

Kay Saalwächter

List of Publications by Year in descending order

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193
papers

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34493

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207
docs citations

207
times ranked

6997
citing authors

#	ARTICLE	IF	CITATIONS
1	Proton multiple-quantum NMR for the study of chain dynamics and structural constraints in polymeric soft materials. <i>Progress in Nuclear Magnetic Resonance Spectroscopy</i> , 2007, 51, 1-35.	3.9	365
2	Low-Field NMR Investigations of Nanocomposites: Polymer Dynamics and Network Effects. <i>Macromolecules</i> , 2011, 44, 913-922.	2.2	207
3	Uncertainties in the Determination of Cross-Link Density by Equilibrium Swelling Experiments in Natural Rubber. <i>Macromolecules</i> , 2008, 41, 4717-4729.	2.2	201
4	Highly Ordered Columnar Structures from Hexa-peri-hexabenzocoronenes—Synthesis, X-ray Diffraction, and Solid-State Heteronuclear Multiple-Quantum NMR Investigations. <i>Angewandte Chemie - International Edition</i> , 1999, 38, 3039-3042.	7.2	178
5	Cross-Link Density Estimation of PDMS Networks with Precise Consideration of Networks Defects. <i>Macromolecules</i> , 2012, 45, 899-912.	2.2	174
6	Inhomogeneities and Chain Dynamics in Diene Rubbers Vulcanized with Different Cure Systems. <i>Macromolecules</i> , 2010, 43, 4210-4222.	2.2	171
7	¹ H multiple-quantum nuclear magnetic resonance investigations of molecular order distributions in poly(dimethylsiloxane) networks: Evidence for a linear mixing law in bimodal systems. <i>Journal of Chemical Physics</i> , 2003, 119, 3468-3482.	1.2	168
8	Structure and Dynamics in Columnar Discotic Materials: A Combined X-ray and Solid-State NMR Study of Hexabenzocoronene Derivatives. <i>Journal of Physical Chemistry B</i> , 2002, 106, 6408-6418.	1.2	163
9	Novel Experimental Approach To Evaluate Filler–Elastomer Interactions. <i>Macromolecules</i> , 2010, 43, 334-346.	2.2	163
10	Connectivity and Structural Defects in Model Hydrogels: A Combined Proton NMR and Monte Carlo Simulation Study. <i>Macromolecules</i> , 2011, 44, 9666-9674.	2.2	161
11	Glass-Transition Temperature Gradient in Nanocomposites: Evidence from Nuclear Magnetic Resonance and Differential Scanning Calorimetry. <i>Physical Review Letters</i> , 2012, 108, 065702.	2.9	152
12	Biaxial Nematic Phase in a Thermotropic Liquid-Crystalline Side-Chain Polymer. <i>Physical Review Letters</i> , 2004, 92, 125501.	2.9	144
13	A Robust Proton NMR Method to Investigate Hard/Soft Ratios, Crystallinity, and Component Mobility in Polymers. <i>Macromolecular Chemistry and Physics</i> , 2006, 207, 1150-1158.	1.1	144
14	BaBa-xy16: Robust and broadband homonuclear DQ recoupling for applications in rigid and soft solids up to the highest MAS frequencies. <i>Journal of Magnetic Resonance</i> , 2011, 212, 204-215.	1.2	143
15	Detection of Surface-Immobilized Components and Their Role in Viscoelastic Reinforcement of Rubber–Silica Nanocomposites. <i>ACS Macro Letters</i> , 2014, 3, 481-485.	2.3	139
16	Polymer Dynamics in PEG-Silica Nanocomposites: Effects of Polymer Molecular Weight, Temperature and Solvent Dilution. <i>Macromolecules</i> , 2012, 45, 4225-4237.	2.2	137
17	Cellulose Solutions in Water Containing Metal Complexes. <i>Macromolecules</i> , 2000, 33, 4094-4107.	2.2	136
18	High Crystallinity and Nature of Crystal–Crystal Phase Transformations in Regioregular Poly(3-hexylthiophene). <i>Macromolecules</i> , 2010, 43, 9401-9410.	2.2	126

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19	Chain Order and Cross-Link Density of Elastomers As Investigated by Proton Multiple-Quantum NMR. <i>Macromolecules</i> , 2005, 38, 9650-9660.	2.2	125
20	Mechanical Properties and Cross-Link Density of Styrene-Butadiene Model Composites Containing Fillers with Bimodal Particle Size Distribution. <i>Macromolecules</i> , 2012, 45, 6504-6515.	2.2	118
21	Sulfur-Cured Natural Rubber Elastomer Networks: Correlating Cross-Link Density, Chain Orientation, and Mechanical Response by Combined Techniques. <i>Macromolecules</i> , 2013, 46, 889-899.	2.2	110
22	Entanglement Effects in Elastomers: Macroscopic vs Microscopic Properties. <i>Macromolecules</i> , 2014, 47, 2759-2773.	2.2	109
23	Precise dipolar coupling constant distribution analysis in proton multiple-quantum NMR of elastomers. <i>Journal of Chemical Physics</i> , 2011, 134, 044907.	1.2	105
24	Time-Domain NMR Observation of Entangled Polymer Dynamics: Universal Behavior of Flexible Homopolymers and Applicability of the Tube Model. <i>Macromolecules</i> , 2011, 44, 1549-1559.	2.2	102
25	Solid particles in an elastomer matrix: impact of colloid dispersion and polymer mobility modification on the mechanical properties. <i>Soft Matter</i> , 2012, 8, 4090.	1.2	99
26	Insights in the Antibacterial Action of Poly(methyloxazoline)s with a Biocidal End Group and Varying Satellite Groups. <i>Biomacromolecules</i> , 2008, 9, 1764-1771.	2.6	92
27	Heterogeneity, Segmental and Hydrogen Bond Dynamics, and Aging of Supramolecular Self-Healing Rubber. <i>Macromolecules</i> , 2013, 46, 1841-1850.	2.2	89
28	Spin-diffusion NMR at low field for the study of multiphase solids. <i>Solid State Nuclear Magnetic Resonance</i> , 2008, 34, 125-141.	1.5	87
29	Characterization of Network Structure and Chain Dynamics of Elastomeric Ionomers by Means of ^1H Low-Field NMR. <i>Macromolecules</i> , 2014, 47, 5655-5667.	2.2	86
30	Coupling and Decoupling of Rotational and Translational Diffusion of Proteins under Crowding Conditions. <i>Journal of the American Chemical Society</i> , 2016, 138, 10365-10372.	6.6	86
31	Intermediate motions as studied by solid-state separated local field NMR experiments. <i>Journal of Chemical Physics</i> , 2008, 128, 104505.	1.2	85
32	Recoupled Polarization Transfer Heteronuclear ^1H - ^{13}C Multiple-Quantum Correlation in Solids under Ultra-fast MAS. <i>Journal of Magnetic Resonance</i> , 1999, 140, 471-476.	1.2	84
33	Basic principles of static proton low-resolution spin diffusion NMR in nanophase-separated materials with mobility contrast. <i>Solid State Nuclear Magnetic Resonance</i> , 2015, 72, 50-63.	1.5	80
34	An Investigation of the Hydrogen-Bonding Structure in Bilirubin by ^1H Double-Quantum Magic-Angle Spinning Solid-State NMR Spectroscopy. <i>Journal of the American Chemical Society</i> , 2001, 123, 4275-4285.	6.6	78
35	Correlation of crosslink densities using solid state NMR and conventional techniques in peroxide-crosslinked EPDM rubber. <i>Polymer</i> , 2015, 56, 309-317.	1.8	78
36	Influence of Chain Topology on Polymer Dynamics and Crystallization. Investigation of Linear and Cyclic Poly(μ -caprolactone)s by ^1H Solid-State NMR Methods. <i>Macromolecules</i> , 2011, 44, 2743-2754.	2.2	77

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37	Tuning the Properties and Self-Healing Behavior of Ionically Modified Poly(isobutylene- <i>i>co</i>-isoprene) Rubber. <i>Macromolecules</i>, 2018, 51, 468-479.</i>	2.2	77
38	Recoupled Polarization-Transfer Methods for Solid-State ^1H - ^{13}C Heteronuclear Correlation in the Limit of Fast MAS. <i>Journal of Magnetic Resonance</i> , 2001, 148, 398-418.	1.2	76
39	Structure of Poly(vinyl alcohol) Cryo-Hydrogels as Studied by Proton Low-Field NMR Spectroscopy. <i>Macromolecules</i> , 2009, 42, 263-272.	2.2	75
40	REDOR-Based Heteronuclear Dipolar Correlation Experiments in Multi-Spin Systems: Rotor-Encoding, Directing, and Multiple Distance and Angle Determination. <i>Solid State Nuclear Magnetic Resonance</i> , 2002, 22, 154-187.	1.5	74
41	Chain Dynamics in Elastomers As Investigated by Proton Multiple-Quantum NMR. <i>Macromolecules</i> , 2006, 39, 3291-3303.	2.2	73
42	Solid-State NMR Approaches to Internal Dynamics of Proteins: From Picoseconds to Microseconds and Seconds. <i>Accounts of Chemical Research</i> , 2013, 46, 2028-2036.	7.6	72
43	Detection of Heterogeneities in Dry and Swollen Polymer Networks by Proton Low-Field NMR Spectroscopy. <i>Journal of the American Chemical Society</i> , 2003, 125, 14684-14685.	6.6	70
44	Hydrogel formation by photocrosslinking of dimethylmaleimide functionalized polyacrylamide. <i>Polymer</i> , 2007, 48, 5599-5611.	1.8	67
45	Use of ^{29}Si and ^{27}Al MAS NMR to study thermal activation of kaolinites from Brazilian Amazon kaolin wastes. <i>Applied Clay Science</i> , 2014, 87, 189-196.	2.6	65
46	Heteronuclear ^1H - ^{13}C multiple-spin correlation in solid-state nuclear magnetic resonance: Combining rotational-echo double-resonance recoupling and multiple-quantum spectroscopy. <i>Journal of Chemical Physics</i> , 2001, 114, 5707-5728.	1.2	64
47	Solid-State NMR Investigations of Molecular Dynamics in Polyphenylene Dendrimers: Evidence of Dense-Shell Packing. <i>Macromolecules</i> , 2002, 35, 10071-10086.	2.2	62
48	MICROSTRUCTURE AND MOLECULAR DYNAMICS OF ELASTOMERS AS STUDIED BY ADVANCED LOW-RESOLUTION NUCLEAR MAGNETIC RESONANCE METHODS. <i>Rubber Chemistry and Technology</i> , 2012, 85, 350-386.	0.6	62
49	Robust NMR Approaches for the Determination of Homonuclear Dipole-Dipole Coupling Constants in Studies of Solid Materials and Biomolecules. <i>ChemPhysChem</i> , 2013, 14, 3000-3014.	1.0	62
50	Swelling Heterogeneities in End-Linked Model Networks: A Combined Proton Multiple-Quantum NMR and Computer Simulation Study. <i>Macromolecules</i> , 2004, 37, 8556-8568.	2.2	60
51	Artifacts in Transverse Proton NMR Relaxation Studies of Elastomers. <i>Macromolecules</i> , 2005, 38, 1508-1512.	2.2	60
52	Confinement Effects on Chain Dynamics and Local Chain Order in Entangled Polymer Melts. <i>Macromolecules</i> , 2010, 43, 4429-4434.	2.2	58
53	NMR Observation of Entangled Polymer Dynamics: Tube Model Predictions and Constraint Release. <i>Physical Review Letters</i> , 2010, 104, 198305.	2.9	58
54	Memory effect in isothermal crystallization of syndiotactic polypropylene --Role of melt structure and dynamics?. <i>European Physical Journal E</i> , 2007, 23, 91-101.	0.7	57

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55	Relaxation-Induced Dipolar Exchange with Recoupling—An MAS NMR Method for Determining Heteronuclear Distances without Irradiating the Second Spin. <i>Journal of Magnetic Resonance</i> , 2000, 145, 161-172.	1.2	55
56	Particle-induced network formation in linear PDMS filled with silica. <i>Polymer</i> , 2009, 50, 5434-5442.	1.8	55
57	Phase Biaxiality in Nematic Liquid Crystalline Side-Chain Polymers of Various Chemical Constitutions. <i>Journal of Physical Chemistry B</i> , 2006, 110, 15680-15688.	1.2	53
58	Time-Domain NMR Observation of Entangled Polymer Dynamics: Analytical Theory of Signal Functions. <i>Macromolecules</i> , 2011, 44, 1560-1569.	2.2	53
59	Dynamics in Crystallites of Poly(ϵ -caprolactone) As Investigated by Solid-State NMR. <i>Macromolecules</i> , 2013, 46, 7818-7825.	2.2	52
60	Structure and swelling of polymer networks: insights from NMR. <i>Soft Matter</i> , 2013, 9, 6587.	1.2	51
61	Local Chain Deformation and Overstrain in Reinforced Elastomers: An NMR Study. <i>Macromolecules</i> , 2013, 46, 5549-5560.	2.2	49
62	¹ H multiple-quantum nuclear magnetic resonance investigations of molecular order in polymer networks. II. Intensity decay and restricted slow dynamics. <i>Journal of Chemical Physics</i> , 2004, 120, 454-464.	1.2	48
63	Inhomogeneities and local chain stretching in partially swollen networks. <i>Soft Matter</i> , 2013, 9, 6943-6954.	1.2	48
64	Entanglements, Defects, and Inhomogeneities in Nitrile Butadiene Rubbers: Macroscopic versus Microscopic Properties. <i>Macromolecules</i> , 2016, 49, 9004-9016.	2.2	48
65	Hierarchical Sticker and Sticky Chain Dynamics in Self-Healing Butyl Rubber Ionomers. <i>Macromolecules</i> , 2019, 52, 4169-4184.	2.2	48
66	Shape-Persistent Polyphenylene Dendrimers—Restricted Molecular Dynamics from Advanced Solid-State Nuclear Magnetic Resonance Techniques. <i>Advanced Materials</i> , 2001, 13, 752-756.	11.1	47
67	Gelation as Studied by Proton Multiple-Quantum NMR. <i>Macromolecules</i> , 2007, 40, 1555-1561.	2.2	47
68	NMR Reveals Non-Distributed and Uniform Character of Network Chain Dynamics. <i>Macromolecular Rapid Communications</i> , 2007, 28, 1455-1465.	2.0	47
69	Diffusion in Model Networks as Studied by NMR and Fluorescence Correlation Spectroscopy. <i>Macromolecules</i> , 2009, 42, 4681-4689.	2.2	47
70	Determination of Chain Flip Rates in Poly(ethylene) Crystallites by Solid-State Low-Field ¹ H NMR for Two Different Sample Morphologies. <i>Journal of Physical Chemistry B</i> , 2012, 116, 13089-13097.	1.2	47
71	Network Structure and Inhomogeneities of Model and Commercial Polyelectrolyte Hydrogels as Investigated by Low-Field Proton NMR Techniques. <i>Macromolecules</i> , 2014, 47, 4251-4265.	2.2	47
72	Solid State NMR Spectroscopic Investigations of Model Compounds for Imidazole-Based Proton Conductors. <i>Journal of Physical Chemistry B</i> , 2004, 108, 18500-18508.	1.2	46

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73	Direct Observation of Millisecond to Second Motions in Proteins by Dipolar CODEX NMR Spectroscopy. <i>Journal of the American Chemical Society</i> , 2009, 131, 12097-12099.	6.6	45
74	The Application of MAS Recoupling Methods in the Intermediate Motional Regime. <i>Journal of Magnetic Resonance</i> , 2002, 157, 17-30.	1.2	44
75	Natural rubber/clay nanocomposites: Influence of poly(ethylene glycol) on the silicate dispersion and local chain order of rubber network. <i>European Polymer Journal</i> , 2008, 44, 3493-3500.	2.6	44
76	Interplay between Crystallization and Entanglements in the Amorphous Phase of the Crystal-Fixed Polymer Poly(μ -caprolactone). <i>Macromolecules</i> , 2018, 51, 5831-5841.	2.2	44
77	Slow motions in microcrystalline proteins as observed by MAS-dependent ^{15}N rotating-frame NMR relaxation. <i>Journal of Magnetic Resonance</i> , 2014, 248, 8-12.	1.2	41
78	Polymer Dynamics of Polybutadiene in Nanoscopic Confinement As Revealed by Field Cycling ^1H NMR. <i>Macromolecules</i> , 2011, 44, 4017-4021.	2.2	38
79	Dynamics-based assessment of nanoscopic polymer-network mesh structures and their defects. <i>Soft Matter</i> , 2018, 14, 1976-1991.	1.2	38
80	Reorientation phenomena in imidazolium methyl sulfonate as probed by advanced solid-state NMR. <i>Solid State Nuclear Magnetic Resonance</i> , 2003, 24, 150-162.	1.5	37
81	Segmental order in end-linked polymer networks: A Monte Carlo study. <i>European Physical Journal E</i> , 2005, 18, 167-182.	0.7	37
82	Internal protein dynamics on ps to $\hat{1}$ / ₄ s timescales as studied by multi-frequency ^{15}N solid-state NMR relaxation. <i>Journal of Biomolecular NMR</i> , 2013, 57, 219-235.	1.6	37
83	Local Flips and Chain Motion in Polyethylene Crystallites: A Comparison of Melt-Crystallized Samples, Reactor Powders, and Nanocrystals. <i>Macromolecules</i> , 2014, 47, 5163-5173.	2.2	37
84	The Underestimated Effect of Intracrystalline Chain Dynamics on the Morphology and Stability of Semicrystalline Polymers. <i>Macromolecules</i> , 2018, 51, 8377-8385.	2.2	36
85	Large-Scale Diffusion of Entangled Polymers along Nanochannels. <i>ACS Macro Letters</i> , 2015, 4, 561-565.	2.3	35
86	Depercolation of aggregates upon polymer grafting in simplified industrial nanocomposites studied with dielectric spectroscopy. <i>Polymer</i> , 2015, 73, 131-138.	1.8	35
87	An Investigation of Poly(dimethylsiloxane) Chain Dynamics and Order in Its Inclusion Compound with $\hat{1}$ ³ -Cyclodextrin by Fast-MAS Solid-State NMR Spectroscopy. <i>Macromolecular Rapid Communications</i> , 2002, 23, 286-291.	2.0	34
88	Effect of excluded volume on segmental orientation correlations in polymer chains. <i>Physical Review E</i> , 2008, 78, 051803.	0.8	34
89	Microsecond motions probed by near-rotary-resonance $\hat{1}$ ¹⁵ N MAS NMR experiments: the model case of protein overall-rocking in crystals. <i>Journal of Biomolecular NMR</i> , 2018, 71, 53-67.	1.6	34
90	The Influence of Chemical Modification on Linker Rotational Dynamics in Metal-Organic Frameworks. <i>Angewandte Chemie - International Edition</i> , 2018, 57, 8678-8681.	7.2	33

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91	15N-1H Bond Length Determination in Natural Abundance by Inverse Detection in Fast-MAS Solid-State NMR Spectroscopy. <i>Journal of the American Chemical Society</i> , 2002, 124, 10938-10939.	6.6	31
92	Chain Dynamics and Segmental Orientation in Polymer Melts Confined to Nanochannels. <i>Macromolecules</i> , 2016, 49, 244-256.	2.2	30
93	Synthesis and Structural NMR Characterization of Novel PPC/PCL Conetworks Based upon Heterocomplementary Coupling Reactions. <i>Macromolecular Chemistry and Physics</i> , 2018, 219, 1700327.	1.1	30
94	Microscopic Study of Chain Deformation and Orientation in Uniaxially Strained Polymer Networks: NMR Results versus Different Network Models. <i>Macromolecules</i> , 2014, 47, 7597-7611.	2.2	29
95	Gradient Interfaces in SBS and SBS/PS Blends and Their Influence on Morphology Development and Material Properties. <i>Macromolecules</i> , 2009, 42, 5684-5699.	2.2	28
96	Intracrystalline Jump Motion in Poly(ethylene oxide) Lamellae of Variable Thickness: A Comparison of NMR Methods. <i>Macromolecules</i> , 2017, 50, 3890-3902.	2.2	28
97	Low-field NMR studies of polymer crystallization kinetics: Changes in the melt dynamics. <i>Polymer</i> , 2006, 47, 7216-7221.	1.8	27
98	Intermediate motions and dipolar couplings as studied by Lee-Goldburg cross-polarization NMR: Hartmann-Hahn matching profiles. <i>Physical Chemistry Chemical Physics</i> , 2009, 11, 7036.	1.3	27
99	Thermodynamics of Swollen Networks As Reflected in Segmental Orientation Correlations. <i>Macromolecules</i> , 2012, 45, 5513-5523.	2.2	27
100	Studying Twin Samples Provides Evidence for a Unique Structure-Determining Parameter in Simplified Industrial Nanocomposites. <i>ACS Macro Letters</i> , 2014, 3, 448-452.	2.3	27
101	The Non-Effect of Polymer Network Inhomogeneities in Microgel Volume Phase Transitions: Support for the Mean-Field Perspective. <i>Macromolecular Chemistry and Physics</i> , 2014, 215, 1116-1133.	1.1	27
102	Opposing Phase Segregation and Hydrogen Bonding Forces in Supramolecular Polymers. <i>Angewandte Chemie - International Edition</i> , 2017, 56, 13016-13020.	7.2	27
103	Structure, Mechanical Properties, and Dynamics of Polyethylenoxide/Nanoclay Nacre-Mimetic Nanocomposites. <i>Macromolecules</i> , 2020, 53, 1716-1725.	2.2	27
104	Photo-vulcanization using thiol-ene chemistry: Film formation, morphology and network characteristics of UV crosslinked rubber latices. <i>Polymer</i> , 2014, 55, 5584-5595.	1.8	26
105	Competition between crystal growth and intracrystalline chain diffusion determines the lamellar thickness in semicrystalline polymers. <i>Nature Communications</i> , 2022, 13, 119.	5.8	26
106	Sideband Patterns from Rotor-Encoded Longitudinal Magnetization in MAS Recoupling Experiments. <i>Journal of Magnetic Resonance</i> , 2000, 146, 140-156.	1.2	25
107	Cellulose in New Metal-Complexing Solvents. 2. Semidilute Behavior in Cd-tren. <i>Macromolecules</i> , 2001, 34, 5587-5598.	2.2	25
108	Analysis of the spatial structure of rigid polyphenylene dendrimers by small-angle neutron scattering. <i>Journal of Luminescence</i> , 2005, 111, 225-238.	1.5	25

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109	Direct Observation of Interphase Composition in Block Copolymers. <i>Macromolecules</i> , 2008, 41, 9187-9191.	2.2	25
110	Reduced-mobility layers with high internal mobility in poly(ethylene oxide)-silica nanocomposites. <i>Journal of Chemical Physics</i> , 2017, 146, 203303.	1.2	25
111	Chemical Shift-Related Artifacts in NMR Determinations of Proton Residual Dipolar Couplings in Elastomers. <i>Macromolecules</i> , 2005, 38, 4040-4042.	2.2	24
112	Molecular Motion of Isolated Linear Alkanes in Nanochannels. <i>Journal of Physical Chemistry B</i> , 2005, 109, 23285-23294.	1.2	24
113	Crystallization Kinetics of Poly(dimethylsiloxane) Molecular-Weight Blends—Correlation with Local Chain Order in the Melt?. <i>Macromolecular Chemistry and Physics</i> , 2007, 208, 2066-2075.	1.1	24
114	Complex Morphology of the Intermediate Phase in Block Copolymers and Semicrystalline Polymers As Revealed by ^1H NMR Spin Diffusion Experiments. <i>Macromolecules</i> , 2017, 50, 8598-8610.	2.2	24
115	Connectivity Defects and Collective Assemblies in Model Metallo-Supramolecular Dual-Network Hydrogels. <i>Macromolecular Chemistry and Physics</i> , 2020, 221, 1900400.	1.1	24
116	Study of Molecular Interactions and Dynamics in Thin Silica Surface Layers by Proton Solid-State NMR Spectroscopy. <i>Chemistry of Materials</i> , 2004, 16, 4071-4079.	3.2	23
117	NMR Observations of Entangled Polymer Dynamics: Focus on Tagged Chain Rotational Dynamics and Confirmation from a Simulation Model. <i>Macromolecules</i> , 2014, 47, 256-268.	2.2	23
118	Transient binding accounts for apparent violation of the generalized Stokes-Einstein relation in crowded protein solutions. <i>Physical Chemistry Chemical Physics</i> , 2016, 18, 18006-18014.	1.3	23
119	Initial Solvent-Driven Nonequilibrium Effect on Structure, Properties, and Dynamics of Polymer Nanocomposites. <i>Physical Review Letters</i> , 2019, 123, 167801.	2.9	23
120	Self-healing and reprocessable bromo butylrubber based on combined ionic cluster formation and hydrogen bonding. <i>Polymer Chemistry</i> , 2020, 11, 1188-1197.	1.9	23
121	Lamellar Liquid Single Crystal Hydrogels: Synthesis and Investigation of Anisotropic Water Diffusion and Swelling. <i>Macromolecules</i> , 2005, 38, 9772-9782.	2.2	22
122	NMR study of interphase structure in layered polymer morphologies with mobility contrast: disorder and confinement effects vs. dynamic heterogeneities. <i>Colloid and Polymer Science</i> , 2014, 292, 1825-1839.	1.0	22
123	Acyl Chain Disorder and Azelaoyl Orientation in Lipid Membranes Containing Oxidized Lipids. <i>Langmuir</i> , 2016, 32, 6524-6533.	1.6	22
124	Identifying the Role of Primary and Secondary Interactions on the Mechanical Properties and Healing of Densely Branched Polyimides. <i>Macromolecules</i> , 2018, 51, 8333-8345.	2.2	22
125	Heteronuclear Double-Quantum MAS NMR Spectroscopy in Dipolar Solids. <i>Journal of Magnetic Resonance</i> , 1999, 139, 287-301.	1.2	21
126	High-Sensitivity ^2H NMR in Solids by ^1H Detection. <i>Journal of the American Chemical Society</i> , 2001, 123, 7168-7169.	6.6	21

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127	MQ NMR and SPME Analysis of Nonlinearity in the Degradation of a Filled Silicone Elastomer. <i>Journal of Physical Chemistry B</i> , 2010, 114, 9729-9736.	1.2	21
128	NMR-Detected Brownian Dynamics of β -Crystallin over a Wide Range of Concentrations. <i>Biophysical Journal</i> , 2015, 108, 98-106.	0.2	21
129	Methyl groups as local probes for polymer dynamics as investigated by double-quantum magic-angle spinning NMR spectroscopy. <i>Chemical Physics Letters</i> , 2002, 362, 331-340.	1.2	20
130	Recoupled separated-local-field experiments and applications to study intermediate-regime molecular motions. <i>Journal of Magnetic Resonance</i> , 2012, 221, 85-96.	1.2	20
131	Binding of amphiphilic and triphilic block copolymers to lipid model membranes: the role of perfluorinated moieties. <i>Soft Matter</i> , 2014, 10, 6147-6160.	1.2	20
132	Microscopic observation of the segmental orientation autocorrelation function for entangled and constrained polymer chains. <i>Journal of Chemical Physics</i> , 2017, 146, .	1.2	20
133	Time-Domain NMR Observation of Entangled Polymer Dynamics: Focus on All Tube-Model Regimes, Chain Center, and Matrix Effects. <i>Macromolecules</i> , 2018, 51, 4108-4117.	2.2	20
134	Terminal Flow of Cluster-Forming Supramolecular Polymer Networks: Single-Chain Relaxation or Micelle Reorganization?. <i>Physical Review Letters</i> , 2020, 125, 127801.	2.9	20
135	Study on Homogeneity in Sulfur Cross-Linked Network Structures of Isoprene Rubber by TD-NMR and AFM of Zinc Stearate System. <i>Macromolecules</i> , 2020, 53, 8438-8449.	2.2	20
136	Spatial inhomogeneity, interfaces and complex vitrification kinetics in a network forming nanocomposite. <i>Soft Matter</i> , 2021, 17, 2775-2790.	1.2	20
137	Rheology, Sticky Chain, and Sticker Dynamics of Supramolecular Elastomers Based on Cluster-Forming Telechelic Linear and Star Polymers. <i>Macromolecules</i> , 2021, 54, 5065-5076.	2.2	20
138	On the Immobilized Polymer Fraction in Attractive Nanocomposites: Gradient versus Interfacial Layer. <i>Macromolecules</i> , 2021, 54, 10289-10299.	2.2	20
139	Breakdown in the efficiency factor of the mixed Magic Sandwich Echo: A novel NMR probe for slow motions. <i>Chemical Physics Letters</i> , 2011, 516, 106-110.	1.2	19
140	Proton NMR spin-diffusion studies of PS-PB block copolymers at low field: two- vs three-phase model and recalibration of spin-diffusion coefficients. <i>Polymer Journal</i> , 2012, 44, 748-756.	1.3	19
141	The long tail of the protein tumbling correlation function: observation by ^1H NMR relaxometry in a wide frequency and concentration range. <i>Journal of Biomolecular NMR</i> , 2015, 63, 403-415.	1.6	19
142	A T-Shaped Amphiphilic Molecule Forms Closed Vesicles in Water and Bicelles in Mixtures with a Membrane Lipid. <i>Journal of Physical Chemistry B</i> , 2012, 116, 4871-4878.	1.2	18
143	Moderate MAS enhances local ^1H spin exchange and spin diffusion. <i>Journal of Magnetic Resonance</i> , 2015, 260, 28-37.	1.2	18
144	The relation of the X-ray B-factor to protein dynamics: insights from recent dynamic solid-state NMR data. <i>Journal of Biomolecular Structure and Dynamics</i> , 2012, 30, 617-627.	2.0	16

#	ARTICLE	IF	CITATIONS
145	Dendritic Domains with Hexagonal Symmetry Formed by X-Shaped Bolapolyphiles in Lipid Membranes. <i>Chemistry - A European Journal</i> , 2015, 21, 8840-8850.	1.7	15
146	Critical fluctuations and static inhomogeneities in polymer gel volume phase transitions. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2015, 53, 1112-1122.	2.4	15
147	Applications of Solid-State NMR Spectroscopy for the Study of Lipid Membranes with Polyphilic Guest (Macro)Molecules. <i>Polymers</i> , 2016, 8, 439.	2.0	15
148	Pharmaceutical nanocrystals confined in porous host systems – interfacial effects and amorphous interphases. <i>Chemical Communications</i> , 2016, 52, 4466-4469.	2.2	15
149	Moisture-mediated self-healing kinetics and molecular dynamics in modified polyurethane urea polymers. <i>Polymer</i> , 2018, 151, 125-135.	1.8	15
150	NMR Studies on the Phase-Resolved Evolution of Cross-Link Densities in Thermo-Oxidatively Aged Elastomer Blends. <i>Macromolecules</i> , 2020, 53, 11166-11177.	2.2	15
151	Microscopic State of Polymer Network Chains upon Swelling and Deformation. <i>Macromolecules</i> , 2019, 52, 5042-5053.	2.2	14
152	Defect-controlled softness, diffusive permeability, and mesh-topology of metallo-supramolecular hydrogels. <i>Soft Matter</i> , 2022, 18, 1071-1081.	1.2	13
153	Signal loss in 1D magic-angle spinning exchange NMR (CODEX): radio-frequency limitations and intermediate motions. <i>Physical Chemistry Chemical Physics</i> , 2009, 11, 7022.	1.3	11
154	Real-Time Observation of Polymer Network Formation by Liquid- and Solid-State NMR Revealing Multistage Reaction Kinetics. <i>Journal of Physical Chemistry B</i> , 2012, 116, 7566-7574.	1.2	11
155	Temperature-Dependent In-Plane Structure Formation of an X-Shaped Bolapolyphile within Lipid Bilayers. <i>Langmuir</i> , 2015, 31, 2839-2850.	1.6	11
156	The Influence of Chemical Modification on Linker Rotational Dynamics in Metal-Organic Frameworks. <i>Angewandte Chemie</i> , 2018, 130, 8814-8817.	1.6	11
157	Comment on ‘‘Chain Entanglements in Polyethylene Melts. Why Is It Studied Again?’’. <i>Macromolecules</i> , 2013, 46, 5090-5093.	2.2	10
158	Avoiding Bias Effects in NMR Experiments for Heteronuclear Dipole-Dipole Coupling Determinations: Principles and Application to Organic Semiconductor Materials. <i>ChemPhysChem</i> , 2013, 14, 3146-3155.	1.0	10
159	Self-Assembly of X-Shaped Bolapolyphiles in Lipid Membranes: Solid-State NMR Investigations. <i>Langmuir</i> , 2016, 32, 673-682.	1.6	10
160	Entrapped Styrene Butadiene Polymer Chains by Sol-Gel-Derived Silica Nanoparticles with Hierarchical Raspberry Structures. <i>Journal of Physical Chemistry B</i> , 2018, 122, 2010-2022.	1.2	10
161	Orientation-dependent proton double-quantum NMR build-up function for soft materials with anisotropic mobility. <i>Solid State Nuclear Magnetic Resonance</i> , 2017, 82-83, 22-28.	1.5	9
162	Segmental dynamics of polyethylene-alt-propylene studied by NMR spin echo techniques. <i>Journal of Chemical Physics</i> , 2017, 146, 224901.	1.2	9

#	ARTICLE	IF	CITATIONS
163	Liquid–liquid phase coexistence in lipid membranes observed by natural abundance ^{13}C solid-state NMR. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 9751-9754.	1.3	9
164	Control of Particle Dispersion with Autophobic Dewetting in Polymer Nanocomposites. <i>Macromolecules</i> , 2020, 53, 4836-4844.	2.2	9
165	Asymmetric Co-unit Inclusion in Statistical Copolyesters. <i>Macromolecules</i> , 2021, 54, 835-845.	2.2	9
166	Swelling and Residual Bond Orientations of Polymer Model Gels: The Entanglement-Free Limit. <i>Macromolecules</i> , 2022, 55, 5997-6014.	2.2	9
167	Segmental Order Parameters and Swelling in Polymer Networks. <i>Macromolecular Symposia</i> , 2010, 291-292, 251-257.	0.4	8
168	Chain Mobility in Crosslinked EPDM Rubbers. Comparison of ^1H NMR T_2 Relaxometry and Double-Quantum ^1H NMR. <i>ACS Symposium Series</i> , 2011, , 207-220.	0.5	7
169	A double-component Anderson–Weiss approach for describing NMR signals of mobile Sn units: Application to constant-time DIPSIFT experiments. <i>Journal of Magnetic Resonance</i> , 2014, 248, 115-125.	1.2	7
170	Dynamic Heterogeneity of Filler–Associated Interphases in Polymer Nanocomposites. <i>Macromolecular Rapid Communications</i> , 2021, 42, e2100061.	2.0	7
171	Cholesterol-like effects of a fluorotelomer alcohol incorporated in phospholipid membranes. <i>Scientific Reports</i> , 2018, 8, 2154.	1.6	6
172	Comment on ‘Turning Vulcanized Natural Rubber into a Self-Healing Polymer: Effect of the Disulfide/Polysulfide Ratio’. <i>ACS Sustainable Chemistry and Engineering</i> , 2017, 5, 11125-11126.	3.2	5
173	Multiple-Quantum NMR Studies of Anisotropic Polymer Chain Dynamics. , 2018, , 755-781.		5
174	Structure and Dynamics in a Polymorphic Nanophase-Separated Stiff Comblike Polymer. <i>Macromolecules</i> , 2019, 52, 6943-6952.	2.2	5
175	Multiple-Quantum NMR Studies of Anisotropic Polymer Chain Dynamics. , 2017, , 1-28.		5
176	Design, Synthesis and Characterization of Vitrimers with Low Topology Freezing Transition Temperature. <i>Polymers</i> , 2022, 14, 2456.	2.0	5
177	Comparison of double-quantum NMR normalization schemes to measure homonuclear dipole-dipole interactions. <i>Journal of Chemical Physics</i> , 2014, 141, 064201.	1.2	4
178	Opposing Phase Segregation and Hydrogen Bonding Forces in Supramolecular Polymers. <i>Angewandte Chemie</i> , 2017, 129, 13196-13200.	1.6	4
179	Sulfobetaine Hydrogels with a Complex Multilength-Scale Hierarchical Structure. <i>Journal of Physical Chemistry B</i> , 2021, 125, 3398-3408.	1.2	4
180	Phase Biaxiality in Nematic Liquid Crystals. , 2007, , 141-170.		4

#	ARTICLE	IF	CITATIONS
181	Quantitative NMR study of heat-induced aggregation of eye-lens crystallin proteins under crowding conditions. <i>Biochimica Et Biophysica Acta - Proteins and Proteomics</i> , 2018, 1866, 1055-1061.	1.1	3
182	Intracrystalline Dynamics in Oligomerâ€Diluted Poly(Ethylene Oxide). <i>Macromolecular Chemistry and Physics</i> , 2020, 221, 1900393.	1.1	3
183	Chain dynamics in partially crossâ€linked polyethylene by combined rheology and NMR â€based molecular rheology. <i>Journal of Polymer Science</i> , 0, , .	2.0	3
184	NMRâ€Based Crossâ€Link Densities in EPDM and EPDM/ULDPE Blend Materials and Correlation with Mechanical Properties. <i>Macromolecular Materials and Engineering</i> , 2022, 307, .	1.7	3
185	Relaxation-induced dipolar exchange with recoupling (RIDER) distortions in CODEX experiments. <i>Magnetic Resonance</i> , 2020, 1, 247-259.	0.8	2
186	Oxidized Lipids in Model Membranes: Atomistic Details from Solid-State NMR Experiments and MD Simulations. <i>Biophysical Journal</i> , 2016, 110, 584a.	0.2	1
187	Polymer Applications of NMR. , 2017, , 695-708.		1
188	Trajectory-Based Approach for the Analysis of CODEX Solid-State Exchange Experiments in the Slow and Intermediate Motion Regime: Comparison of Experiment, Simulation, and Analytical Treatment. <i>Journal of Physical Chemistry C</i> , 2021, 125, 6839-6850.	1.5	1
189	Efficient polynomial analysis of magic-angle spinning sidebands and application to order parameter determination in anisotropic samples. <i>Magnetic Resonance</i> , 2021, 2, 589-606.	0.8	1
190	Polymer Networks for Enrichment of Calcium Ions. <i>Polymers</i> , 2021, 13, 3506.	2.0	1
191	Multiple-Quantum NMR Studies of Anisotropic Polymer Chain Dynamics. , 2016, , 1-28.		1
192	Polymer Composites with Molecular Fillers: Microscopic Views into Supramolecular Reinforcement. <i>Advances in Dielectrics</i> , 2022, , 163-185.	1.2	1
193	Solid State NMR Investigations of Lipid Bilayers in Interaction with Amphiphilic Triblock Copolymers. <i>Biophysical Journal</i> , 2016, 110, 246a.	0.2	0