Reiner Zorn

List of Publications by Year
in descending order

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78 papers	2,677 citations	201674 27 h-index	182427 51 g-index
79 all docs	79 docs citations	79 times ranked	1941 citing authors

#	Article	IF	Citations
1	A Relation Between Fast and Slow Motions in Glassy and Liquid Selenium. Europhysics Letters, 1992, 18, 523-528.	2.0	228
2	Neutron scattering study of the picosecond dynamics of polybutadiene and polyisoprene. Physical Review E, 1995, 52, 781-795.	2.1	192
3	Decoupling of time scales of motion in polybutadiene close to the glass transition. Physical Review Letters, 1992, 68, 71-74.	7.8	130
4	Glassy dynamics of polymers confined to nanoporous glasses revealed by relaxational and scattering experiments. European Physical Journal E, 2003, 12, 173-178.	1.6	124
5	Molecular dynamics of water in oriented DPPC multilayers studied by quasielastic neutron scattering and deuteriumâ€nuclear magnetic resonance relaxation. Journal of Chemical Physics, 1994, 100, 3307-3316.	3.0	110
6	Polymers in nanoconfinement: What can be learned from relaxation and scattering experiments?. Journal of Non-Crystalline Solids, 2005, 351, 2668-2677.	3.1	108
7	Glass transition of polymers confined to nanoporous glasses. Colloid and Polymer Science, 2004, 282, 882-891.	2.1	95
8	Rheological Investigation of Polybutadienes Having Different Microstructures over a Large Temperature Range. Macromolecules, 1995, 28, 8552-8562.	4.8	83
9	Anisotropic Motion of Cholesterol in Oriented DPPC Bilayers Studied by Quasielastic Neutron Scattering: The Liquid-Ordered Phase. Biophysical Journal, 1999, 77, 331-340.	0.5	81
10	Deviation from Gaussian behavior in the self-correlation function of the proton motion in polybutadiene. Physical Review B, 1997, 55, 6249-6259.	3.2	78
11	Logarithmic moments of relaxation time distributions. Journal of Chemical Physics, 2002, 116, 3204-3209.	3.0	74
12	Tests of the multi-spin-coding technique in Monte Carlo simulations of statistical systems. Computer Physics Communications, 1981, 23, 337-342.	7.5	68
13	Dynamics of polybutadienes with different microstructures. 2. Dielectric response and comparisons with rheological behavior. Journal of Chemical Physics, 1997, 107, 3645-3655.	3.0	62
14	Glass transition cooperativity from broad band heat capacity spectroscopy. Colloid and Polymer Science, 2014, 292, 1893-1904.	2.1	57
15	Inelastic neutron scattering experiments on the dynamics of a glass-forming material in mesoscopic confinement. Journal of Non-Crystalline Solids, 2002, 307-310, 547-554.	3.1	54
16	Segmental dynamics of poly(methyl phenyl siloxane) confined to nanoporous glasses. European Physical Journal: Special Topics, 2007, 141, 255-259.	2.6	54
17	Inelastic neutron scattering for investigating the dynamics of confined glass-forming liquids. Journal of Non-Crystalline Solids, 2005, 351, 2657-2667.	3.1	51
18	Neutron scattering experiments on the glass transition of polymers. Physica A: Statistical Mechanics and Its Applications, 1993, 201, 52-66.	2.6	50

#	Article	IF	Citations
19	Comparative study of the segmental relaxation in polyisoprene by quasi-elastic neutron scattering and dielectric spectroscopy. Physica B: Condensed Matter, 1992, 180-181, 534-536.	2.7	45
20	Quasielastic neutron scattering study of the methyl group dynamics in polyisoprene. Journal of Chemical Physics, 2002, 116, 845-853.	3.0	44
21	Probing cooperative liquid dynamics with the mean square displacement. Physical Review E, 2014, 90, 042312.	2.1	44
22	Vibrational density of states of triphenylene based discotic liquid crystals: dependence on the length of the alkyl chain. Physical Chemistry Chemical Physics, 2014, 16, 7324-7333.	2.8	39
23	Applicability of distribution functions for the Havriliak-Negami spectral function. Journal of Polymer Science, Part B: Polymer Physics, 1999, 37, 1043-1044.	2.1	38
24	Molecular dynamics in glass-forming poly(phenyl methyl siloxane) as investigated by broadband thermal, dielectric and neutron spectroscopy. Journal of Non-Crystalline Solids, 2007, 353, 3853-3861.	3.1	34
25	Partial Structure Factors of Polyisoprene:Â Neutron Scattering and Molecular Dynamics Simulation. Macromolecules, 2003, 36, 238-248.	4.8	32
26	Boson peak in confined disordered systems. Physical Review B, 2010, 81, .	3.2	32
27	Molecular dynamics of n-hexane: A quasi-elastic neutron scattering study on the bulk and spatially nanochannel-confined liquid. Journal of Chemical Physics, 2012, 136, 124505.	3.0	28
28	Determination of the Compositional Profile for Tapered Copolymers of Ethylene Oxide and 1,2-Butylene Oxide by In-situ-NMR. Macromolecules, 2013, 46, 3931-3938.	4.8	28
29	Inelastic neutron spectroscopy as a tool to investigate nanoconfined polymer systems. Polymer, 2016, 105, 393-406.	3.8	28
30	Investigation of the glass transition in polymers under the aspect of mode coupling predictions. Journal of Non-Crystalline Solids, 1991, 131-133, 169-176.	3.1	26
31	Absence of annealing effect in the vibrational density of states in a glassforming polymer. Journal of Chemical Physics, 1998, 108, 3327-3331.	3.0	26
32	Inelastic neutron scattering study of a glass-forming liquid in soft confinement. Soft Matter, 2008, 4, 522-533.	2.7	26
33	On the evaluation of neutron scattering elastic scan data. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2009, 603, 439-445.	1.6	26
34	Multiple scattering correction of neutron scattering elastic scans. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2007, 572, 874-881.	1.6	25
35	Unified Description of the Viscoelastic and Dielectric Global Chain Motion in Terms of the Tube Theory. Macromolecules, 2011, 44, 7430-7437.	4.8	25
36	Neutron Spinâ''Echo Study of the Dynamic Behavior of Amphiphilic Diblock Copolymer Micelles in Aqueous Solution. Langmuir, 2000, 16, 9177-9185.	3.5	24

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37	The segmental dynamics of a polymer electrolyte investigated by coherent quasielastic neutron scattering. Journal of Chemical Physics, 2001, 114, 9645-9656.	3.0	23
38	The fast relaxation process near the glass transition in amorphous polymers with different microstructure. Journal of Non-Crystalline Solids, 1994, 172-174, 272-285.	3.1	22
39	Partial Structure Factors in 1,4-Polybutadiene. A Combined Neutron Scattering and Molecular Dynamics Simulations Study. Macromolecules, 2005, 38, 9847-9853.	4.8	22
40	Temperature fluctuations and the thermodynamic determination of the cooperativity length in glass forming liquids. Journal of Chemical Physics, 2017, 146, 104501.	3.0	21
41	Fast dynamics ofH2Oin hydrous aluminosilicate glasses studied with quasielastic neutron scattering. Physical Review B, 2005, 71, .	3.2	20
42	Editorial. European Physical Journal E, 2003, 12, 3-4.	1.6	19
43	Vibrational and molecular dynamics of a nanoconfined liquid crystal. European Physical Journal: Special Topics, 2010, 189, 251-255.	2.6	19
44	Microscopic dynamics of glass-forming polymers. Journal of Physics Condensed Matter, 2003, 15, R1025-R1046.	1.8	17
45	Plasticizer effect on the dynamics of polyvinylchloride studied by dielectric spectroscopy and quasielastic neutron scattering. Journal of Chemical Physics, 2006, 125, 154904.	3.0	17
46	Anomalies in the low frequency vibrational density of states for a polymer with intrinsic microporosity â€“ the Boson peak of PIM-1. Physical Chemistry Chemical Physics, 2018, 20, 1355-1363.	2.8	17
47	Influence of the microstructure on the incoherent neutron scattering of glassâ€forming polybutadienes. Journal of Chemical Physics, 1996, 105, 1189-1197.	3.0	16
48	Influence of morphology on physical properties of poly(2,5-benzimidazole) membranes. Journal of Membrane Science, 2017, 533, 342-350.	8.2	13
49	Neutron Scattering Experiments in the Neighborhood of the Glass Transition in Polybutadiene â€“ a Test of Mode Coupling. Zeitschrift Fur Elektrotechnik Und Elektrochemie, 1991, 95, 1111-1118.	0.9	12
50	Richteret al. reply. Physical Review Letters, 1992, 69, 1621-1621.	7.8	12
51	Dynamics of confined glass-forming systems observed by neutron scattering. Physica B: Condensed Matter, 2004, 350, E1115-E1118.	2.7	12
52	Structure and Proton Dynamics in Catalytic Layer of HTâ€PEFC. Fuel Cells, 2016, 16, 406-413.	2.4	12
53	Observing proton motion on the nanoscale in polymeric electrolyte membranes with quasielastic neutron scattering. International Journal of Hydrogen Energy, 2014, 39, 21657-21662.	7.1	11
54	Dielectric and Structural Properties of a Water-Oil Emulsion at the Gel-Microemulsion Transition. Europhysics Letters, 1986, 2, 103-108.	2.0	9

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55	Structural and dielectric properties of synthetic glycolipids in mixtures with water. Biophysical Journal, 1990, 58, 1199-1206.	0.5	9
56	Deconvolution of neutron scattering data: a new computational approach. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 1996, 378, 275-283.	1.6	9
57	Multiple scattering correction of polarized neutron diffraction data. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2002, 479, 568-584.	1.6	8
58	Fractal diffusion in high temperature polymer electrolyte fuel cell membranes. Journal of Chemical Physics, 2018, 148, 204906.	3.0	8
59	SANS Investigation and Conductivity of Pure and Salt-Containing Poly(bismethoxyphosphazene). Macromolecules, 2008, 41, 2212-2218.	4.8	7
60	Neutron spectroscopy for confinement studies. European Physical Journal: Special Topics, 2010, 189, 65-81.	2.6	7
61	Fast-dynamics in plasticized poly(vinyl chloride). Journal of Non-Crystalline Solids, 1998, 235-237, 169-172.	3.1	6
62	Thermal properties and vibrational density of states of a nanoconfined discotic liquid crystal. Colloid and Polymer Science, 2014, 292, 1949-1960.	2.1	6
63	Orientational effects on low-energy modes in amorphous poly(ethylene terephthalate) fiber. Journal of Chemical Physics, 1998, 109, 10456-10463.	3.0	5
64	Partial structure factors of a simulated polymer melt. Computational Materials Science, 2002, 25, 596-605.	3.0	5
65	Local Structure and Proton Transport in HT-PEFCs Measured with Neutron Scattering. ECS Transactions, 2015, 69, 337-343.	0.5	5
66	Going to the limits of NSE. Physica B: Condensed Matter, 2005, 356, 206-212.	2.7	4
67	Sample shape contribution to the resolution function of time-of-flight neutron scattering spectrometers. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2012, 674, 85-91.	1.6	4
68	Closedâ€‹scp›F‹/scp›orm Expressions for the Form Factor of a Polymer under Strong Confinement. Macromolecular Theory and Simulations, 2014, 23, 84-89.	1.4	3
69	The Initiation Mechanism of Butadiene Polymerization in Aliphatic Hydrocarbons: A Full Mechanistic Approach. Macromolecules, 2016, 49, 5397-5406.	4.8	3
70	Microscopic dynamics of highly permeable super glassy polynorbornenes revealed by quasielastic neutron scattering. Journal of Membrane Science, 2022, 642, 119972.	8.2	3
71	Influence of Ca2+ - and Mg2+ -Ions on Model Membranes. Zeitschrift Fur Elektrotechnik Und Elektrochemie, 1990, 94, 573-578.	0.9	2
72	Quasi- and inelastic neutron scattering to investigate the molecular dynamics of discotic molecules in the bulk. EPJ Web of Conferences, 2015, 83, 02017.	0.3	2

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73	Inelastic neutron scattering analysis with time-dependent Gaussian-field models. Journal of Chemical Physics, 2021, 155, 024121.	3.0	2
74	Low Frequency Vibrations and Diffusion in Disordered Polymers Bearing an Intrinsic Microporosity as Revealed by Neutron Scattering. Crystals, 2021, 11, 1482.	2.2	2
75	Description of poly(ethylenepropylene) confined in nanopores by a modified Rouse model. Journal of Chemical Physics, 2017, 146, 203309.	3.0	1
76	Optimization of stepâ€scanning registration with radiation counters. Review of Scientific Instruments, 1995, 66, 3377-3381.	1.3	0
77	Dielectric and thermal relaxation in the energy landscape. Philosophical Magazine, 2007, 87, 389-400.	1.6	0
78	A wing explained. Nature Physics, 0, , .	16.7	0