Patrick Giraudeau

List of Publications by Year
in descending order

107	3,821	81900	149698
papers	citations	39 h-index	56 g-index

112	112	112	2839
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Ultrafast 2D NMR: An Emerging Tool in Analytical Spectroscopy. Annual Review of Analytical Chemistry, 2014, 7, 129-161.	5.4	141
2	Quantitative 2D liquidâ€state NMR. Magnetic Resonance in Chemistry, 2014, 52, 259-272.	1.9	109
3	Evaluation of Fast 2D NMR for Metabolomics. Analytical Chemistry, 2014, 86, 5946-5954.	6.5	105
4	Multiple Ultrafast, Broadband 2D NMR Spectra of Hyperpolarized Natural Products. Journal of the American Chemical Society, 2009, 131, 13902-13903.	13.7	101
5	Hyperpolarized NMR of plant and cancer cell extracts at natural abundance. Analyst, The, 2015, 140, 5860-5863.	3.5	87
6	An Autonomous Self-Optimizing Flow Reactor for the Synthesis of Natural Product Carpanone. Journal of Organic Chemistry, 2018, 83, 14286-14299.	3.2	86
7	Plant metabolism as studied by NMR spectroscopy. Progress in Nuclear Magnetic Resonance Spectroscopy, 2017, 102-103, 61-97.	7.5	85
8	Challenges and perspectives in quantitative NMR. Magnetic Resonance in Chemistry, 2017, 55, 61-69.	1.9	85
9	High-throughput authentication of edible oils with benchtop Ultrafast 2D NMR. Food Chemistry, 2018, 244, 153-158.	8.2	85
10	Flow reactors integrated with in-line monitoring using benchtop NMR spectroscopy. Reaction Chemistry and Engineering, 2018, 3, 399-413.	3.7	82
11	Fast Determination of Absolute Metabolite Concentrations by Spatially Encoded 2D NMR: Application to Breast Cancer Cell Extracts. Analytical Chemistry, 2012, 84, 10831-10837.	6.5	81
12	Optimizing water suppression for quantitative NMR-based metabolomics: a tutorial review. Metabolomics, 2015, 11, 1041-1055.	3.0	78
13	Application and methodology of dissolution dynamic nuclear polarization in physical, chemical and biological contexts. Journal of Magnetic Resonance, 2019, 305, 41-50.	2.1	76
14	Ultrafast 2D NMR on a benchtop spectrometer: Applications and perspectives. TrAC - Trends in Analytical Chemistry, 2016, 83, 65-75.	11.4	67
15	Dynamic Nuclear Polarization Opens New Perspectives for NMR Spectroscopy in Analytical Chemistry. Analytical Chemistry, 2018, 90, 3639-3650.	6.5	67
16	Combined Nuclear Magnetic Resonance Spectroscopy and Mass Spectrometry Approaches for Metabolomics. Analytical Chemistry, 2021, 93, 500-518.	6.5	67
17	Absolute quantification of metabolites in breast cancer cell extracts by quantitative 2D ¹H INADEQUATE NMR. NMR in Biomedicine, 2012, 25, 985-992.	2.8	66
18	Multidimensional NMR approaches towards highly resolved, sensitive and high-throughput quantitative metabolomics. Current Opinion in Biotechnology, 2017, 43, 49-55.	6.6	65

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19	A new detection scheme for ultrafast 2D J-resolved spectroscopy. Journal of Magnetic Resonance, 2007, 186, 352-357.	2.1	63
20	Ultrafast Quantitative 2D NMR: An Efficient Tool for the Measurement of Specific Isotopic Enrichments in Complex Biological Mixtures. Analytical Chemistry, 2011, 83, 3112-3119.	6.5	63
21	Strategy for choosing extraction procedures for NMR-based metabolomic analysis of mammalian cells. Analytical and Bioanalytical Chemistry, 2011, 401, 2133-2142.	3.7	62
22	â€œMulti-scan single shotâ€•quantitative 2D NMR: a valuable alternative to fast conventional quantitative 2D NMR. Analyst, The, 2011, 136, 3157.	3.5	60
23	NMR-based metabolomics and fluxomics: developments and future prospects. Analyst, The, 2020, 145, 2457-2472.	3.5	59
24	Reference and normalization methods: Essential tools for the intercomparison of NMR spectra. Journal of Pharmaceutical and Biomedical Analysis, 2014, 93, 3-16.	2.8	58
25	Highly Repeatable Dissolution Dynamic Nuclear Polarization for Heteronuclear NMR Metabolomics. Analytical Chemistry, 2016, 88, 6179-6183.	6.5	57
26	Resolution and sensitivity aspects of ultrafast J-resolved 2D NMR spectra. Journal of Magnetic Resonance, 2008, 190, 339-345.	2.1	56
27	In Situ Ultrafast 2D NMR Spectroelectrochemistry for Real-Time Monitoring of Redox Reactions. Analytical Chemistry, 2015, 87, 372-375.	6.5	55
28	Real-time reaction monitoring by ultrafast 2D NMR on a benchtop spectrometer. Analyst, The, 2015, 140, 7854-7858.	3.5	52
29	Absolute quantification of metabolites in tomato fruit extracts by fast 2D NMR. Metabolomics, 2015, 11, 1231-1242.	3.0	50
30	The new face of isotopic NMR at natural abundance. Magnetic Resonance in Chemistry, 2017, 55, 77-90.	1.9	50
31	Resolutionâ€enhanced 2D NMR of complex mixtures by nonâ€uniform sampling. Magnetic Resonance in Chemistry, 2015, 53, 913-920.	1.9	49
32	Fast and precise quantitative analysis of metabolic mixtures by 2D 1H INADEQUATE NMR. Journal of Pharmaceutical and Biomedical Analysis, 2011, 54, 252-257.	2.8	48
33	Evaluation of Ultrafast 2D NMR for Quantitative Analysis. Analytical Chemistry, 2009, 81, 479-484.	6.5	47
34	Hyperpolarized NMR Metabolomics at Natural ¹³C Abundance. Analytical Chemistry, 2020, 92, 14867-14871.	6.5	44
35	Nuclear Magnetic Resonance Spectroscopy in Clinical Metabolomics and Personalized Medicine: Current Challenges and Perspectives. Frontiers in Molecular Biosciences, 2021, 8, 698337.	3.5	44
36	Sources of sensitivity losses in ultrafast 2D NMR. Journal of Magnetic Resonance, 2008, 192, 151-158.	2.1	43

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37	Oxidative Neutralization of Mustardâ€Gas Simulants in an Onâ€Board Flow Device with Inâ€Line NMR Monitoring. Angewandte Chemie - International Edition, 2017, 56, 7568-7572.	13.8	42
38	A new gradient-controlled method for improving the spectral width of ultrafast 2D NMR experiments. Journal of Magnetic Resonance, 2010, 205, 171-176.	2.1	41
39	Gradientâ€based solvent suppression methods on a benchtop spectrometer. Magnetic Resonance in Chemistry, 2017, 55, 91-98.	1.9	41
40	Sensitivity and lineshape improvement in ultrafast 2D NMR by optimized apodization in the spatially encoded dimension. Magnetic Resonance in Chemistry, 2011, 49, 307-313.	1.9	40
41	In situ NMR spectroelectrochemistry for the structure elucidation of unstable intermediate metabolites. Analytical and Bioanalytical Chemistry, 2013, 405, 5817-5824.	3.7	39
42	Optimization of homonuclear 2D NMR for fast quantitative analysis: Application to tropineâ€“nortropine mixtures. Journal of Pharmaceutical and Biomedical Analysis, 2007, 43, 1243-1248.	2.8	38
43	Fast Quantitative ¹Hâ€“¹³C Two-Dimensional NMR with Very High Precision. Analytical Chemistry, 2013, 85, 4777-4783.	6.5	36
44	Sensitivity losses and line shape modifications due to molecular diffusion in continuous encoding ultrafast 2D NMR experiments. Journal of Magnetic Resonance, 2008, 195, 9-16.	2.1	35
45	Real-time separation of natural products by ultrafast 2D NMR coupled to on-line HPLC. Analyst, The, 2012, 137, 2357.	3.5	33
46	A multidimensional 1H NMR lipidomics workflow to address chemical food safety issues. Metabolomics, 2018, 14, 60.	3.0	32
47	UFJCOSY: A Fast 3D NMR Method for Measuring Isotopic Enrichments in Complex Samples. ChemPhysChem, 2012, 13, 3098-3101.	2.1	31
48	Ultrafast 2D NMR: Methods and Applications. Annual Reports on NMR Spectroscopy, 2018, 93, 75-144.	1.5	31
49	Fast quantitative 2D NMR for metabolomics and lipidomics: A tutorial. Magnetic Resonance in Chemistry, 2020, 58, 390-403.	1.9	31
50	Kinetics from Indirectly Detected Hyperpolarized NMR Spectroscopy by Using Spatially Selective Coherence Transfers. Chemistry - A European Journal, 2011, 17, 697-703.	3.3	30
51	Improvement of the inverse-gated-decoupling sequence for a faster quantitative analysis of various samples by 13C NMR spectroscopy. Journal of Magnetic Resonance, 2006, 180, 110-117.	2.1	29
52	Fast Spatially Encoded 3D NMR Strategies for ¹³C-Based Metabolic Flux Analysis. Analytical Chemistry, 2013, 85, 9751-9757.	6.5	29
53	Diffusion-ordered spectroscopy on a benchtop spectrometer for drug analysis. Journal of Pharmaceutical and Biomedical Analysis, 2018, 160, 268-275.	2.8	29
54	Realâ€time mechanistic monitoring of an acetal hydrolysis using ultrafast 2D NMR. Magnetic Resonance in Chemistry, 2012, 50, 496-501.	1.9	28

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55	Understanding the degradation of electrochemically-generated reactive drug metabolites by quantitative NMR. Talanta, 2013, 116, 554-558.	5.5	28
56	The FAQUIRE Approach: FAst, QUantitative, hIghly Resolved and sEnsitivity Enhanced ¹H, ¹³C Data. Analytical Chemistry, 2018, 90, 1845-1851.	6.5	28
57	How metabolomics can contribute to bio-processes: a proof of concept study for biomarkers discovery in the context of nitrogen-starved microalgae grown in photobioreactors. Metabolomics, 2013, 9, 1286-1300.	3.0	25
58	Ultrafast double-quantum NMR spectroscopy. Chemical Communications, 2015, 51, 354-357.	4.1	25
59	Fast hybrid multiâ€dimensional NMR methods based on ultrafast 2D NMR. Magnetic Resonance in Chemistry, 2015, 53, 986-994.	1.9	25
60	Robust 1D NMR lineshape fitting using real and imaginary data in the frequency domain. Journal of Magnetic Resonance, 2019, 298, 91-100.	2.1	24
61	Processing strategies to obtain clean interleaved ultrafast 2D NMR spectra. Journal of Magnetic Resonance, 2014, 238, 87-93.	2.1	23
62	1H NMR noise measurements in hyperpolarized liquid samples. Chemical Physics Letters, 2010, 489, 107-112.	2.6	21
63	High-field and benchtop NMR spectroscopy for the characterization of new psychoactive substances. Forensic Science International, 2021, 321, 110718.	2.2	21
64	Ultrafast 2D NMR for the analysis of complex mixtures. Progress in Nuclear Magnetic Resonance Spectroscopy, 2022, 130-131, 1-46.	7.5	21
65	Ultrafast 2D ¹Hâ€“¹H NMR spectroscopy of DNP-hyperpolarised substrates for the analysis of mixtures. Chemical Communications, 2021, 57, 8035-8038.	4.1	20
66	Broadband ¹³Câ€Homodecoupled Heteronuclear Singleâ€Quantum Correlation Nuclear Magnetic Resonance. ChemPhysChem, 2011, 12, 2409-2411.	2.1	19
67	Fast access to residual dipolar couplings by singleâ€scan 2D NMR in oriented media. Magnetic Resonance in Chemistry, 2012, 50, S53-7.	1.9	19
68	Understanding Jâ€Modulation during Spatial Encoding for Sensitivityâ€Optimized Ultrafast NMR Spectroscopy. ChemPhysChem, 2015, 16, 3093-3100.	2.1	18
69	Benchtop flow NMR spectroscopy as an online device for the in vivo monitoring of lipid accumulation in microalgae. Algal Research, 2019, 43, 101624.	4.6	18
70	Gradient-based pulse sequences for benchtop NMR spectroscopy. Journal of Magnetic Resonance, 2020, 319, 106810.	2.1	18
71	A toolbox of HSQC experiments for small molecules at high ¹³Câ€enrichment. Artifactâ€free, fully ¹³Câ€homodecoupled and J_{CC}â€encoding pulse sequences. Magnetic Resonance in Chemistry, 2013, 51, 808-814.	1.9	17
72	New practical tools for the implementation and use of ultrafast 2D NMR experiments. Magnetic Resonance in Chemistry, 2013, 51, 168-175.	1.9	17

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73	Precise and rapid isotopomic analysis by 1Hâ€“13C 2D NMR: Application to triacylglycerol matrices. Talanta, 2016, 156-157, 239-244.	5.5	17
74	Using benchtop NMR spectroscopy as an online non-invasive in vivo lipid sensor for microalgae cultivated in photobioreactors. Process Biochemistry, 2020, 93, 63-68.	3.7	17
75	Ultrafast hetero-nuclear 2D J-resolved spectroscopy. Journal of Magnetic Resonance, 2012, 214, 335-339.	2.1	16
76	Fast and Ultrafast Quantitative 2D NMR. Advances in Botanical Research, 2013, , 99-158.	1.1	16
77	Highly Resolved Pureâ€Shift Spectra on a Compact NMR Spectrometer. ChemPhysChem, 2019, 20, 736-744.	2.1	16
78	Real-time benchtop NMR spectroscopy for the online monitoring of sucrose hydrolysis. LWT - Food Science and Technology, 2020, 118, 108832.	5.2	16
79	Recent advances in benchtop NMR spectroscopy and its applications. Annual Reports on NMR Spectroscopy, 2021, 103, 191-258.	1.5	16
80	Non-linear effects in quantitative 2D NMR of polysaccharides: Pitfalls and how to avoid them. Journal of Pharmaceutical and Biomedical Analysis, 2015, 108, 78-85.	2.8	14
81	Benchtop NMR for the monitoring of bioprocesses. Magnetic Resonance in Chemistry, 2019, 57, 794-804.	1.9	14
82	Ultrafast double-quantum NMR spectroscopy with optimized sensitivity for the analysis of mixtures. Analyst, The, 2016, 141, 1686-1692.	3.5	13
83	Detection of quadrupolar nuclei by ultrafast 2D NMR: exploring the case of deuterated analytes aligned in chiral oriented solvents. Chemical Communications, 2016, 52, 2122-2125.	4.1	13
84	Quantification of natural products in herbal supplements: A combined NMR approach applied on goldenseal. Journal of Pharmaceutical and Biomedical Analysis, 2019, 165, 155-161.	2.8	13
85	Improvement of the inverse-gated-decoupling sequence for a faster quantitative analysis by 13C NMR. Comptes Rendus Chimie, 2006, 9, 525-529.	0.5	12
86	Consequences of blunting the mevalonate pathway in cancer identified by a pluri-omics approach. Cell Death and Disease, 2018, 9, 745.	6.3	12
87	Limitation of Diffusion Effects in Ultrafast 2D Nuclear Magnetic Resonance by Encapsulation of Analytes in Phospholipidic Vesicles. ChemPhysChem, 2012, 13, 4124-4127.	2.1	11
88	Oxidative Neutralization of Mustardâ€Gas Simulants in an Onâ€Board Flow Device with Inâ€Line NMR Monitoring. Angewandte Chemie, 2017, 129, 7676-7680.	2.0	11
89	Multi-scale benchtop 1H NMR spectroscopy for milk analysis. LWT - Food Science and Technology, 2021, 139, 110557.	5.2	11
90	Understanding the tautomerism in azacalixphyrins. Physical Chemistry Chemical Physics, 2016, 18, 9608-9615.	2.8	10

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91	Optimization and practical implementation of ultrafast 2D NMR experiments. Quimica Nova, 2013, 36, 577-581.	0.3	9
92	Ultrafast acquisition of 1H-1H dipolar correlation experiments in spinning elastomers. Journal of Magnetic Resonance, 2017, 277, 30-35.	2.1	8
93	Two data pre-processing workflows to facilitate the discovery of biomarkers by 2D NMR metabolomics. Metabolomics, 2019, 15, 63.	3.0	8
94	Combining rapid 2D NMR experiments with novel pre-processing workflows and MIC quality measures for metabolomics. Metabolomics, 2020, 16, 42.	3.0	6
95	Fast Quantitative 2D NMR for Untargeted and Targeted Metabolomics. Methods in Molecular Biology, 2019, 2037, 365-383.	0.9	6
96	Interleaved spatial/spectral encoding in ultrafast 2D NMR spectroscopy. Journal of Magnetic Resonance, 2019, 305, 112-121.	2.1	4
97	Merging Gradientâ€Based Methods to Improve Benchtop NMR Spectroscopy: A New Tool for Flow Reaction Optimization. ChemPhysChem, 2020, 21, 2311-2319.	2.1	4
98	Extending the Lipidome Coverage by Combining Different Mass Spectrometric Platforms: An Innovative Strategy to Answer Chemical Food Safety Issues. Foods, 2021, 10, 1218.	4.3	4
99	Optimized decoupling schemes in ultrafast HSQC experiments. Journal of Magnetic Resonance, 2017, 283, 89-95.	2.1	3
100	Characterizing the Spoilage of Egg Products using Targeted and Non-targeted Approaches. , 2018, , 157-258.		3
101	Development of a continuous flow synthesis of FGIN-1-27 enabled by in-line ¹⁹F NMR analyses and optimization algorithms. Reaction Chemistry and Engineering, 2021, 6, 1983-1992.	3.7	3
102	MRC special issue on fast multiâ€dimensional NMR methods. Magnetic Resonance in Chemistry, 2015, 53, 877-877.	1.9	2
103	Isotope Ratio Monitoring by NMR. Part 1: Recent Advances. , 2016, , 1-26.		2
104	MRC launches its new Associate Editorial Board. Magnetic Resonance in Chemistry, 2016, 54, 5-7.	1.9	1
105	Isotope Ratio Monitoring by NMR: Part 1 â€“ Recent Advances. , 2018, , 1353-1378.		1
106	Perspectives on the future of NMR, by the Associate Editors. Magnetic Resonance in Chemistry, 2017, 55, 6-6.	1.9	0
107	The Potential of Online Analysis Systems for the Chemotyping of the Egg Matrix. , 2018, , 259-283.		0