

Mathias Nilsson

List of Publications by Year in descending order

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116
papers

5,637
citations

66336

42
h-index

88628

70
g-index

123
all docs

123
docs citations

123
times ranked

3707
citing authors

#	ARTICLE	IF	CITATIONS
1	Ultra-high-Resolution NMR Spectroscopy. <i>Angewandte Chemie - International Edition</i> , 2014, 53, 6990-6992.	13.8	254
2	Pure Shift ¹ H NMR: A Resolution of the Resolution Problem?. <i>Angewandte Chemie - International Edition</i> , 2010, 49, 3901-3903.	13.8	225
3	Spin echo NMR spectra without J modulation. <i>Chemical Communications</i> , 2012, 48, 811-813.	4.1	218
4	Quantitative Interpretation of Diffusion-Ordered NMR Spectra: Can We Rationalize Small Molecule Diffusion Coefficients?. <i>Angewandte Chemie - International Edition</i> , 2013, 52, 3199-3202.	13.8	181
5	Pure shift proton DOSY: diffusion-ordered ¹ H spectra without multiplet structure. <i>Chemical Communications</i> , 2007, , 933.	4.1	164
6	The DOSY Toolbox: A new tool for processing PFG NMR diffusion data. <i>Journal of Magnetic Resonance</i> , 2009, 200, 296-302.	2.1	161
7	Simultaneously Enhancing Spectral Resolution and Sensitivity in Heteronuclear Correlation NMR Spectroscopy. <i>Angewandte Chemie - International Edition</i> , 2013, 52, 11616-11619.	13.8	160
8	Improving the Interpretation of Small Molecule Diffusion Coefficients. <i>Analytical Chemistry</i> , 2018, 90, 3987-3994.	6.5	129
9	Improving the accuracy of pulsed field gradient NMR diffusion experiments: Correction for gradient non-uniformity. <i>Journal of Magnetic Resonance</i> , 2009, 198, 121-131.	2.1	116
10	Perfecting WATERGATE: clean proton NMR spectra from aqueous solution. <i>Chemical Communications</i> , 2013, 49, 358-360.	4.1	115
11	High-Resolution NMR and Diffusion-Ordered Spectroscopy of Port Wine. <i>Journal of Agricultural and Food Chemistry</i> , 2004, 52, 3736-3743.	5.2	114
12	Ultra-high-Resolution Total Correlation NMR Spectroscopy. <i>Journal of the American Chemical Society</i> , 2014, 136, 11867-11869.	13.7	114
13	Simple Proton Spectra from Complex Spin Systems: Pure Shift NMR Spectroscopy Using BIRD. <i>Angewandte Chemie - International Edition</i> , 2011, 50, 9716-9717.	13.8	113
14	True Chemical Shift Correlation Maps: A TOCSY Experiment with Pure Shifts in Both Dimensions. <i>Journal of the American Chemical Society</i> , 2010, 132, 12770-12772.	13.7	107
15	Biexponential Fitting of Diffusion-Ordered NMR Data: Practicalities and Limitations. <i>Analytical Chemistry</i> , 2006, 78, 3040-3045.	6.5	105
16	Content of Nutrients and Lignans in Roller Milled Fractions of Rye. <i>Journal of the Science of Food and Agriculture</i> , 1997, 73, 143-148.	3.5	102
17	Decoupling Two-Dimensional NMR Spectroscopy in Both Dimensions: Pure Shift NOESY and COSY. <i>Angewandte Chemie - International Edition</i> , 2012, 51, 6460-6463.	13.8	97
18	Speedy Component Resolution: An Improved Tool for Processing Diffusion-Ordered Spectroscopy Data. <i>Analytical Chemistry</i> , 2008, 80, 3777-3782.	6.5	95

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19	Structure-revealing data fusion. <i>BMC Bioinformatics</i> , 2014, 15, 239.	2.6	91
20	Measuring couplings in crowded NMR spectra: pure shift NMR with multiplet analysis. <i>Chemical Communications</i> , 2015, 51, 15410-15413.	4.1	85
21	Sample convection in liquid-state NMR: Why it is always with us, and what we can do about it. <i>Journal of Magnetic Resonance</i> , 2015, 252, 120-129.	2.1	76
22	Production and properties of agar from the invasive marine alga, <i>Gracilaria vermiculophylla</i> (Gracilariales, Rhodophyta). <i>Journal of Applied Phycology</i> , 2010, 22, 211-220.	2.8	73
23	Improving Pulse Sequences for 3D Diffusion-Ordered NMR Spectroscopy: A 2D J-IDSY. <i>Analytical Chemistry</i> , 2004, 76, 5418-5422.	6.5	71
24	Matrix-assisted diffusion-ordered spectroscopy: mixture resolution by NMR using SDS micelles. <i>Magnetic Resonance in Chemistry</i> , 2010, 48, 550-553.	1.9	71
25	A General Method for Extracting Individual Coupling Constants from Crowded ¹ H NMR Spectra. <i>Angewandte Chemie - International Edition</i> , 2016, 55, 1090-1093.	13.8	71
26	Diastereomeric ratio determination by high sensitivity band-selective pure shift NMR spectroscopy. <i>Chemical Communications</i> , 2014, 50, 2512-2514.	4.1	67
27	Isomer Resolution by Micelle-Assisted Diffusion-Ordered Spectroscopy. <i>Analytical Chemistry</i> , 2009, 81, 4548-4550.	6.5	66
28	Local Covariance Order Diffusion-Ordered Spectroscopy: A Powerful Tool for Mixture Analysis. <i>Journal of the American Chemical Society</i> , 2011, 133, 7640-7643.	13.7	63
29	The GNAT: A new tool for processing NMR data. <i>Magnetic Resonance in Chemistry</i> , 2018, 56, 546-558.	1.9	63
30	PSYCHE Pure Shift NMR Spectroscopy. <i>Chemistry - A European Journal</i> , 2018, 24, 13988-14000.	3.3	63
31	Improving pulse sequences for 3D DOSY: COSY-IDSY. <i>Chemical Communications</i> , 2005, , 1737.	4.1	60
32	J-modulation effects in DOSY experiments and their suppression: The Oneshot45 experiment. <i>Journal of Magnetic Resonance</i> , 2011, 208, 270-278.	2.1	60
33	Ultrahigh-Resolution Diffusion-Ordered Spectroscopy. <i>Angewandte Chemie - International Edition</i> , 2016, 55, 15579-15582.	13.8	59
34	Water unextractable polysaccharides from three milling fractions of rye grain. <i>Carbohydrate Polymers</i> , 1996, 30, 229-237.	10.2	57
35	2D and 3D DOSY methods for studying mixtures of oligomeric dimethylsiloxanes. <i>Physical Chemistry Chemical Physics</i> , 2004, 6, 3221.	2.8	56
36	Simultaneous enhancement of chemical shift dispersion and diffusion resolution in mixture analysis by diffusion-ordered NMR spectroscopy. <i>Chemical Communications</i> , 2011, 47, 7063.	4.1	55

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37	Tailoring kappa/iota-hybrid carrageenan from <i>Mastocarpus stellatus</i> with desired gel quality through pre-extraction alkali treatment. <i>Food Hydrocolloids</i> , 2013, 31, 94-102.	10.7	55
38	“Perfecting” pure shift HSQC: full homodecoupling for accurate and precise determination of heteronuclear couplings. <i>Chemical Communications</i> , 2014, 50, 15702-15705.	4.1	53
39	Accurate determination of one-bond heteronuclear coupling constants with “pure shift” broadband proton-decoupled CLIP/CLAP-HSQC experiments. <i>Journal of Magnetic Resonance</i> , 2014, 239, 130-138.	2.1	52
40	Ultraclean pure shift NMR. <i>Chemical Communications</i> , 2017, 53, 10188-10191.	4.1	52
41	Improving pulse sequences for 3D DOSY: Convection compensation. <i>Journal of Magnetic Resonance</i> , 2005, 177, 203-211.	2.1	48
42	Breath metabolomic profiling by nuclear magnetic resonance spectroscopy in asthma. <i>Allergy: European Journal of Allergy and Clinical Immunology</i> , 2013, 68, 1050-1056.	5.7	46
43	Increasing the quantitative bandwidth of NMR measurements. <i>Chemical Communications</i> , 2016, 52, 2916-2919.	4.1	44
44	Resolving natural product epimer spectra by matrix-assisted DOSY. <i>Organic and Biomolecular Chemistry</i> , 2011, 9, 7062.	2.8	42
45	The structural plasticity of heparan sulfate NA-domains and hence their role in mediating multivalent interactions is confirmed by high-accuracy ¹⁵ N-NMR relaxation studies. <i>Glycoconjugate Journal</i> , 2008, 25, 401-414.	2.7	40
46	Heterogeneity in a water-extractable rye arabinoxylan with a low degree of disubstitution. <i>Carbohydrate Polymers</i> , 2000, 41, 397-405.	10.2	39
47	Flavonoid Mixture Analysis by Matrix-Assisted Diffusion-Ordered Spectroscopy. <i>Journal of Natural Products</i> , 2012, 75, 131-134.	3.0	39
48	Convection in liquid-state NMR: expect the unexpected. <i>RSC Advances</i> , 2016, 6, 95173-95176.	3.6	39
49	Novel Artemisinin and Curcumin Micellar Formulations: Drug Solubility Studies by NMR Spectroscopy. <i>Journal of Pharmaceutical Sciences</i> , 2009, 98, 3666-3675.	3.3	37
50	Unmixing the NMR spectra of similar species “vive la différence”. <i>Chemical Communications</i> , 2013, 49, 10510.	4.1	37
51	Diffusion NMR and trilinear analysis in the study of reaction kinetics. <i>Chemical Communications</i> , 2009, , 1252.	4.1	35
52	Suppressing exchange effects in diffusion-ordered NMR spectroscopy. <i>Journal of Magnetic Resonance</i> , 2014, 238, 16-19.	2.1	33
53	Single-Scan Selective Excitation of Individual NMR Signals in Overlapping Multiplets. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 666-669.	13.8	32
54	High resolution ¹³ C DOSY: The DEPTSE experiment. <i>Journal of Magnetic Resonance</i> , 2011, 211, 25-29.	2.1	31

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55	Detection of Potential TNA and RNA Nucleoside Precursors in a Prebiotic Mixture by Pure Shift Diffusion-Ordered NMR Spectroscopy. <i>Chemistry - A European Journal</i> , 2013, 19, 4586-4595.	3.3	30
56	Real-time pure shift 15N HSQC of proteins: a real improvement in resolution and sensitivity. <i>Journal of Biomolecular NMR</i> , 2015, 62, 43-52.	2.8	30
57	A new tool for NMR analysis of complex systems: selective pure shift TOCSY. <i>RSC Advances</i> , 2016, 6, 100063-100066.	3.6	30
58	Reaction Kinetics Studied Using Diffusion-Ordered Spectroscopy and Multiway Chemometrics. <i>Analytical Chemistry</i> , 2010, 82, 2102-2108.	6.5	29
59	Correction of systematic errors in CORE processing of DOSY data. <i>Magnetic Resonance in Chemistry</i> , 2006, 44, 655-660.	1.9	28
60	Relaxation-encoded NMR experiments for mixture analysis: REST and beer. <i>Chemical Communications</i> , 2017, 53, 7461-7464.	4.1	28
61	^1H -Diffusion-Ordered Spectroscopy: Nuclear Magnetic Resonance Mixture Analysis Using Parallel Factor Analysis. <i>Analytical Chemistry</i> , 2009, 81, 8119-8125.	6.5	27
62	Diffusion Studies of Dihydroxybenzene Isomers in Water-Alcohol Systems. <i>Journal of Physical Chemistry B</i> , 2013, 117, 2734-2741.	2.6	27
63	Minimising Research Bottlenecks by Decluttering NMR Spectra. <i>Chemistry - A European Journal</i> , 2015, 21, 6623-6630.	3.3	27
64	^{19}F DOSY NMR analysis for spin systems with $n\text{J}_{\text{FF}}$ couplings. <i>Magnetic Resonance in Chemistry</i> , 2014, 52, 172-177.	1.9	26
65	Improving accuracy in DOSY and diffusion measurements using triaxial field gradients. <i>Journal of Magnetic Resonance</i> , 2016, 270, 24-30.	2.1	25
66	Analysing DHPC/DMPC bicelles by diffusion NMR and multivariate decomposition. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2015, 1848, 2910-2917.	2.6	24
67	Improved DECRA processing of DOSY data: correcting for non-uniform field gradients. <i>Magnetic Resonance in Chemistry</i> , 2007, 45, 656-660.	1.9	22
68	Very broadband diffusion-ordered NMR spectroscopy: ^{19}F DOSY. <i>Chemical Communications</i> , 2016, 52, 6892-6894.	4.1	22
69	^1H NMR spectroscopy for profiling complex carbohydrate mixtures in non-fractionated beer. <i>Food Chemistry</i> , 2014, 150, 65-72.	8.2	21
70	Cleaning up NMR spectra with reference deconvolution for improving multivariate analysis of complex mixture spectra. <i>Journal of Chemometrics</i> , 2014, 28, 656-662.	1.3	21
71	Anatomising proton NMR spectra with pure shift 2D J-spectroscopy: A cautionary tale. <i>Chemical Physics Letters</i> , 2017, 683, 398-403.	2.6	21
72	Dissect and Divide: Putting NMR Spectra of Mixtures under the Knife. <i>Journal of the American Chemical Society</i> , 2019, 141, 5766-5771.	13.7	21

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73	Matrix-assisted diffusion-ordered spectroscopy: application of surfactant solutions to the resolution of isomer spectra. <i>Magnetic Resonance in Chemistry</i> , 2012, 50, 458-465.	1.9	20
74	Real-time broadband proton-homodecoupled CLIP/CLAP-HSQC for automated measurement of heteronuclear one-bond coupling constants. <i>RSC Advances</i> , 2016, 6, 87848-87855.	3.6	20
75	Practical aspects of real-time pure shift HSQC experiments. <i>Magnetic Resonance in Chemistry</i> , 2018, 56, 993-1005.	1.9	20
76	Filter diagonalization method for processing PFG NMR data. <i>Journal of Magnetic Resonance</i> , 2013, 234, 125-134.	2.1	19
77	FESTA: An Efficient Nuclear Magnetic Resonance Approach for the Structural Analysis of Mixtures Containing Fluorinated Species. <i>Analytical Chemistry</i> , 2018, 90, 5445-5450.	6.5	19
78	Nutrient and lignan content, dough properties and baking performance of rye samples used in Scandinavia. <i>Acta Agriculturae Scandinavica - Section B Soil and Plant Science</i> , 1997, 47, 26-34.	0.6	18
79	Precise Measurement of Long-Range Heteronuclear Coupling Constants by a Novel Broadband Proton-Decoupled CPMG-HSQC Method. <i>Chemistry - A European Journal</i> , 2015, 21, 3472-3479.	3.3	17
80	Extraction of distance restraints from pure shift NOE experiments. <i>Journal of Magnetic Resonance</i> , 2016, 271, 99-109.	2.1	17
81	Probing Interactions between β -Glucan and Bile Salts at Atomic Detail by ^1H - ^{13}C NMR Assays. <i>Journal of Agricultural and Food Chemistry</i> , 2014, 62, 11472-11478.	5.2	16
82	Improved ultra-broadband chirp excitation. <i>Journal of Magnetic Resonance</i> , 2019, 302, 28-33.	2.1	16
83	Single-scan ultra-selective 1D total correlation spectroscopy. <i>Chemical Communications</i> , 2021, 57, 2368-2371.	4.1	16
84	Semi-real-time acquisition for fast pure shift NMR at maximum resolution. <i>Journal of Magnetic Resonance</i> , 2018, 293, 19-27.	2.1	15
85	A donor-functionalized, silyl-substituted pentadienyllithium: structural insight from experiment and theory. <i>Chemical Communications</i> , 2011, 47, 6162.	4.1	14
86	Resolving complex mixtures: trilinear diffusion data. <i>Journal of Biomolecular NMR</i> , 2014, 58, 251-257.	2.8	14
87	Natural product mixture analysis by matrix-assisted DOSY using Brij surfactants in mixed solvents. <i>RSC Advances</i> , 2014, 4, 42029-42034.	3.6	14
88	Matrix-assisted diffusion-ordered spectroscopy: choosing a matrix. <i>Magnetic Resonance in Chemistry</i> , 2016, 54, 815-820.	1.9	14
89	Ultrahigh-Resolution Diffusion-Ordered Spectroscopy. <i>Angewandte Chemie</i> , 2016, 128, 15808-15811.	2.0	13
90	A General Method for Extracting Individual Coupling Constants from Crowded ^1H -NMR Spectra. <i>Angewandte Chemie</i> , 2016, 128, 1102-1105.	2.0	13

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91	Matrix-assisted diffusion-ordered NMR spectroscopy with an invisible matrix: a vanishing surfactant. RSC Advances, 2017, 7, 449-452.	3.6	12
92	¹⁹ F NMR matrix-assisted DOSY: a versatile tool for differentiating fluorinated species in mixtures. Magnetic Resonance in Chemistry, 2017, 55, 323-328.	1.9	12
93	¹³ C Satellite-Free ¹ H NMR Spectra. Analytical Chemistry, 2017, 89, 11898-11901.	6.5	10
94	Unexploited Dimension: New Software for Mixture Analysis by 3D Diffusion-Ordered NMR Spectroscopy. Analytical Chemistry, 2018, 90, 13695-13701.	6.5	10
95	Arabinoxylan fractionation on DEAE-cellulose chromatography influenced by protease pre-treatment. Carbohydrate Polymers, 1999, 39, 321-326.	10.2	9
96	Synthesis of Multivalent [Lys8]-Oxytocin Dendrimers that Inhibit Visceral Nociceptive Responses. Australian Journal of Chemistry, 2017, 70, 162.	0.9	9
97	Improving the Sensitivity of FESTA Methods for the Analysis of Fluorinated Mixtures. Analytical Chemistry, 2020, 92, 2224-2228.	6.5	9
98	Hyperfine structure and homogeneous broadening in Pr ³⁺ :KY(WO ₄) ₂ . Physical Review B, 2004, 70, .	3.2	8
99	¹ H and ¹⁹ F NMR in drug stress testing: the case of voriconazole. RSC Advances, 2017, 7, 34000-34004.	3.6	7
100	Revealing Well-Defined Soluble States during Amyloid Fibril Formation by Multilinear Analysis of NMR Diffusion Data. Journal of the American Chemical Society, 2019, 141, 18649-18652.	13.7	6
101	Sharpening Up Your Spectra: Broadband Homonuclear Decoupling in HSQC by Real-Time Pure Shift Acquisition. Synlett, 2019, 30, 1015-1025.	1.8	6
102	Ultra-high dispersion NMR reveals new levels of detail. RSC Advances, 2015, 5, 52902-52906.	3.6	5
103	Clearing the undergrowth: detection and quantification of low level impurities using ¹⁹ F NMR. Chemical Communications, 2017, 53, 123-125.	4.1	5
104	Linear and non-linear spectroscopy of Ho ³⁺ -doped YVO ₄ and LuVO ₄ . Journal of Physics Condensed Matter, 2005, 17, 6751-6762.	1.8	4
105	High resolution techniques: general discussion. Faraday Discussions, 2019, 218, 247-267.	3.2	4
106	Broadband measurement of true transverse relaxation rates in systems with coupled protons: application to the study of conformational exchange. Chemical Science, 2021, 12, 11538-11547.	7.4	4
107	Signal-to-noise ratio in diffusion-ordered spectroscopy: how good is good enough?. Magnetic Resonance, 2021, 2, 733-739.	1.9	4
108	Single-Scan Selective Excitation of Individual NMR Signals in Overlapping Multiplets. Angewandte Chemie, 2021, 133, 676-679.	2.0	3

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109	SABRE-enhanced real-time pure shift NMR spectroscopy. <i>Magnetic Resonance in Chemistry</i> , 2021, 59, 1244-1252.	1.9	3
110	Matrix-assisted diffusion-ordered NMR spectroscopy with an invisible, tuneable matrix. <i>RSC Advances</i> , 2017, 7, 10757-10762.	3.6	2
111	Diffusion NMR. <i>Magnetic Resonance in Chemistry</i> , 2017, 55, 385-385.	1.9	2
112	Frontispiece: PSYCHE Pure Shift NMR Spectroscopy. <i>Chemistry - A European Journal</i> , 2018, 24, .	3.3	1
113	Future challenges and new approaches: general discussion. <i>Faraday Discussions</i> , 2019, 218, 505-523.	3.2	1
114	Improved Quantification by Nuclear Magnetic Resonance Spectroscopy of the Fatty Acid Ester Composition of Extra Virgin Olive Oils. <i>ACS Food Science & Technology</i> , 2022, 2, 1237-1242.	2.7	1
115	Metabolomic Analysis Of Exhaled Breath Condensate By NMR Spectroscopy Discriminates Inflammatory Phenotypes In Asthma. , 2010, , .		0
116	Suppression of ¹³ C satellites in ¹ H DOSY spectra. <i>Journal of Magnetic Resonance</i> , 2018, 295, 6-11.	2.1	0