Mathias Nilsson

List of Publications by Citations

118 papers	4,690 citations	39 h-index	64 g-index
123 ext. papers	5,132 ext. citations	5.8 avg, IF	5.78 L-index

#	Paper	IF	Citations
118	Pure shift 1H NMR: a resolution of the resolution problem?. *Angewandte Chemie - International Edition*, **2010**, 49, 3901-3	16.4	208
117	Ultrahigh-resolution NMR spectroscopy. *Angewandte Chemie - International Edition*, **2014**, 53, 6990-2	16.4	201
116	Spin echo NMR spectra without J modulation. *Chemical Communications*, **2012**, 48, 811-3	5.8	175
115	Pure shift proton DOSY: diffusion-ordered 1H spectra without multiplet structure. *Chemical Communications*, **2007**, 933-5	5.8	150
114	The DOSY Toolbox: a new tool for processing PFG NMR diffusion data. *Journal of Magnetic Resonance*, **2009**, 200, 296-302	3	144
113	Simultaneously enhancing spectral resolution and sensitivity in heteronuclear correlation NMR spectroscopy. *Angewandte Chemie - International Edition*, **2013**, 52, 11616-9	16.4	141
112	Quantitative interpretation of diffusion-ordered NMR spectra: can we rationalize small molecule diffusion coefficients?. *Angewandte Chemie - International Edition*, **2013**, 52, 3199-202	16.4	140
111	Improving the accuracy of pulsed field gradient NMR diffusion experiments: Correction for gradient non-uniformity. *Journal of Magnetic Resonance*, **2009**, 198, 121-31	3	105
110	Simple proton spectra from complex spin systems: pure shift NMR spectroscopy using BIRD. *Angewandte Chemie - International Edition*, **2011**, 50, 9716-7	16.4	101
109	High-resolution NMR and diffusion-ordered spectroscopy of port wine. *Journal of Agricultural and Food Chemistry*, **2004**, 52, 3736-43	5.7	101
108	True chemical shift correlation maps: a TOCSY experiment with pure shifts in both dimensions. *Journal of the American Chemical Society*, **2010**, 132, 12770-2	16.4	98
107	Biexponential fitting of diffusion-ordered NMR data: practicalities and limitations. *Analytical Chemistry*, **2006**, 78, 3040-5	7.8	97
106	Ultrahigh-resolution total correlation NMR spectroscopy. *Journal of the American Chemical Society*, **2014**, 136, 11867-9	16.4	96
105	Content of Nutrients and Lignans in Roller Milled Fractions of Rye. *Journal of the Science of Food and Agriculture*, **1997**, 73, 143-148	4.3	91
104	Decoupling two-dimensional NMR spectroscopy in both dimensions: pure shift NOESY and COSY. *Angewandte Chemie - International Edition*, **2012**, 51, 6460-3	16.4	90
103	Speedy component resolution: an improved tool for processing diffusion-ordered spectroscopy data. *Analytical Chemistry*, **2008**, 80, 3777-82	7.8	83
102	"Perfecting" WATERGATE: clean proton NMR spectra from aqueous solution. *Chemical Communications*, **2013**, 49, 358-60	5.8	79

101	Matrix-assisted diffusion-ordered spectroscopy: mixture resolution by NMR using SDS micelles. *Magnetic Resonance in Chemistry*, **2010**, 48, 550-3	2.1	69
100	Measuring couplings in crowded NMR spectra: pure shift NMR with multiplet analysis. *Chemical Communications*, **2015**, 51, 15410-3	5.8	67
99	Sample convection in liquid-state NMR: why it is always with us, and what we can do about it. *Journal of Magnetic Resonance*, **2015**, 252, 120-9	3	64
98	Improving the Interpretation of Small Molecule Diffusion Coefficients. *Analytical Chemistry*, **2018**, 90, 3987-3994	7.8	63
97	Isomer resolution by micelle-assisted diffusion-ordered spectroscopy. *Analytical Chemistry*, **2009**, 81, 4548-50	7.8	63
96	Improving pulse sequences for 3D diffusion-ordered NMR spectroscopy: 2DJ-IDOSY. *Analytical Chemistry*, **2004**, 76, 5418-22	7.8	63
95	Structure-revealing data fusion. *BMC Bioinformatics*, **2014**, 15, 239	3.6	61
94	Diastereomeric ratio determination by high sensitivity band-selective pure shift NMR spectroscopy. *Chemical Communications*, **2014**, 50, 2512-4	5.8	60
93	Local covariance order diffusion-ordered spectroscopy: a powerful tool for mixture analysis. *Journal of the American Chemical Society*, **2011**, 133, 7640-3	16.4	59
92	A General Method for Extracting Individual Coupling Constants from Crowded (1)H NMR Spectra. *Angewandte Chemie - International Edition*, **2016**, 55, 1090-3	16.4	59
91	Production and properties of agar from the invasive marine alga, Gracilaria vermiculophylla (Gracilariales, Rhodophyta). *Journal of Applied Phycology*, **2010**, 22, 211-220	3.2	58
90	J-modulation effects in DOSY experiments and their suppression: the Oneshot45 experiment. *Journal of Magnetic Resonance*, **2011**, 208, 270-8	3	54
89	Improving pulse sequences for 3D DOSY: COSY-IDOSY. *Chemical Communications*, **2005**, 1737-9	5.8	54
88	Water unextractable polysaccharides from three milling fractions of rye grain. *Carbohydrate Polymers*, **1996**, 30, 229-237	10.3	53
87	Simultaneous enhancement of chemical shift dispersion and diffusion resolution in mixture analysis by diffusion-ordered NMR spectroscopy. *Chemical Communications*, **2011**, 47, 7063-4	5.8	52
86	2D and 3D DOSY methods for studying mixtures of oligomeric dimethylsiloxanes. *Physical Chemistry Chemical Physics*, **2004**, 6, 3221	3.6	52
85	Pure Shift 1H NMR: A Resolution of the Resolution Problem?. *Angewandte Chemie*, **2010**, 122, 3993-3995	3.6	49
84	Accurate determination of one-bond heteronuclear coupling constants with "pure shift" broadband proton-decoupled CLIP/CLAP-HSQC experiments. *Journal of Magnetic Resonance*, **2014**, 239, 130-8	3	46

83	Ultrahigh-Resolution Diffusion-Ordered Spectroscopy. *Angewandte Chemie - International Edition*, **2016**, 55, 15579-15582	16.4	44
82	"Perfecting" pure shift HSQC: full homodecoupling for accurate and precise determination of heteronuclear couplings. *Chemical Communications*, **2014**, 50, 15702-5	5.8	44
81	Tailoring kappa/iota-hybrid carrageenan from Mastocarpus stellatus with desired gel quality through pre-extraction alkali treatment. *Food Hydrocolloids*, **2013**, 31, 94-102	10.6	43
80	Resolving natural product epimer spectra by matrix-assisted DOSY. *Organic and Biomolecular Chemistry*, **2011**, 9, 7062-4	3.9	40
79	Improving pulse sequences for 3D DOSY: convection compensation. *Journal of Magnetic Resonance*, **2005**, 177, 203-11	3	39
78	The GNAT: A new tool for processing NMR data. *Magnetic Resonance in Chemistry*, **2018**, 56, 546-558	2.1	38
77	Simple Proton Spectra from Complex Spin Systems: Pure Shift NMR Spectroscopy Using BIRD. *Angewandte Chemie*, **2011**, 123, 9890-9891	3.6	38
76	PSYCHE Pure Shift NMR Spectroscopy. *Chemistry - A European Journal*, **2018**, 24, 13988-14000	4.8	36
75	Breath metabolomic profiling by nuclear magnetic resonance spectroscopy in asthma. *Allergy: European Journal of Allergy and Clinical Immunology*, **2013**, 68, 1050-6	9.3	36
74	Flavonoid mixture analysis by matrix-assisted diffusion-ordered spectroscopy. *Journal of Natural Products*, **2012**, 75, 131-4	4.9	36
73	Unmixing the NMR spectra of similar species - vive la diffEence. *Chemical Communications*, **2013**, 49, 10510-2	5.8	35
72	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. *Glycoconjugate Journal*, **2008**, 25, 401-14	3	35
71	Increasing the quantitative bandwidth of NMR measurements. *Chemical Communications*, **2016**, 52, 2916-9	5.8	34
70	Ultraclean pure shift NMR. *Chemical Communications*, **2017**, 53, 10188-10191	5.8	34
69	Ultrahigh-Resolution NMR Spectroscopy. *Angewandte Chemie*, **2014**, 126, 7110-7112	3.6	34
68	Heterogeneity in a water-extractable rye arabinoxylan with a low degree of disubstitution. *Carbohydrate Polymers*, **2000**, 41, 397-405	10.3	34
67	Diffusion NMR and trilinear analysis in the study of reaction kinetics. *Chemical Communications*, **2009**, 1252-4	5.8	33
66	Novel artemisinin and curcumin micellar formulations: drug solubility studies by NMR spectroscopy. *Journal of Pharmaceutical Sciences*, **2009**, 98, 3666-75	3.9	32

65	Convection in liquid-state NMR: expect the unexpected. *RSC Advances*, **2016**, 6, 95173-95176	3.7	32
64	High resolution 13C DOSY: the DEPTSE experiment. *Journal of Magnetic Resonance*, **2011**, 211, 25-9	3	30
63	Suppressing exchange effects in diffusion-ordered NMR spectroscopy. *Journal of Magnetic Resonance*, **2014**, 238, 16-9	3	29
62	Quantitative Interpretation of Diffusion-Ordered NMR Spectra: Can We Rationalize Small Molecule Diffusion Coefficients?. *Angewandte Chemie*, **2013**, 125, 3281-3284	3.6	29
61	Reaction kinetics studied using diffusion-ordered spectroscopy and multiway chemometrics. *Analytical Chemistry*, **2010**, 82, 2102-8	7.8	28
60	Correction of systematic errors in CORE processing of DOSY data. *Magnetic Resonance in Chemistry*, **2006**, 44, 655-60	2.1	28
59	Detection of potential TNA and RNA nucleoside precursors in a prebiotic mixture by pure shift diffusion-ordered NMR spectroscopy. *Chemistry - A European Journal*, **2013**, 19, 4586-95	4.8	27
58	Real-time pure shift ¹⁵N HSQC of proteins: a real improvement in resolution and sensitivity. *Journal of Biomolecular NMR*, **2015**, 62, 43-52	3	25
57	Diffusion studies of dihydroxybenzene isomers in water-alcohol systems. *Journal of Physical Chemistry B*, **2013**, 117, 2734-41	3.4	25
56	T1-diffusion-ordered spectroscopy: nuclear magnetic resonance mixture analysis using parallel factor analysis. *Analytical Chemistry*, **2009**, 81, 8119-25	7.8	25
55	19F DOSY NMR analysis for spin systems with nJFF couplings. *Magnetic Resonance in Chemistry*, **2014**, 52, 172-7	2.1	24
54	Simultaneously Enhancing Spectral Resolution and Sensitivity in Heteronuclear Correlation NMR Spectroscopy. *Angewandte Chemie*, **2013**, 125, 11830-11833	3.6	24
53	Decoupling Two-Dimensional NMR Spectroscopy in Both Dimensions: Pure Shift NOESY and COSY. *Angewandte Chemie*, **2012**, 124, 6566-6569	3.6	23
52	Minimising research bottlenecks by decluttering NMR spectra. *Chemistry - A European Journal*, **2015**, 21, 6623-30	4.8	22
51	A new tool for NMR analysis of complex systems: selective pure shift TOCSY. *RSC Advances*, **2016**, 6, 100063-100066	3.7	21
50	Improving accuracy in DOSY and diffusion measurements using triaxial field gradients. *Journal of Magnetic Resonance*, **2016**, 270, 24-30	3	20
49	Analysing DHPC/DMPC bicelles by diffusion NMR and multivariate decomposition. *Biochimica Et Biophysica Acta - Biomembranes*, **2015**, 1848, 2910-7	3.8	20
48	Very broadband diffusion-ordered NMR spectroscopy: (19)F DOSY. *Chemical Communications*, **2016**, 52, 6892-4	5.8	20

47	Anatomising proton NMR spectra with pure shift 2D J-spectroscopy: A cautionary tale. *Chemical Physics Letters*, **2017**, 683, 398-403	2.5	19
46	Filter diagonalization method for processing PFG NMR data. *Journal of Magnetic Resonance*, **2013**, 234, 125-34	3	19
45	Improved DECRA processing of DOSY data: correcting for non-uniform field gradients. *Magnetic Resonance in Chemistry*, **2007**, 45, 656-60	2.1	19
44	Matrix-assisted diffusion-ordered spectroscopy: application of surfactant solutions to the resolution of isomer spectra. *Magnetic Resonance in Chemistry*, **2012**, 50, 458-65	2.1	18
43	Relaxation-encoded NMR experiments for mixture analysis: REST and beer. *Chemical Communications*, **2017**, 53, 7461-7464	5.8	17
42	Cleaning up NMR spectra with reference deconvolution for improving multivariate analysis of complex mixture spectra. *Journal of Chemometrics*, **2014**, 28, 656-662	1.6	17
41	(1)H NMR spectroscopy for profiling complex carbohydrate mixtures in non-fractionated beer. *Food Chemistry*, **2014**, 150, 65-72	8.5	16
40	Precise measurement of long-range heteronuclear coupling constants by a novel broadband proton-proton-decoupled CPMG-HSQMBC method. *Chemistry - A European Journal*, **2015**, 21, 3472-9	4.8	15
39	Real-time broadband proton-homodecoupled CLIP/CLAP-HSQC for automated measurement of heteronuclear one-bond coupling constants. *RSC Advances*, **2016**, 6, 87848-87855	3.7	15
38	Dissect and Divide: Putting NMR Spectra of Mixtures under the Knife. *Journal of the American Chemical Society*, **2019**, 141, 5766-5771	16.4	13
37	Practical aspects of real-time pure shift HSQC experiments. *Magnetic Resonance in Chemistry*, **2018**, 56, 993-1005	2.1	13
36	Matrix-assisted diffusion-ordered spectroscopy: choosing a matrix. *Magnetic Resonance in Chemistry*, **2016**, 54, 815-820	2.1	13
35	Probing interactions between □glucan and bile salts at atomic detail by □H-□□C NMR assays. *Journal of Agricultural and Food Chemistry*, **2014**, 62, 11472-8	5.7	13
34	Resolving complex mixtures: trilinear diffusion data. *Journal of Biomolecular NMR*, **2014**, 58, 251-7	3	13
33	A donor-functionalized, silyl-substituted pentadienyllithium: structural insight from experiment and theory. *Chemical Communications*, **2011**, 47, 6162-4	5.8	13
32	Natural product mixture analysis by matrix-assisted DOSY using Brij surfactants in mixed solvents. *RSC Advances*, **2014**, 4, 42029-42034	3.7	12
31	A General Method for Extracting Individual Coupling Constants from Crowded 1H NMR Spectra. *Angewandte Chemie*, **2016**, 128, 1102-1105	3.6	12
30	Matrix-assisted diffusion-ordered NMR spectroscopy with an invisible matrix: a vanishing surfactant. *RSC Advances*, **2017**, 7, 449-452	3.7	11

29	Extraction of distance restraints from pure shift NOE experiments. *Journal of Magnetic Resonance*, **2016**, 271, 99-109	3	11
28	Nutrient and lignan content, dough properties and baking performance of rye samples used in Scandinavia. *Acta Agriculturae Scandinavica - Section B Soil and Plant Science*, **1997**, 47, 26-34	1.1	11
27	Semi-real-time acquisition for fast pure shift NMR at maximum resolution. *Journal of Magnetic Resonance*, **2018**, 293, 19-27	3	11
26	Improved ultra-broadband chirp excitation. *Journal of Magnetic Resonance*, **2019**, 302, 28-33	3	10
25	FESTA: An Efficient Nuclear Magnetic Resonance Approach for the Structural Analysis of Mixtures Containing Fluorinated Species. *Analytical Chemistry*, **2018**, 90, 5445-5450	7.8	10
24	F NMR matrix-assisted DOSY: a versatile tool for differentiating fluorinated species in mixtures. *Magnetic Resonance in Chemistry*, **2017**, 55, 323-328	2.1	10
23	C Satellite-Free H NMR Spectra. *Analytical Chemistry*, **2017**, 89, 11898-11901	7.8	9
22	Ultrahigh-Resolution Diffusion-Ordered Spectroscopy. *Angewandte Chemie*, **2016**, 128, 15808-15811	3.6	9
21	Unexploited Dimension: New Software for Mixture Analysis by 3D Diffusion-Ordered NMR Spectroscopy. *Analytical Chemistry*, **2018**, 90, 13695-13701	7.8	9
20	Arabinoxylan fractionation on DEAE-cellulose chromatography influenced by protease pre-treatment. *Carbohydrate Polymers*, **1999**, 39, 321-326	10.3	8
19	Single-Scan Selective Excitation of Individual NMR Signals in Overlapping Multiplets. *Angewandte Chemie - International Edition*, **2021**, 60, 666-669	16.4	7
18	Synthesis of Multivalent [Lys8]-Oxytocin Dendrimers that Inhibit Visceral Nociceptive Responses. *Australian Journal of Chemistry*, **2017**, 70, 162	1.2	6
17	Hyperfine structure and homogeneous broadening in Pr3+:KY(WO4)2. *Physical Review B*, **2004**, 70,	3.3	6
16	1 H and 19F NMR in drug stress testing: the case of voriconazole. *RSC Advances*, **2017**, 7, 34000-34004	3.7	5
15	Clearing the undergrowth: detection and quantification of low level impurities using F NMR. *Chemical Communications*, **2016**, 53, 123-125	5.8	5
14	Ultra-high dispersion NMR reveals new levels of detail. *RSC Advances*, **2015**, 5, 52902-52906	3.7	4
13	Improving the Sensitivity of FESTA Methods for the Analysis of Fluorinated Mixtures. *Analytical Chemistry*, **2020**, 92, 2224-2228	7.8	4
12	Sharpening Up Your Spectra: Broadband Homonuclear Decoupling in HSQC by Real-Time Pure Shift Acquisition. *Synlett*, **2019**, 30, 1015-1025	2.2	3

11	High resolution techniques: general discussion. *Faraday Discussions*, **2019**, 218, 247-267	3.6	3
10	Linear and non-linear spectroscopy of Ho3+-doped YVO4and LuVO4. *Journal of Physics Condensed Matter*, **2005**, 17, 6751-6762	1.8	3
9	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	9.4	3
8	Matrix-assisted diffusion-ordered NMR spectroscopy with an invisible, tuneable matrix. *RSC Advances*, **2017**, 7, 10757-10762	3.7	2
7	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	16.4	2
6	Single-Scan Selective Excitation of Individual NMR Signals in Overlapping Multiplets. *Angewandte Chemie*, **2021**, 133, 676-679	3.6	2
5	Single-scan ultra-selective 1D total correlation spectroscopy. *Chemical Communications*, **2021**, 57, 2368-2371	5.8	2
4	Signal-to-noise ratio in diffusion-ordered spectroscopy: how good is good enough?. *Magnetic Resonance*, **2021**, 2, 733-739	2.9	1
3	Frontispiece: PSYCHE Pure Shift NMR Spectroscopy. *Chemistry - A European Journal*, **2018**, 24,	4.8	1
2	SABRE-enhanced real-time pure shift NMR spectroscopy. *Magnetic Resonance in Chemistry*, **2021**, 59, 1244-1252	2.1	0
1	Suppression of C satellites in H DOSY spectra. *Journal of Magnetic Resonance*, **2018**, 295, 6-11	3	