Thomas O Metz

List of Publications by Year in descending order

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		31902	34900
129	11,074	53	98
papers	citations	h-index	g-index
143	143	143	18396
all docs	docs citations	times ranked	citing authors

#	Article	IF	CITATIONS
1	Sharing and community curation of mass spectrometry data with Global Natural Products Social Molecular Networking. Nature Biotechnology, 2016, 34, 828-837.	9.4	2,802
2	Human Gut Microbiota from Autism Spectrum Disorder Promote Behavioral Symptoms in Mice. Cell, 2019, 177, 1600-1618.e17.	13.5	701
3	Temporal Proteome and Lipidome Profiles Reveal Hepatitis C Virus-Associated Reprogramming of Hepatocellular Metabolism and Bioenergetics. PLoS Pathogens, 2010, 6, e1000719.	2.1	361
4	Dengue Virus Infection Perturbs Lipid Homeostasis in Infected Mosquito Cells. PLoS Pathogens, 2012, 8, e1002584.	2.1	290
5	Effect of Genetic Diagnosis on Patients with Previously Undiagnosed Disease. New England Journal of Medicine, 2018, 379, 2131-2139.	13.9	261
6	Mechanisms of Severe Acute Respiratory Syndrome Coronavirus-Induced Acute Lung Injury. MBio, 2013, 4, .	1.8	251
7	Pathogenic Influenza Viruses and Coronaviruses Utilize Similar and Contrasting Approaches To Control Interferon-Stimulated Gene Responses. MBio, 2014, 5, e01174-14.	1.8	246
8	Review, Evaluation, and Discussion of the Challenges of Missing Value Imputation for Mass Spectrometry-Based Label-Free Global Proteomics. Journal of Proteome Research, 2015, 14, 1993-2001.	1.8	217
9	Uncovering biologically significant lipid isomers with liquid chromatography, ion mobility spectrometry and mass spectrometry. Analyst, The, 2016, 141, 1649-1659.	1.7	196
10	MPLEx: a Robust and Universal Protocol for Single-Sample Integrative Proteomic, Metabolomic, and Lipidomic Analyses. MSystems, 2016, 1, .	1.7	166
11	A statistical framework for protein quantitation in bottom-up MS-based proteomics. Bioinformatics, 2009, 25, 2028-2034.	1.8	149
12	Enrichment and Analysis of Nonenzymatically Glycated Peptides:Â Boronate Affinity Chromatography Coupled with Electron-Transfer Dissociation Mass Spectrometry. Journal of Proteome Research, 2007, 6, 2323-2330.	1.8	147
13	Modelâ€driven multiâ€omic data analysis elucidates metabolic immunomodulators of macrophage activation. Molecular Systems Biology, 2012, 8, 558.	3.2	142
14	The Undiagnosed Diseases Network: Accelerating Discovery about Health and Disease. American Journal of Human Genetics, 2017, 100, 185-192.	2.6	142
15	MERS-CoV and H5N1 influenza virus antagonize antigen presentation by altering the epigenetic landscape. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, E1012-E1021.	3.3	142
16	Release of Severe Acute Respiratory Syndrome Coronavirus Nuclear Import Block Enhances Host Transcription in Human Lung Cells. Journal of Virology, 2013, 87, 3885-3902.	1.5	140
17	Influence of early life exposure, host genetics and diet on the mouse gut microbiome and metabolome. Nature Microbiology, 2017, 2, 16221.	5.9	138
18	GIM3E: condition-specific models of cellular metabolism developed from metabolomics and expression data. Bioinformatics, 2013, 29, 2900-2908.	1.8	122

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19	The impact of proinflammatory cytokines on the β-cell regulatory landscape provides insights into the genetics of type 1 diabetes. Nature Genetics, 2019, 51, 1588-1595.	9.4	117
20	Tutorial: best practices and considerations for mass-spectrometry-based protein biomarker discovery and validation. Nature Protocols, 2021, 16, 3737-3760.	5.5	110
21	LIQUID: an-open source software for identifying lipids in LC-MS/MS-based lipidomics data. Bioinformatics, 2017, 33, 1744-1746.	1.8	108
22	Diel metabolomics analysis of a hot spring chlorophototrophic microbial mat leads to new hypotheses of community member metabolisms. Frontiers in Microbiology, 2015, 6, 209.	1.5	104
23	Phototrophic biofilm assembly in microbial-mat-derived unicyanobacterial consortia: model systems for the study of autotroph-heterotroph interactions. Frontiers in Microbiology, 2014, 5, 109.	1.5	97
24	Decreased abundance of type III secretion system-inducing signals in <i>Arabidopsis mkp1</i> enhances resistance against <i>Pseudomonas syringae</i> . Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 6846-6851.	3.3	97
25	Separation and Classification of Lipids Using Differential Ion Mobility Spectrometry. Journal of the American Society for Mass Spectrometry, 2011, 22, 1146-55.	1.2	96
26	Combined Statistical Analyses of Peptide Intensities and Peptide Occurrences Improves Identification of Significant Peptides from MS-Based Proteomics Data. Journal of Proteome Research, 2010, 9, 5748-5756.	1.8	93
27	Serum proteomics reveals systemic dysregulation of innate immunity in type 1 diabetes. Journal of Experimental Medicine, 2013, 210, 191-203.	4.2	91
28	Improved quality control processing of peptide-centric LC-MS proteomics data. Bioinformatics, 2011, 27, 2866-2872.	1.8	88
29	Multi-platform 'Omics Analysis of Human Ebola Virus Disease Pathogenesis. Cell Host and Microbe, 2017, 22, 817-829.e8.	5.1	88
30	An integrated multi-omics approach identifies the landscape of interferon-α-mediated responses of human pancreatic beta cells. Nature Communications, 2020, 11, 2584.	5.8	87
31	A reversed-phase capillary ultra-performance liquid chromatography–mass spectrometry (UPLC-MS) method for comprehensive top-down/bottom-up lipid profiling. Analytical and Bioanalytical Chemistry, 2012, 402, 2923-2933.	1.9	86
32	A Multi-Omic View of Host-Pathogen-Commensal Interplay in Salmonella-Mediated Intestinal Infection. PLoS ONE, 2013, 8, e67155.	1.1	81
33	Proteomic Analysis of the Site Specificity of Glycation and Carboxymethylation of Ribonuclease. Journal of Proteome Research, 2003, 2, 506-513.	1.8	78
34	Future of liquid chromatography–mass spectrometry in metabolic profiling and metabolomic studies for biomarker discovery. Biomarkers in Medicine, 2007, 1, 159-185.	0.6	78
35	Comprehensive Proteomics Analysis of Stressed Human Islets Identifies GDF15 as a Target for Type 1 Diabetes Intervention. Cell Metabolism, 2020, 31, 363-374.e6.	7.2	78
36	Auto-deconvolution and molecular networking of gas chromatography–mass spectrometry data. Nature Biotechnology, 2021, 39, 169-173.	9.4	78

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37	SLIM Ultrahigh Resolution Ion Mobility Spectrometry Separations of Isotopologues and Isotopomers Reveal Mobility Shifts due to Mass Distribution Changes. Analytical Chemistry, 2019, 91, 11952-11962.	3.2	76
38	Integrated Omics Analysis of Pathogenic Host Responses during Pandemic H1N1 Influenza Virus Infection: The Crucial Role of Lipid Metabolism. Cell Host and Microbe, 2016, 19, 254-266.	5.1	75
39	Elucidation of roles for vitamin B ₁₂ in regulation of folate, ubiquinone, and methionine metabolism. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E1205-E1214.	3.3	75
40	A comparative analysis of computational approaches to relative protein quantification using peptide peak intensities in labelâ€free <scp>LC</scp> â€ <scp>MS</scp> proteomics experiments. Proteomics, 2013, 13, 493-503.	1.3	74
41	ISiCLE: A Quantum Chemistry Pipeline for Establishing in Silico Collision Cross Section Libraries. Analytical Chemistry, 2019, 91, 4346-4356.	3.2	74
42	lon mobility spectrometry and the omics: Distinguishing isomers, molecular classes and contaminant ions in complex samples. TrAC - Trends in Analytical Chemistry, 2019, 116, 292-299.	5.8	71
43	A Network Integration Approach to Predict Conserved Regulators Related to Pathogenicity of Influenza and SARS-CoV Respiratory Viruses. PLoS ONE, 2013, 8, e69374.	1.1	68
44	New mass spectrometry technologies contributing towards comprehensive and high throughput omics analyses of single cells. Analyst, The, 2019, 144, 794-807.	1.7	67
45	Lipidomics reveals dramatic lipid compositional changes in the maturing postnatal lung. Scientific Reports, 2017, 7, 40555.	1.6	67
46	The succinated proteome. Mass Spectrometry Reviews, 2014, 33, 98-109.	2.8	66
47	Integrating ion mobility spectrometry into mass spectrometry-based exposome measurements: what can it add and how far can it go?. Bioanalysis, 2017, 9, 81-98.	0.6	66
48	SPE-IMS-MS: An automated platform for sub-sixty second surveillance of endogenous metabolites and xenobiotics in biofluids. Clinical Mass Spectrometry, 2016, 2, 1-10.	1.9	63
49	A comprehensive collection of systems biology data characterizing the host response to viral infection. Scientific Data, 2014, 1, 140033.	2.4	62
50	Multi-omics analysis reveals regulators of the response to nitrogen limitation in Yarrowia lipolytica. BMC Genomics, 2016, 17, 138.	1.2	62
51	Biallelic Mutations in ATP5F1D, which Encodes a Subunit of ATP Synthase, Cause a Metabolic Disorder. American Journal of Human Genetics, 2018, 102, 494-504.	2.6	59
52	Characterization of the Human Pancreatic Islet Proteome by Two-Dimensional LC/MS/MS. Journal of Proteome Research, 2006, 5, 3345-3354.	1.8	58
53	<i>In silico</i> identification software (ISIS): a machine learning approach to tandem mass spectral identification of lipids. Bioinformatics, 2012, 28, 1705-1713.	1.8	58
54	Temporospatial shifts in the human gut microbiome and metabolome after gastric bypass surgery. Npj Biofilms and Microbiomes, 2020, 6, 12.	2.9	57

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55	Metaphenomic Responses of a Native Prairie Soil Microbiome to Moisture Perturbations. MSystems, 2019, 4, .	1.7	56
56	Genetic and metabolic links between the murine microbiome and memory. Microbiome, 2020, 8, 53.	4.9	56
57	Untargeted metabolomic profiling of <i>Sphagnum fallax</i> reveals novel antimicrobial metabolites. Plant Direct, 2019, 3, e00179.	0.8	55
58	Comprehensive Metabolomic, Lipidomic and Microscopic Profiling of Yarrowia lipolytica during Lipid Accumulation Identifies Targets for Increased Lipogenesis. PLoS ONE, 2015, 10, e0123188.	1.1	54
59	Silymarin Suppresses Cellular Inflammation By Inducing Reparative Stress Signaling. Journal of Natural Products, 2015, 78, 1990-2000.	1.5	53
60	A global lipid map defines a network essential for Zika virus replication. Nature Communications, 2020, 11, 3652.	5.8	50
61	Salmonella modulates metabolism during growth under conditions that induce expression of virulence genes. Molecular BioSystems, 2013, 9, 1522.	2.9	49
62	Systems Virology Identifies a Mitochondrial Fatty Acid Oxidation Enzyme, Dodecenoyl Coenzyme A Delta Isomerase, Required for Hepatitis C Virus Replication and Likely Pathogenesis. Journal of Virology, 2011, 85, 11646-11654.	1.5	48
63	Quantum Chemistry Calculations for Metabolomics. Chemical Reviews, 2021, 121, 5633-5670.	23.0	47
64	Effects of ingested nanocellulose on intestinal microbiota and homeostasis in Wistar Han rats. NanoImpact, 2020, 18, 100216.	2.4	44
65	MPLEx: a method for simultaneous pathogen inactivation and extraction of samples for multi-omics profiling. Analyst, The, 2017, 142, 442-448.	1.7	43
66	High-resolution separations and improved ion production and transmission in metabolomics. TrAC - Trends in Analytical Chemistry, 2008, 27, 205-214.	5.8	41
67	Sexual dimorphism in the fetal cardiac response to maternal nutrient restriction. Journal of Molecular and Cellular Cardiology, 2017, 108, 181-193.	0.9	41
68	Perturbations in the lipid profile of individuals with newly diagnosed type 1 diabetes mellitus: Lipidomics analysis of a Diabetes Antibody Standardization Program sample subset. Clinical Biochemistry, 2010, 43, 948-956.	0.8	38
69	Bayesian Proteoform Modeling Improves Protein Quantification of Global Proteomic Measurements. Molecular and Cellular Proteomics, 2014, 13, 3639-3646.	2.5	38
70	Leucine Biosynthesis Is Involved in Regulating High Lipid Accumulation in <i>Yarrowia lipolytica</i> . MBio, 2017, 8, .	1.8	38
71	An automated framework for NMR chemical shift calculations of small organic molecules. Journal of Cheminformatics, 2018, 10, 52.	2.8	37
72	A multi-omic systems approach to elucidating Yersinia virulence mechanisms. Molecular BioSystems, 2013, 9, 44-54.	2.9	29

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73	A statistical analysis of the effects of urease pre-treatment on the measurement of the urinary metabolome by gas chromatography–mass spectrometry. Metabolomics, 2014, 10, 897-908.	1.4	28
74	Targeted Protein Degradation by Salmonella under Phagosome-mimicking Culture Conditions Investigated Using Comparative Peptidomics. Molecular and Cellular Proteomics, 2007, 6, 717-727.	2.5	26
75	Quantitative Differences in the Urinary Proteome of Siblings Discordant for Type 1 Diabetes Include Lysosomal Enzymes. Journal of Proteome Research, 2015, 14, 3123-3135.	1.8	26
76	Light-Stress Influences the Composition of the Murine Gut Microbiome, Memory Function, and Plasma Metabolome. Frontiers in Molecular Biosciences, 2019, 6, 108.	1.6	26
77	Quality Control Analysis in Real-time (QC-ART): A Tool for Real-time Quality Control Assessment of Mass Spectrometry-based Proteomics Data. Molecular and Cellular Proteomics, 2018, 17, 1824-1836.	2.5	25
78	Time-resolved proteome profiling of normal lung development. American Journal of Physiology - Lung Cellular and Molecular Physiology, 2018, 315, L11-L24.	1.3	25
79	Prediction of the development of islet autoantibodies through integration of environmental, genetic, and metabolic markers. Journal of Diabetes, 2021, 13, 143-153.	0.8	25
80	Salinivirga fredricksonii gen. nov., sp. nov., a heterotrophic halophile isolated from a photosynthetic mat, a member of a novel lineage (Salinarimonadaceae fam. nov.) within the order Rhizobiales, and reclassification of the genus Salinarimonas Liu et al. 2010 into Salinarimonadaceae. International Journal of Systematic and Evolutionary Microbiology, 2018, 68, 1591-1598.	0.8	25
81	MultiAlign: a multiple LC-MS analysis tool for targeted omics analysis. BMC Bioinformatics, 2013, 14, 49.	1.2	24
82	Deoxyhypusine synthase promotes a pro-inflammatory macrophage phenotype. Cell Metabolism, 2021, 33, 1883-1893.e7.	7.2	24
83	A global lipid map reveals host dependency factors conserved across SARS-CoV-2 variants. Nature Communications, 2022, 13, .	5.8	22
84	The fungus gardens of leafâ€cutter ants undergo a distinct physiological transition during biomass degradation. Environmental Microbiology Reports, 2014, 6, 389-395.	1.0	21
85	Specific mutations in H5N1 mainly impact the magnitude and velocity of the host response in mice. BMC Systems Biology, 2013, 7, 69.	3.0	20
86	Characterizing the lipid and metabolite changes associated with placental function and pregnancy complications using ion mobility spectrometry-mass spectrometry and mass spectrometry imaging. Placenta, 2017, 60, S67-S72.	0.7	20
87	The MPLEx Protocol for Multi-omic Analyses of Soil Samples. Journal of Visualized Experiments, 2018, ,	0.2	19
88	Technologies and Approaches to Elucidate and Model the Virulence Program of Salmonella. Frontiers in Microbiology, 2011, 2, 121.	1.5	18
89	In situ transformation of ethoxylate and glycol surfactants by shale-colonizing microorganisms during hydraulic fracturing. ISME Journal, 2019, 13, 2690-2700.	4.4	18
90	Xanthohumol Microbiome and Signature in Healthy Adults (the XMaS Trial): Safety and Tolerability Results of a Phase I Tripleâ€Masked, Placeboâ€Controlled Clinical Trial. Molecular Nutrition and Food Research, 2021, 65, e2001170.	1.5	18

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91	Soil microbial EPS resiliency is influenced by carbon source accessibility. Soil Biology and Biochemistry, 2020, 151, 108037.	4.2	17
92	Unfolded Protein Response Inhibition Reduces Middle East Respiratory Syndrome Coronavirus-Induced Acute Lung Injury. MBio, 2021, 12, e0157221.	1.8	16
93	Measurement of Fructose–Asparagine Concentrations in Human and Animal Foods. Journal of Agricultural and Food Chemistry, 2018, 66, 212-217.	2.4	15
94	Ceramide synthase 2 deletion decreases the infectivity of HIV-1. Journal of Biological Chemistry, 2021, 296, 100340.	1.6	15
95	Metabolite, Protein, and Lipid Extraction (MPLEx): A Method that Simultaneously Inactivates Middle East Respiratory Syndrome Coronavirus and Allows Analysis of Multiple Host Cell Components Following Infection. Methods in Molecular Biology, 2020, 2099, 173-194.	0.4	15
96	Formation of dehydroalanine from mimosine and cysteine: artifacts in gas chromatography/mass spectrometry based metabolomics. Rapid Communications in Mass Spectrometry, 2011, 25, 2561-2564.	0.7	14
97	Effects of delayed NSAID administration after experimental eccentric contraction injury – A cellular and proteomics study. PLoS ONE, 2017, 12, e0172486.	1.1	14
98	DEIMoS: An Open-Source Tool for Processing High-Dimensional Mass Spectrometry Data. Analytical Chemistry, 2022, 94, 6130-6138.	3.2	14
99	Sequential projection pursuit principal component analysis – dealing with missing data associated with new -omics technologies. BioTechniques, 2013, 54, 165-168.	0.8	13
100	Temporal dynamics of CO2 and CH4 loss potentials in response to rapid hydrological shifts in tidal freshwater wetland soils. Ecological Engineering, 2018, 114, 104-114.	1.6	13
101	Evaluation of <i>In Silico</i> Multifeature Libraries for Providing Evidence for the Presence of Small Molecules in Synthetic Blinded Samples. Journal of Chemical Information and Modeling, 2019, 59, 4052-4060.	2.5	13
102	AutoCCS: automated collision cross-section calculation software for ion mobility spectrometry–mass spectrometry. Bioinformatics, 2021, 37, 4193-4201.	1.8	13
103	Salmonella-Mediated Inflammation Eliminates Competitors for Fructose-Asparagine in the Gut. Infection and Immunity, 2018, 86, .	1.0	12
104	Extending Classification Algorithms to Case-Control Studies. Biomedical Engineering and Computational Biology, 2019, 10, 117959721985895.	0.8	12
105	A resource of lipidomics and metabolomics data from individuals with undiagnosed diseases. Scientific Data, 2021, 8, 114.	2.4	12
106	GDF15: a potential therapeutic target for type 1 diabetes. Expert Opinion on Therapeutic Targets, 2022, 26, 57-67.	1.5	12
107	Rapidly Assessing the Quality of Targeted Proteomics Experiments through Monitoring Stable-Isotope Labeled Standards. Journal of Proteome Research, 2019, 18, 694-699.	1.8	11
108	yippee like 3Â(ypel3) is a novel gene required for myelinating and perineurial glia development. PLoS Genetics, 2020, 16, e1008841.	1.5	11

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109	PIXiE: an algorithm for automated ion mobility arrival time extraction and collision cross section calculation using global data association. Bioinformatics, 2017, 33, 2715-2722.	1.8	10
110	Xanthohumol microbiome and signature in healthy adults (the XMaS trial): a phase I triple-masked, placebo-controlled clinical trial. Trials, 2020, 21, 835.	0.7	10
111	Integration of Infant Metabolite, Genetic, and Islet Autoimmunity Signatures to Predict Type 1 Diabetes by Age 6 Years. Journal of Clinical Endocrinology and Metabolism, 2022, 107, 2329-2338.	1.8	10
112	Diacyltransferase Activity and Chain Length Specificity ofMycobacterium tuberculosisPapA5 in the Synthesis of Alkyl β-Diol Lipids. Biochemistry, 2015, 54, 5457-5468.	1.2	9
113	Integrated network modeling approach defines key metabolic responses of soil microbiomes to perturbations. Scientific Reports, 2020, 10, 10882.	1.6	9
114	The role of proteomics in assessing beta-cell dysfunction and death in type 1 diabetes. Expert Review of Proteomics, 2019, 16, 569-582.	1.3	8
115	Exploring the Impacts of Conformer Selection Methods on Ion Mobility Collision Cross Section Predictions. Analytical Chemistry, 2021, 93, 3830-3838.	3.2	8
116	Proteomic analysis reveals down-regulation of surfactant protein B in murine type II pneumocytes infected with influenza A virus. Virology, 2015, 483, 96-107.	1.1	7
117	Statistically Driven Metabolite and Lipid Profiling of Patients from the Undiagnosed Diseases Network. Analytical Chemistry, 2020, 92, 1796-1803.	3.2	7
118	Mass Spectrometry Adduct Calculator. Journal of Chemical Information and Modeling, 2021, 61, 5721-5725.	2.5	7
119	Who Is Metabolizing What? Discovering Novel Biomolecules in the Microbiome and the Organisms Who Make Them. Frontiers in Cellular and Infection Microbiology, 2020, 10, 388.	1.8	6
120	MetFish: a Metabolomics Pipeline for Studying Microbial Communities in Chemically Extreme Environments. MSystems, 2021, 6, e0105820.	1.7	5
121	Simulated Night- Shift Schedule Disrupts the Plasma Lipidome and Reveals Early Markers of Cardiovascular Disease Risk. Nature and Science of Sleep, 0, Volume 14, 981-994.	1.4	5
122	Bridging the Cap between Analytical and Microbial Sciences in Microbiome Research. MSystems, 2021, 6, e0058521.	1.7	4
123	ROFI - The Use of Repeated Optimization for Feature Interpretation. , 2016, , .		3
124	P-Mart: Interactive Analysis of Ion Abundance Global Proteomics Data. Journal of Proteome Research, 2019, 18, 1426-1432.	1.8	3
125	Chespa: Streamlining Expansive Chemical Space Evaluation of Molecular Sets. Journal of Chemical Information and Modeling, 2020, 60, 6251-6257.	2.5	2
126	Supernatants of intestinal luminal contents from mice fed highâ€fat diet impair intestinal motility by injuring enteric neurons and smooth muscle cells. Neurogastroenterology and Motility, 2021, 33, e13990.	1.6	2

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127	Bayesian Posterior Integration for Classification of Mass Spectrometry Data. , 2017, , 203-211.		1
128	Probing islet stress in type 1 diabetes. Aging, 2020, 12, 18795-18796.	1.4	0
129	Probing islet stress in type 1 diabetes. Aging, 2020, 12, 18795-18796.	1.4	0