. Willner, D. Richter

J. Phys. Condens. Matter **16**, S3821-S3834 (2004)

Microemulsion efficiency boosting and the complementary effect. 1. Structural properties

D. Byelov, H. Frielinghaus, O. Holderer, J. Allgaier, D. Richter

Langmuir **20**, 10433-10443 (2004)

Crossover from Rouse dynamics to the alpha-relaxation in poly(vinyl-ethylene)

A. Arbe, J. Colmenero, D. Richter, M. Monkenbusch, L. Willner, B. Farago

Pramana - Journal of Physics **63**, 33-40 (2004)

Diffusion of compact macromolecules through polymer meshes: mesh dynamics and probe dynamics

R. Biehl, X. Guo, R.K. Prud'homme, M. Monkenbusch, J. Allgaier, D. Richter, D.

Physica B: Condensed Matter **350** 76-78 (2004)

SANS studies of polymer efficiency boosting in microemulsions - diblock copolymers versus homopolymers

D. Byelov, H. Frielinghaus, J. Allgaier, G. Gompper, D. Richter

Physica B: Condensed Matter **350**, 1/3, Suppl. 1, e931 - e933 (2004)

Hydrogen motions and the alpha-relaxation in glass-forming polymers: Molecular dynamics simulation and quasi-elastic neutron scattering results

J. Colmenero, A. Arbe, F. Alvarez, A. Narros, D. Richter, M. Monkenbusch, B. Farago

Pramana - Journal of Physics **63**, 25 – 32 (2004)

Efficiency boosting and optional viscosity tuning in microemulsions studied by SANS

H. Frielinghaus, D. Byelov, J. Allgaier, G. Gompper, D. Richter

Physica B: Condensed Matter **350**, 186-192 (2004)

Small-angle neutron scattering study of the relaxation of a melt of polybutadiene H-polymers following a large step strain

M. Heinrich, W. Pyckhout-Hintzen, J. Allgaier, D. Richter, E. Straube, T.C.B. McLeish, A.

Wiedenmann, R.J. Blackwell, D.J. Read

Macromolecules **37**, 5054-5064 (2004)

KWS-3, the new focusing-mirror ultra small-angle neutron scattering instrument and reflectometer at Jülich

E. Kentzinger, L. Dohmen, B. Alefeld, U. Rücker, J. Stellbrink, A. Ioffe, D. Richter, Th. Brückel

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Role of interfacial tension for the structure of PEP-PEO polymeric micelles. A combined SANS and pendant drop tensiometry investigation

R. Lund, L. Willner, J. Stellbrink, A. Radulescu, D. Richter

Macromolecules **37**, 9984-9993 (2004)

Tuning of structure and kinetics of chain exchange in star-like PEP-PEO block copolymer micelles

R. Lund, L. Willner, J. Stellbrink, A. Radulescu, D. Richter

Physica B: Condensed Matter **350**, Suppl. 1, e909 - e912 (2004)

Direct observation of the transition from free to constrained single segment motion in entangled polymer melts

M. Monkenbusch, M.; Wischnewski, A.; Willner, L.; Richter, D.

Physica B: Condensed Matter **350**, 214 (2004)

A new view of the anionic diene polymerization mechanism

A.Z. Niu, J. Stellbrink, J. Allgaier, L. Willner, D. Richter, B.W. Koenig, M. Gondorf, S. Willbold, L.J. Fetters, R.P. May

Macromolecular Symposia **215**, 1-15 (2004)

Real-time SANS and ¹H-NMR studies during 'living' anionic polymerization of butadiene in hydrocarbon media

A.Z. Niu, J. Stellbrink, J. Allgaier, L. Willner, D. Richter, A. Radulescu, B.W. Koenig, M. Gondorf, S. Willbold, L.J. Fetters, R.P. May

Physica B: Condensed Matter **350**, Suppl. 1, e921 - e925 (2004)

The high-resolution neutron spin-echo spectrometer for the SNS with $\tau \geq 1 \mu\text{s}$

M. Ohl, M. Monkenbusch, D. Richter, C. Pappas, K. Lieutenant, T. Krist, G. Zsigmond, F. Mezei

Physica B: Condensed Matter **350**, 147-150 (2004)

The interaction mechanism of triacontane paraffin with semi-crystalline poly(ethylene-butene) random copolymers in dilute solution studied with SANS

A. Radulescu, D. Schwahn, M. Monkenbusch, D. Richter, L.J. Fetters

Physica B: Condensed Matter **350**, Suppl. 1, e927 - e930 (2004)

Backscattering spectrometer RSSM for the FRM-II reactor in Munich

P. Rottländer, T. Kozielowski, M. Prager, D. Richter

Physica B: Condensed Matter **350**, Suppl. 1, e823 - e825(2004)

Molecular observation of contour length fluctuations in polymer melts

A. Wischnewski, M. Zamponi, M. Monkenbusch, L. Willner, W. Pyckhout-Hintzen, D. Richter, A.E. Likhtman, T.C.B. McLeish, B. Farago

Physica B: Condensed Matter **350**, 193 (2004)

Dynamics of confined glass-forming systems observed by neutron scattering

R. Zorn, B. Frick, L. Hartmann, F. Kremer, A. Schönhals, D. Richter

Physica B: Condensed Matter **350**, Suppl. 1, e1115-e1118 (2004)

Self-motion of protons in the α -relaxation of poly(vinylethylene): a neutron scattering and MD-simulation study

A. Narros, F. Alvarez, A. Arbe, J. Colmenero, D. Richter, B. Farago

Physica B: Condensed Matter **350**, Suppl. 1, e1091-e1093 (2004)

Concentration fluctuations in polymer gel investigated by neutron scattering: Static inhomogeneity in swollen gel

S. Koizumi, M. Monkenbusch, D. Richter, D. Schwahn, B. Farago

Journal of Chemical Physics **121**, 12721-12731 (2004)

Neutron scattering studies of dynamics: a new frontier in materials science

D. Richter, D.A. Neumann

MRS Bulletin, S. 913-917 (2003)

New frontiers in the application of neutron scattering to materials science

D. Richter, J.M. Rowe

MRS Bulletin, S. 903-906 (December 2003)

Polymer dynamics by dielectric spectroscopy and neutron scattering – a comparison

Arbe, J. Colmenero, D. Richter

in Broadband Dielectric Spectroscopy, Eds. F. Kremer & A. Schönhal, ISBN 3-540-43407-0, Springer Verlag, 685-718 (2003)

Dynamics of hydrophobically modified polymer doped surfactant bilayers: A neutron spin-echo study

B.-S. Yang, J. Lal, M. Mihailescu, M. Monkenbusch, D. Richter, J.S. Huang, W.B. Russel, R.K. Prud'homme

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