Simultaneous Quantification and Identification of Indiv Mixtures by Two-Dimensional Extrapolated Time-Zero (HSQC₀)

Journal of the American Chemical Society 133, 1662-1665 DOI: 10.1021/ja1095304

Citation Report

#	Article	IF	CITATIONS
1	Measurement of Absolute Concentrations of Individual Compounds in Metabolite Mixtures by Gradient-Selective Time-Zero ¹ H– ¹³ C HSQC with Two Concentration References and Fast Maximum Likelihood Reconstruction Analysis. Analytical Chemistry, 2011, 83, 9352-9360.	3.2	39
2	Deconvolution of Chemical Mixtures with High Complexity by NMR Consensus Trace Clustering. Analytical Chemistry, 2011, 83, 7412-7417.	3.2	55
3	Deconvolution of Two-Dimensional NMR Spectra by Fast Maximum Likelihood Reconstruction: Application to Quantitative Metabolomics. Analytical Chemistry, 2011, 83, 4871-4880.	3.2	80
4	Selective Quantification by 2D HSQC0Spectroscopy of Thiocoraline in an Extract from a Sponge-DerivedVerrucosisporasp Journal of Natural Products, 2011, 74, 2295-2298.	1.5	22
5	NMR quantitation: influence of RF inhomogeneity. Magnetic Resonance in Chemistry, 2011, 49, 655-658.	1.1	8
6	Application of NMR Metabolomics to Search for Human Disease Biomarkers. Combinatorial Chemistry and High Throughput Screening, 2012, 15, 595-610.	0.6	116
7	Fast and Accurate Quantitative Metabolic Profiling of Body Fluids by Nonlinear Sampling of ¹ H– ¹³ C Two-Dimensional Nuclear Magnetic Resonance Spectroscopy. Analytical Chemistry, 2012, 84, 10005-10011.	3.2	38
8	Quantitative ¹ H NMR. Development and Potential of an Analytical Method: An Update. Journal of Natural Products, 2012, 75, 834-851.	1.5	296
9	Analysis of bacterial biofilms using NMR-based metabolomics. Future Medicinal Chemistry, 2012, 4, 1273-1306.	1.1	89
10	Quantitative 1H NMR spectroscopy. TrAC - Trends in Analytical Chemistry, 2012, 35, 5-26.	5.8	530
11	Plant cell wall profiling by fast maximum likelihood reconstruction (FMLR) and region-of-interest (ROI) segmentation of solution-state 2D 1H–13C NMR spectra. Biotechnology for Biofuels, 2013, 6, 45.	6.2	18
12	Fast and Accurate Quantitation of Glucans in Complex Mixtures by Optimized Heteronuclear NMR Spectroscopy. Analytical Chemistry, 2013, 85, 8802-8808.	3.2	33
13	Current NMR Strategies for Biomarker Discovery. , 2013, , 87-117.		4
14	Quantification of Complex Mixtures by NMR. Annual Reports on NMR Spectroscopy, 2013, , 181-236.	0.7	22
15	Solution-State 2D NMR Spectroscopy of Plant Cell Walls Enabled by a Dimethylsulfoxide- <i>d</i> ₆ /1-Ethyl-3-methylimidazolium Acetate Solvent. Analytical Chemistry, 2013, 85, 3213-3221.	3.2	102
16	Catabolite Control Protein E (CcpE) Is a LysR-type Transcriptional Regulator of Tricarboxylic Acid Cycle Activity in Staphylococcus aureus. Journal of Biological Chemistry, 2013, 288, 36116-36128.	1.6	38
17	Measuring protein reduction potentials using 15N HSQC NMR spectroscopy. Chemical Communications, 2013, 49, 1847.	2.2	4
18	Mass Spectrometry and NMR Spectroscopy–Based Quantitative Metabolomics. , 2013, , 279-297.		9

#	Article	IF	CITATIONS
19	An Effective Strategy for Exploring Unknown Metabolic Pathways by Genome Mining. Journal of the American Chemical Society, 2013, 135, 5885-5894.	6.6	53
20	Quantitative Analysis of Metabolic Mixtures by Two-Dimensional ¹³ C Constant-Time TOCSY NMR Spectroscopy. Analytical Chemistry, 2013, 85, 6414-6420.	3.2	47
21	QUANTITATIVE HSQC ANALYSES OF LIGNIN: A PRACTICAL COMPARISON. Computational and Structural Biotechnology Journal, 2013, 6, e201303016.	1.9	59
22	Environmental metabolomics: an emerging approach to study organism responses to environmental stressors. Environmental Reviews, 2013, 21, 180-205.	2.1	305
23	Mechanism of E-cadherin dimerization probed by NMR relaxation dispersion. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 16462-16467.	3.3	70
24	Current Experimental, Bioinformatic and Statistical Methods used in NMR Based Metabolomics. Current Metabolomics, 2013, 1, 253-268.	0.5	16
25	MetaboQuant: a tool combining individual peak calibration and outlier detection for accurate metabolite quantification in 1D ¹ H and ¹ H- ¹³ C HSQC NMR spectra. BioTechniques, 2013, 54, 251-256.	0.8	19
26	Revisiting Protocols for the NMR Analysis of Bacterial Metabolomes. Journal of Integrated OMICS, 2013, 3, 120-137.	0.5	39
27	Current NMR strategies for biomarker discovery. , 2013, , 103-131.		1
28	Quantification of multiple compounds containing heterogeneous elements in the mixture by one-dimensional nuclear magnetic resonance spectroscopy of different nuclei using a single universal concentration reference. Magnetic Resonance in Chemistry, 2014, 52, 779-782.	1.1	2
29	Advances in NMR-Based Metabolomics. Comprehensive Analytical Chemistry, 2014, , 187-211.	0.7	8
30	In-situ annotation of carbohydrate diversity, abundance, and degradability in highly complex mixtures using NMR spectroscopy. Analytical and Bioanalytical Chemistry, 2014, 406, 7763-7772.	1.9	7
31	Quantitative 2D liquidâ€state NMR. Magnetic Resonance in Chemistry, 2014, 52, 259-272.	1.1	109
32	Influence of Iron and Aeration on Staphylococcus aureus Growth, Metabolism, and Transcription. Journal of Bacteriology, 2014, 196, 2178-2189.	1.0	55
33	Profiling of carbohydrate mixtures at unprecedented resolution using high-precision ¹ H- ¹³ C chemical shift measurements and a reference library. Analyst, The, 2014, 139, 401-406.	1.7	28
34	Multidimensional Approaches to NMR-Based Metabolomics. Analytical Chemistry, 2014, 86, 47-57.	3.2	112
35	Growth and Preparation of Staphylococcus epidermidis for NMR Metabolomic Analysis. Methods in Molecular Biology, 2014, 1106, 71-91.	0.4	8
37	Fractionation of â€~water-soluble lignocellulose' into C ₅ /C ₆ sugars and sulfur-free lignins. Green Chemistry, 2014, 16, 2454-2462.	4.6	78

_

#	Article	IF	CITATIONS
38	Deciphering â€~water-soluble lignocellulose' obtained by mechanocatalysis: new insights into the chemical processes leading to deep depolymerization. Green Chemistry, 2014, 16, 3528-3538.	4.6	49
40	Customized Metabolomics Database for the Analysis of NMR ¹ H– ¹ H TOCSY and ¹³ C– ¹ H HSQC-TOCSY Spectra of Complex Mixtures. Analytical Chemistry, 2014, 86, 5494-5501.	3.2	96
41	Nuclear Magnetic Resonance Spectroscopy for Structural Characterization of Bioactive Compounds. Comprehensive Analytical Chemistry, 2014, 65, 149-191.	0.7	3
42	Metabolomics Analysis Identifies <scp>d</scp> -Alanine- <scp>d</scp> -Alanine Ligase as the Primary Lethal Target of <scp>d</scp> -Cycloserine in Mycobacteria. Journal of Proteome Research, 2014, 13, 1065-1076.	1.8	61
43	Chemical exchange in biomacromolecules: Past, present, and future. Journal of Magnetic Resonance, 2014, 241, 3-17.	1.2	215
44	Catalytic Biorefining of Plant Biomass to Nonâ€Pyrolytic Lignin Bioâ€Oil and Carbohydrates through Hydrogen Transfer Reactions. Angewandte Chemie - International Edition, 2014, 53, 8634-8639.	7.2	383
45	Quantitative metabolic profiling of NMR spectral signatures of branched chain amino acids in blood serum. Amino Acids, 2015, 47, 2229-2236.	1.2	16
46	Two elephants in the room. Current Opinion in Clinical Nutrition and Metabolic Care, 2015, 18, 471-477.	1.3	60
47	Two dimensional NMR spectroscopic approaches for exploring plant metabolome: A review. Journal of Advanced Research, 2015, 6, 3-15.	4.4	98
48	¹ H– ¹³ C HSQC NMR Spectroscopy for Estimating Procyanidin/Prodelphinidin and <i>cis</i> / <i>trans</i> -Flavan-3-ol Ratios of Condensed Tannin Samples: Correlation with Thiolysis. Journal of Agricultural and Food Chemistry, 2015, 63, 1967-1973.	2.4	34
49	Supramolecular chemical shift reagents inducing conformational transitions: NMR analysis of carbohydrate homooligomer mixtures. Chemical Communications, 2015, 51, 3073-3076.	2.2	5
50	Cyanohydrin reactions enhance glycolytic oscillations in yeast. Biophysical Chemistry, 2015, 200-201, 18-26.	1.5	1
51	Can NMR solve some significant challenges in metabolomics?. Journal of Magnetic Resonance, 2015, 260, 144-160.	1.2	178
52	Unified and Isomer-Specific NMR Metabolomics Database for the Accurate Analysis of ¹³ C– ¹ H HSQC Spectra. ACS Chemical Biology, 2015, 10, 452-459.	1.6	96
53	NMR Spectroscopy for Metabolomics and Metabolic Profiling. Analytical Chemistry, 2015, 87, 133-146.	3.2	192
54	Direct Comparison of ¹⁹ F qNMR and ¹ H qNMR by Characterizing Atorvastatin Calcium Content. Journal of Analytical Methods in Chemistry, 2016, 2016, 1-5.	0.7	2
55	Wege zur Verwertung von Lignin: Fortschritte in der Biotechnik, der Bioraffination und der Katalyse. Angewandte Chemie, 2016, 128, 8296-8354.	1.6	159
56	Paving the Way for Lignin Valorisation: Recent Advances in Bioengineering, Biorefining and Catalysis. Angewandte Chemie - International Edition, 2016, 55, 8164-8215.	7.2	1,576

#	Article	IF	CITATIONS
57	Accurate and molecular-size-tolerant NMR quantitation of diverse components in solution. Scientific Reports, 2016, 6, 21742.	1.6	3
58	Sensitive, highly resolved, and quantitative 1H–13C NMR data in one go for tracking metabolites in vegetal extracts. Chemical Communications, 2016, 52, 6142-6145.	2.2	39
59	Fractional Precipitation of Wheat Straw Organosolv Lignin: Macroscopic Properties and Structural Insights. ACS Sustainable Chemistry and Engineering, 2016, 4, 5136-5151.	3.2	49
60	Ultrasound-Assisted Functionalization of Polyphenols. , 2016, , 995-1020.		0
61	Quantitative, equal carbon response HSQC experiment, QEC-HSQC. Journal of Magnetic Resonance, 2016, 271, 34-39.	1.2	14
62	Gel Permeation Chromatography in Determining Molecular Weights of Lignins: Critical Aspects Revisited for Improved Utility in the Development of Novel Materials. ACS Sustainable Chemistry and Engineering, 2016, 4, 5167-5180.	3.2	75
63	Assessment of Metabolic Changes in <i>Mycobacterium smegmatis</i> Wild-Type and <i>alr</i> Mutant Strains: Evidence of a New Pathway of <scp>d</scp> -Alanine Biosynthesis. Journal of Proteome Research, 2017, 16, 1270-1279.	1.8	12
64	Fast profiling of metabolite mixtures using chemometric analysis of a speeded-up 2D heteronuclear correlation NMR experiment. RSC Advances, 2017, 7, 29860-29870.	1.7	10
65	NMR Techniques in Metabolomic Studies: A Quick Overview on Examples of Utilization. Applied Magnetic Resonance, 2017, 48, 1-21.	0.6	51
66	SOFAST-HMQC—an efficient tool for metabolomics. Analytical and Bioanalytical Chemistry, 2017, 409, 6731-6738.	1.9	17
67	Applications of nuclear magnetic resonance in lipid analyses: An emerging powerful tool for lipidomics studies. Progress in Lipid Research, 2017, 68, 37-56.	5.3	125
68	NMR Quantification of Carbohydrates in Complex Mixtures. A Challenge on Honey. Analytical Chemistry, 2017, 89, 13405-13414.	3.2	55
69	Nonlinear Effects in NMR. Annual Reports on NMR Spectroscopy, 2017, 92, 199-226.	0.7	4
70	Metabolite Measurement: Pitfalls to Avoid and Practices to Follow. Annual Review of Biochemistry, 2017, 86, 277-304.	5.0	322
71	Quantitative NMR Studies of Multiple Compound Mixtures. Annual Reports on NMR Spectroscopy, 2017, 90, 85-143.	0.7	28
72	Multidimensional NMR approaches towards highly resolved, sensitive and high-throughput quantitative metabolomics. Current Opinion in Biotechnology, 2017, 43, 49-55.	3.3	65
73	Prediction of Clinical Endpoints in Breast Cancer Using NMR Metabolic Profiles. Methods in Molecular Biology, 2018, 1711, 167-189.	0.4	5
74	The FAQUIRE Approach: FAst, QUantitative, hIghly Resolved and sEnsitivity Enhanced ¹ H, ¹³ C Data. Analytical Chemistry, 2018, 90, 1845-1851.	3.2	28

#	Article	IF	CITATIONS
75	Hybrid MS/NMR methods on the prioritization of natural products: Applications in drug discovery. Journal of Pharmaceutical and Biomedical Analysis, 2018, 147, 234-249.	1.4	26
76	Automated multicomponent phospholipid analysis using 31P NMR spectroscopy: example of vegetable lecithin and krill oil. Analytical and Bioanalytical Chemistry, 2018, 410, 7891-7900.	1.9	12
77	Comparative analysis of1H NMR and1H–13C HSQC NMR metabolomics to understand the effects of medium composition in yeast growth. Analytical Chemistry, 2018, 90, 12422-12430.	3.2	16
78	Isolation and Determination of Fomentariol: Novel Potential Antidiabetic Drug from Fungal Material. Journal of Analytical Methods in Chemistry, 2018, 2018, 1-9.	0.7	6
79	An adapted isotope dilution 1H–13C heteronuclear single-quantum correlation (ID-HSQC) for rapid and accurate quantification of endogenous and exogenous plasma glucose. Analytical and Bioanalytical Chemistry, 2018, 410, 6705-6711.	1.9	2
80	Identification of a diagnostic structural motif reveals a new reaction intermediate and condensation pathway in kraft lignin formation. Chemical Science, 2018, 9, 6348-6360.	3.7	143
81	SCoT: Swept coherence transfer for quantitative heteronuclear 2D NMR. Journal of Magnetic Resonance, 2018, 294, 1-6.	1.2	9
82	Establishing lignin structure-upgradeability relationships using quantitative ¹ H– ¹³ C heteronuclear single quantum coherence nuclear magnetic resonance (HSQC-NMR) spectroscopy. Chemical Science, 2019, 10, 8135-8142.	3.7	50
83	Site-specific peak intensity ratio (SPIR) from 1D 2H/1H NMR spectra for rapid distinction between natural and synthetic nicotine and detection of possible adulteration. Analytical and Bioanalytical Chemistry, 2019, 411, 6427-6434.	1.9	5
84	Translational Metabolomics: Current Challenges and Future Opportunities. Metabolites, 2019, 9, 108.	1.3	136
85	Ultra-Clean Pure Shift 1H-NMR applied to metabolomics profiling. Scientific Reports, 2019, 9, 6900.	1.6	23
86	Combining loss of function of FOLYLPOLYGLUTAMATE SYNTHETASE1 and CAFFEOYL-COA 3-O-METHYLTRANSFERASE1 for lignin reduction and improved saccharification efficiency in Arabidopsis thaliana. Biotechnology for Biofuels, 2019, 12, 108.	6.2	18
87	Pyrolytic Behavior of Major Biomass Components in Waste Biomass. Polymers, 2019, 11, 324.	2.0	23
88	Statistically correlating NMR spectra and LC-MS data to facilitate the identification of individual metabolites in metabolomics mixtures. Analytical and Bioanalytical Chemistry, 2019, 411, 1301-1309.	1.9	17
89	Combining NMR and MS with Chemical Derivatization for Absolute Quantification with Reduced Matrix Effects. Analytical Chemistry, 2019, 91, 4055-4062.	3.2	16
90	A critical review on the analysis of lignin carbohydrate bonds. Green Chemistry, 2019, 21, 1573-1595.	4.6	204
91	Chemical Exchange. Methods in Enzymology, 2019, 615, 177-236.	0.4	54
92	Assessing the potential of quantitative 2D HSQC NMR in 13C enriched living organisms. Journal of Biomolecular NMR, 2019, 73, 31-42.	1.6	33

# 93	ARTICLE NMR Spectroscopy Methods in Metabolic Phenotyping. , 2019, , 53-96.	IF	Citations
94	Quantification of natural products in herbal supplements: A combined NMR approach applied on goldenseal. Journal of Pharmaceutical and Biomedical Analysis, 2019, 165, 155-161.	1.4	13
95	Fast quantitative 2D NMR for metabolomics and lipidomics: A tutorial. Magnetic Resonance in Chemistry, 2020, 58, 390-403.	1.1	31
96	Mass spectrometry and NMR spectroscopy based quantitative metabolomics. , 2020, , 289-311.		5
97	Quantitative Measurement of a Chiral Drug in a Complex Matrix: A <i>J</i> -Compensated Quantitative HSQC NMR Method. Analytical Chemistry, 2020, 92, 3636-3642.	3.2	14
98	Quantitative NMR-Based Biomedical Metabolomics: Current Status and Applications. Molecules, 2020, 25, 5128.	1.7	81
99	2D Assignment and quantitative analysis of cellulose and oxidized celluloses using solution-state NMR spectroscopy. Cellulose, 2020, 27, 7929-7953.	2.4	34
100	NPid: an Automatic Approach to Rapid Identification of Known Natural Products in the Crude Extract of Crabapple Based on 2D ¹ H– ¹³ C Heteronuclear Correlation Spectra of the Extract Mixture. Analytical Chemistry, 2020, 92, 10996-11006.	3.2	7
101	Quantifying the thermodynamics of protein unfolding using 2D NMR spectroscopy. Communications Chemistry, 2020, 3, 100.	2.0	15
102	Robust Metabolite Quantification from J-Compensated 2D 1H-13C-HSQC Experiments. Metabolites, 2020, 10, 449.	1.3	5
103	Guidelines for performing lignin-first biorefining. Energy and Environmental Science, 2021, 14, 262-292.	15.6	416
104	NMR-Based Metabolomics. , 2021, , 353-369.		1
105	Comparison of methodologies used to determine aromatic lignin unit ratios in lignocellulosic biomass. Biotechnology for Biofuels, 2021, 14, 58.	6.2	18
106	Metabolomics in Retinal Diseases: An Update. Biology, 2021, 10, 944.	1.3	9
107	Quantitative NMR as a Versatile Tool for the Reference Material Preparation. Magnetochemistry, 2021, 7, 15.	1.0	13
108	CHAPTER 17. Polysaccharides as Major Carbon Sources in Environmental Biodiversity. New Developments in NMR, 0, , 369-395.	0.1	2
110	Ultrasound Functionalization of Polyphenols. , 2015, , 1-26.		0
111	Ultrasound-Assisted Functionalization of Polyphenols. , 2016, , 1-26.		0

#	Article	IF	CITATIONS
112	Environmental Metabolomics: A Powerful Tool to Investigate Biochemical Responses to Drugs in Nontarget Organisms. , 2020, , 441-465.		0
114	Mechanistic analysis by NMR spectroscopy: A users guide. Progress in Nuclear Magnetic Resonance Spectroscopy, 2022, 129, 28-106.	3.9	43
115	A Sparse Model-Inspired Deep Thresholding Network for Exponential Signal Reconstruction—Application in Fast Biological Spectroscopy. IEEE Transactions on Neural Networks and Learning Systems, 2023, 34, 7578-7592.	7.2	12
116	Rapid quantitative ¹ H– ¹³ C two-dimensional NMR with high precision. RSC Advances, 2022, 12, 5349-5356.	1.7	1
117	Challenges in Metabolomics-Based Tests, Biomarkers Revealed by Metabolomic Analysis, and the Promise of the Application of Metabolomics in Precision Medicine. International Journal of Molecular Sciences, 2022, 23, 5213.	1.8	30
118	COLMARq: A Web Server for 2D NMR Peak Picking and Quantitative Comparative Analysis of Cohorts of Metabolomics Samples. Analytical Chemistry, 2022, 94, 8674-8682.	3.2	8
119	The time-zero HSQC method improves the linear free energy relationship of a polypeptide chain through the accurate measurement of residue-specific equilibrium constants. Journal of Biomolecular NMR, 2022, 76, 87-94.	1.6	5
120	Spatially encoded polarization transfer for improving the quantitative aspect of 1H–13C HSQC. Journal of Magnetic Resonance Open, 2022, 12-13, 100063.	0.5	2
121	NMR and Metabolomicsâ \in "A Roadmap for the Future. Metabolites, 2022, 12, 678.	1.3	47
122	On the Oxidative Valorization of Lignin to Highâ€Value Chemicals: A Critical Review of Opportunities and Challenges. ChemSusChem, 2022, 15, .	3.6	25
123	Retrospective study for the universal applicability of the residue-based linear free energy relationship in the two-state exchange of protein molecules. Scientific Reports, 2022, 12, .	1.6	2
124	Practical Aspects of NMR-Based Metabolomics. Handbook of Experimental Pharmacology, 2022, , .	0.9	0
125	Lignins and Lignans – Recent Developments and Trends Regarding their Pharmaceutical Properties. , 2022, , 196-248.		0
126	Exploring Image Processing Tools To Unravel Complex ¹ H– ¹³ C Heteronuclear Single-Quantum Correlation Nuclear Magnetic Resonance Spectra: A Demonstration for Pyrolysis Liquids. Energy & Fuels, 2023, 37, 4446-4459.	2.5	0
130	Lignin and Its Composites for Drug Delivery Applications. , 2023, , 130-160.		0
132	Intrinsically quantitative 2D HSQC NMR: A tool for deciphering complex mixtures. Annual Reports on NMR Spectroscopy, 2023, , .	0.7	1