Gisela Guthausen

List of Publications by Year
in descending order

86 papers	1,973 citations	236925 25 h-index	289244 40 g-index
88 all docs	88 docs citations	88 times ranked	1863 citing authors

#	Article	IF	Citations
1	Process and reaction monitoring by low-field NMR spectroscopy. Progress in Nuclear Magnetic Resonance Spectroscopy, 2012, 60, 52-70.	7.5	203
2	Water/moisture and fat analysis by time-domain NMR. Food Chemistry, 2006, 96, 436-440.	8.2	127
3	Field Dependent Dynamic Nuclear Polarization with Radicals in Aqueous Solution. Journal of the American Chemical Society, 2008, 130, 3254-3255.	13.7	117
4	Process control with compact NMR. TrAC - Trends in Analytical Chemistry, 2016, 83, 39-52.	11.4	85
5	Measurement of fat content of food with single-sided NMR. JAOCS, Journal of the American Oil Chemists' Society, 2004, 81, 727-731.	1.9	58
6	[Ag₁₁₅S₃₄(SCH₂C₆H₄^tBu)₄₇(dpph)<sub> synthesis, crystal structure and NMR investigations of a soluble silver chalcogenide nanocluster. Chemical Science, 2017, 8, 2235-2240.	7.4	55
7	Simultaneous 19Fâ€“1H medium resolution NMR spectroscopy for online reaction monitoring. Journal of Magnetic Resonance, 2014, 249, 53-62.	2.1	54
8	Online Low-Field ¹H NMR Spectroscopy: Monitoring of Emulsion Polymerization of Butyl Acrylate. Macromolecules, 2010, 43, 5561-5568.	4.8	51
9	Analysis of W1/O/W2 double emulsions with CLSM: Statistical image processing for droplet size distribution. Chemical Engineering Science, 2012, 81, 84-90.	3.8	51
10	Quality control with time-domain NMR. European Journal of Lipid Science and Technology, 2001, 103, 835-840.	1.5	47
11	Network Structure and Inhomogeneities of Model and Commercial Polyelectrolyte Hydrogels as Investigated by Low-Field Proton NMR Techniques. Macromolecules, 2014, 47, 4251-4265.	4.8	47
12	Diffusion in Polymer Solutions: Molecular Weight Distribution by PFGâ€NMR and Relation to SEC. Macromolecular Chemistry and Physics, 2017, 218, 1600440.	2.2	46
13	Considerations on the design of flow cells in by-pass systems for process analytical applications and its influence on the flow profile using NMR and CFD. Chemical Engineering Science, 2012, 75, 318-326.	3.8	40
14	Lowâ€field <scp>NMR</scp> for quality control on oils. Magnetic Resonance in Chemistry, 2019, 57, 777-793.	1.9	39
15	Hyphenated lowâ€field NMR techniques: combining NMR with NIR, GPC/SEC and rheometry. Magnetic Resonance in Chemistry, 2016, 54, 494-501.	1.9	38
16	Analysis of food and emulsions. TrAC - Trends in Analytical Chemistry, 2016, 83, 103-106.	11.4	35
17	PFGâ€NMR on W₁/O/W₂â€emulsions: Evidence for molecular exchange between water phases. European Journal of Lipid Science and Technology, 2010, 112, 828-837.	1.5	34
18	Preparation of W₁/O/W₂ emulsions and droplet size distribution measurements by pulsedâ€field gradient nuclear magnetic resonance (PFGâ€NMR) technique. European Journal of Lipid Science and Technology, 2009, 111, 730-742.	1.5	29

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19	SECâ€MRâ€NMR: Online Coupling of Size Exclusion Chromatography and Medium Resolution NMR Spectroscopy. Macromolecular Rapid Communications, 2011, 32, 665-670.	3.9	29
20	In-situ investigations of the curing of a polyester resin. Polymer Testing, 2012, 31, 127-135.	4.8	29
21	Quantitative Medium-Resolution NMR Spectroscopy Under Non-Equilibrium Conditions, Studied on the Example of an Esterification Reaction. Applied Magnetic Resonance, 2014, 45, 411-425.	1.2	29
22	Characterisation and application of ultra-high spin clusters as magnetic resonance relaxation agents. Dalton Transactions, 2015, 44, 5032-5040.	3.3	29
23	Investigation of Hydrogenation of Toluene to Methylcyclohexane in a Trickle Bed Reactor by Low-Field Nuclear Magnetic Resonance Spectroscopy. Applied Spectroscopy, 2009, 63, 1121-1127.	2.2	26
24	Improving the processability of coke water slurries for entrained flow gasification. Fuel, 2016, 185, 102-111.	6.4	26
25	In situ MRI of alginate fouling and flow in ceramic hollow fiber membranes. Journal of Membrane Science, 2017, 524, 691-699.	8.2	26
26	Investigation and application of measurement techniques for the determination of the encapsulation efficiency of O/W/O multiple emulsions stabilized by hydrocolloid gelation. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2015, 475, 55-61.	4.7	25
27	Automated data evaluation and modelling of simultaneous ¹⁹Fâ€“¹H mediumâ€resolution NMR spectra for online reaction monitoring. Magnetic Resonance in Chemistry, 2016, 54, 513-520.	1.9	25
28	Polymer crystallinity and crystallization kinetics via benchtop 1H NMR relaxometry: Revisited method, data analysis, and experiments on common polymers. Polymer, 2018, 145, 162-173.	3.8	25
29	Determining the flow regime in a biofilm carrier by means of magnetic resonance imaging. Biotechnology and Bioengineering, 2015, 112, 1023-1032.	3.3	24
30	Online Coupling of Sizeâ€Exclusion Chromatography and Lowâ€Field ¹H NMR Spectroscopy. Macromolecular Chemistry and Physics, 2012, 213, 1933-1943.	2.2	21
31	NMR investigation of water diffusion in different biofilm structures. Biotechnology and Bioengineering, 2017, 114, 2857-2867.	3.3	21
32	NMR Diffusion and Relaxation for Monitoring of Degradation in Motor Oils. Applied Magnetic Resonance, 2017, 48, 51-65.	1.2	21
33	Thermophysical Properties of the Binary Mixture of Water + Diethylmethylammonium Trifluoromethanesulfonate and the Ternary Mixture of Water + Diethylmethylammonium Trifluoromethanesulfonate + Diethylmethylammonium Methanesulfonate. Journal of Chemical & Engineering Data, 2014, 59, 560-570.	1.9	20
34	Short and long term biosorption of silica-coated iron oxide nanoparticles in heterotrophic biofilms. Science of the Total Environment, 2016, 544, 722-729.	8.0	19
35	Polymer Crystallization Studied by Hyphenated Rheology Techniques: Rheoâ€NMR, Rheoâ€SAXS, and Rheoâ€Microscopy. Macromolecular Materials and Engineering, 2019, 304, 1800586.	3.6	19
36	Interactions between Phospholipids and Organic Phases: Insights into Lipoproteins and Nanoemulsions. Langmuir, 2016, 32, 5821-5829.	3.5	18

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37	Phospholipid adsorption at oil in water versus water in oil interfaces: Implications for interfacial densities and bulk solubilities. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2016, 505, 56-63.	4.7	17
38	Effect of molecular exchange on water droplet size analysis as determined by diffusion NMR: The W/O/W double emulsion case. Journal of Colloid and Interface Science, 2016, 475, 57-65.	9.4	15
39	Evaluation of productive biofilms for continuous lactic acid production. Biotechnology and Bioengineering, 2019, 116, 2687-2697.	3.3	15
40	Ein Spektrometer fÃ¼r die spektral aufgelÃ¶ste Niederfeldâ€NMR. Nachrichten Aus Der Chemie, 2010, 58, 1155-1157.	0.0	14
41	Nuclear Magnetic Resonance Relaxivities: Investigations of Ultrahighâ€Spin Lanthanide Clusters from 10 MHz to 1.4 GHz. ChemPhysChem, 2014, 15, 3608-3613.	2.1	14
42	Magnetic resonance imaging reveals detailed spatial and temporal distribution of iron-based nanoparticles transported through water-saturated porous media. Journal of Contaminant Hydrology, 2015, 182, 51-62.	3.3	14
43	Direct surface visualization of biofilms with high spin coordination clusters using Magnetic Resonance Imaging. Acta Biomaterialia, 2016, 31, 167-177.	8.3	13
44	Dynamics of Sodium Ions and Water in Swollen Superabsorbent Hydrogels as Studied by ²³Naâ€and ¹Hâ€NMR. Macromolecular Chemistry and Physics, 2019, 220, 1800350.	2.2	13
45	In situ measurement of deposit layer formation during skim milk filtration by MRI. Magnetic Resonance in Chemistry, 2019, 57, 738-748.	1.9	13
46	Characterization of biofilm distribution in hollow fiber membranes using Compressed Sensing Magnetic Resonance Imaging. Journal of Membrane Science, 2020, 594, 117437.	8.2	13
47	Polystyrene Solutions: Characterization of Molecular Motional Modes by Spectrally Resolved Lowâ€and Highâ€Field NMR Relaxation. Macromolecular Chemistry and Physics, 2012, 213, 1833-1840.	2.2	12
48	Polyoxometalate-based high-spin cluster systems: a NMR relaxivity study up to 1.4 GHz/33 T. Dalton Transactions, 2019, 48, 15597-15604.	3.3	12
49	Structure of Superabsorbent Polyacrylate Hydrogels and Dynamics of Counterions by Nuclear Magnetic Resonance. Macromolecular Chemistry and Physics, 2019, 220, 1800525.	2.2	12
50	Non-destructive, quantitative characterization of extruded starch-based products by magnetic resonance imaging and X-ray microtomography. Journal of Food Engineering, 2014, 124, 122-127.	5.2	11
51	CFD-MRI: A coupled measurement and simulation approach for accurate fluid flow characterisation and domain identification. Computers and Fluids, 2018, 166, 218-224.	2.5	11
52	Fluid flow simulations verified by measurements to investigate adsorption processes in a static mixer. Computers and Mathematics With Applications, 2018, 76, 2744-2757.	2.7	10
53	Topological Insight into Superabsorbent Hydrogel Network Structures: a ¹H Doubleâ€Quantum NMR Study. Macromolecular Chemistry and Physics, 2018, 219, 1800100.	2.2	10
54	Transport and retention of artificial and real wastewater particles inside a bed of settled aerobic granular sludge assessed applying magnetic resonance imaging. Water Research X, 2020, 7, 100050.	6.1	10

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55	Recent NMR/MRI studies of biofilm structures and dynamics. Annual Reports on NMR Spectroscopy, 2019, 97, 163-213.	1.5	9
56	Influence of Shear Flow on the Crystallization of Organic Melt Emulsions â€“ A Rheoâ€Nuclear Magnetic Resonance Investigation. Chemical Engineering and Technology, 2020, 43, 1699-1705.	1.5	9
57	Structural Characterisation of Deposit Layer during Milk Protein Microfiltration by Means of In-Situ MRI and Compositional Analysis. Membranes, 2020, 10, 59.	3.0	9
58	Molecular Dynamics of Polymer Composites Using Rheology and Combined RheoNMR on the Example of TiO₂-Filled Poly(n-Alkyl Methacrylates) and Trans-1,4-Polyisoprene. Soft Materials, 2014, 12, S4-S13.	1.7	8
59	Flowing Liquids in NMR: Numerical CFD Simulation and Experimental Confirmation of Magnetization Buildup. Applied Magnetic Resonance, 2018, 49, 687-705.	1.2	8
60	Characterization of covalent, feruloylated polysaccharide gels by pulsed field gradient-stimulated echo (PFG-STE)-NMR. Carbohydrate Polymers, 2021, 267, 118232.	10.2	8
61	Imaging of Double Emulsions. Food Engineering Series, 2016, , 69-98.	0.7	8
62	NMR Relaxivities of Paramagnetic Lanthanide-Containing Polyoxometalates. Molecules, 2021, 26, 7481.	3.8	8
63	¹H NMR Techniques for Characterization of Water Content and Viscosity of Fast Pyrolysis Oils. Energy & Fuels, 2012, 26, 5274-5280.	5.1	7
64	Noise reduction of flow MRI measurements using a lattice Boltzmann based topology optimisation approach. Computers and Fluids, 2020, 197, 104391.	2.5	7
65	Dedicated NMR sensor to analyze relaxation and diffusion in liquids and its application to characterize lubricants. Magnetic Resonance in Chemistry, 2021, 59, 825-834.	1.9	7
66	Investigation of Polymerâ€Filler Interactions in TiO₂â€Filled Poly(nâ€alkyl) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 307 851-858.	2.2	6
67	Reaction kinetics of polyfurfuryl alcohol bioresin and nanoparticles by ¹Hâ€NMR transverse relaxation measurements. Polymer Composites, 2018, 39, 3280-3288.	4.6	6
68	Contactâ€mediated nucleation in melt emulsions investigated by rheoâ€nuclear magnetic resonance. Magnetic Resonance in Chemistry, 2022, 60, 615-627.	1.9	6
69	Magnetic resonance imaging as a tool for quality control in extrusionâ€based bioprinting. Biotechnology Journal, 2022, 17, e2100336.	3.5	6
70	Solid Fat Content Determination of Dispersed Lipids by Timeâ€Domain NMR. European Journal of Lipid Science and Technology, 2018, 120, 1700132.	1.5	5
71	Recent MRI and diffusion studies of food structures. Annual Reports on NMR Spectroscopy, 2020, 100, 203-264.	1.5	5
72	A Low-field-NMR Capillary Rheometer. Special Publication - Royal Society of Chemistry, 2009, , 81-88.	0.0	5

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73	Viscoelastic behaviour of asphalt modified by grafted tri-block copolymers: predictions of fractional rheological models. International Journal of Pavement Engineering, 2015, 16, 730-744.	4.4	4
74	1 H PFGâ€NMR Diffusion Study on a Sequenceâ€Defined Macromolecule: Confirming Monodispersity. Macromolecular Chemistry and Physics, 2019, 220, 1900155.	2.2	4
75	Nuclear magnetic resonance/magnetic resonance imaging on lubricating greases: Observation of bleeding and aging. Magnetic Resonance in Chemistry, 2022, 60, 452-462.	1.9	4
76	Shear rheology and 1H TD-NMR combined to low-field RheoNMR: Set-up and application to quiescent and flow-induced crystallization of polymers. AIP Conference Proceedings, 2017, , .	0.4	3
77	Contact-Mediated Nucleation of Subcooled Droplets in Melt Emulsions: A Microfluidic Approach. Crystals, 2021, 11, 1471.	2.2	3
78	Comparative NMR Relaxivity Study of Polyoxometalate-Based Clusters [Mn4(H2O)2(P2W1SO56)2]16â^' and [{Dy(H2O)6}2Mn4(H2O)2(P2W15O56)2]10â^' from 20ÂMHz to 1.2ÂGHz. Applied Magnetic Resonance, 2020, 51, 1295-1305.	1.2	2
79	Quantification of Evaporation and Drainage Processes in Unsaturated Porous Media Using Magnetic Resonance Imaging. Water Resources Research, 2020, 56, e2019WR026658.	4.2	2
80	Investigation of Transverse Relaxation Rate Distribution via Magnetic Resonance Imaging: Impact of Electrode Formation. Energy Technology, 2021, 9, 2000579.	3.8	2
81	Charge Transport and Glassy Dynamics in Blends Based on 1-Butyl-3-vinylbenzylimidazolium Bis(trifluoromethanesulfonyl)imide Ionic Liquid and the Corresponding Polymer. Polymers, 2022, 14, 2423.	4.5	2
82	Low-field RheoNMR: Newly developed combination of rheology and time domain (TD)-NMR to correlate mechanical properties with molecular dynamics in polymer melts. AIP Conference Proceedings, 2017, , .	0.4	1
83	3D reconstruction of ablation lesions from in-vitro preparations using MRI. Current Directions in Biomedical Engineering, 2017, 3, 437-440.	0.4	1
84	Flow of Newtonian and Non-Newtonian Fluids in Porous Solid Matrices Described by Magnetic Resonance Tomography. Chemie-Ingenieur-Technik, 2001, 73, 755-755.	0.8	0
85	Diffusometric Assessment of Food Double Emulsions. , 2017, , 1-13.		0
86	Diffusometric Assessment of Food Double Emulsions. , 2018, , 1417-1429.		0