

Mark R Emmett

List of Publications by Year in descending order

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101
papers

6,375
citations

61857

43
h-index

66788

78
g-index

104
all docs

104
docs citations

104
times ranked

5026
citing authors

#	ARTICLE	IF	CITATIONS
1	Micro-electrospray mass spectrometry: Ultra-high-sensitivity analysis of peptides and proteins. <i>Journal of the American Society for Mass Spectrometry</i> , 1994, 5, 605-613.	1.2	481
2	External accumulation of ions for enhanced electrospray ionization fourier transform ion cyclotron resonance mass spectrometry. <i>Journal of the American Society for Mass Spectrometry</i> , 1997, 8, 970-976.	1.2	442
3	Electron Capture Dissociation and Infrared Multiphoton Dissociation MS/MS of an N-Glycosylated Tryptic Peptide To Yield Complementary Sequence Information. <i>Analytical Chemistry</i> , 2001, 73, 4530-4536.	3.2	362
4	KIT kinase mutants show unique mechanisms of drug resistance to imatinib and sunitinib in gastrointestinal stromal tumor patients. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2009, 106, 1542-1547.	3.3	345
5	Reading Chemical Fine Print:â€‰‰ Resolution and Identification of 3000 Nitrogen-Containing Aromatic Compounds from a Single Electrospray Ionization Fourier Transform Ion Cyclotron Resonance Mass Spectrum of Heavy Petroleum Crude Oil. <i>Energy & Fuels</i> , 2001, 15, 492-498.	2.5	310
6	Identification of Novel Interactions in HIV-1 Capsid Protein Assembly by High-resolution Mass Spectrometry. <i>Journal of Molecular Biology</i> , 2003, 325, 759-772.	2.0	198
7	Application of micro-electrospray liquid chromatography techniques to FT-ICR MS to enable high-sensitivity biological analysis. <i>Journal of the American Society for Mass Spectrometry</i> , 1998, 9, 333-340.	1.2	187
8	Key interactions in HIV-1 maturation identified by hydrogen-deuterium exchange. <i>Nature Structural and Molecular Biology</i> , 2004, 11, 676-677.	3.6	164
9	Inhibition of Nitric Oxide Synthase Blocks N-Methyl-D-Aspartate-, Quisqualate-, Kainate-, Harmaline-, and Pentylentetrazole-Dependent Increases in Cerebellar Cyclic GMP In Vivo. <i>Journal of Neurochemistry</i> , 1990, 55, 346-348.	2.1	153
10	Micro-Electrospray: Zeptomole/attomole per microliter sensitivity for peptides. <i>Journal of the American Society for Mass Spectrometry</i> , 1994, 5, 867-869.	1.2	130
11	Gas-phase bovine ubiquitin cation conformations resolved by gas-phase hydrogen/deuterium exchange rate and extent. <i>International Journal of Mass Spectrometry</i> , 1999, 185-187, 565-575.	0.7	126
12	Determination of Aberrant O-Glycosylation in the IgA1 Hinge Region by Electron Capture Dissociation Fourier Transform-Ion Cyclotron Resonance Mass Spectrometry. <i>Journal of Biological Chemistry</i> , 2005, 280, 19136-19145.	1.6	125
13	Determination of post-translational modifications of proteins by high-sensitivity, high-resolution Fourier transform ion cyclotron resonance mass spectrometry. <i>Journal of Chromatography A</i> , 2003, 1013, 203-213.	1.8	120
14	Identification of Intact Proteins in Mixtures by Alternated Capillary Liquid Chromatography Electrospray Ionization and LC ESI Infrared Multiphoton Dissociation Fourier Transform Ion Cyclotron Resonance Mass Spectrometry. <i>Analytical Chemistry</i> , 1999, 71, 4397-4402.	3.2	115
15	Epitope Mapping of a 95 kDa Antigen in Complex with Antibody by Solution-Phase Amide Backbone Hydrogen/Deuterium Exchange Monitored by Fourier Transform Ion Cyclotron Resonance Mass Spectrometry. <i>Analytical Chemistry</i> , 2011, 83, 7129-7136.	3.2	112
16	In Vivo Modulation of the N-Methyl-D-Aspartate Receptor Complex by D-Serine: Potentiation of Ongoing Neuronal Activity as Evidenced by Increased Cerebellar Cyclic GMP. <i>Journal of Neurochemistry</i> , 1989, 53, 979-981.	2.1	98
17	Molecular characterization of petroporphyrins in crude oil by electrospray ionization Fourier transform ion cyclotron resonance mass spectrometry. <i>Canadian Journal of Chemistry</i> , 2001, 79, 546-551.	0.6	95
18	ELECTROSPRAY IONIZATION FOURIER TRANSFORM ION CYCLOTRON RESONANCE MASS SPECTROMETRY. <i>Annual Review of Physical Chemistry</i> , 1999, 50, 517-536.	4.8	93

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19	Involvement of granule, basket and stellate neurons but not purkinje or Golgi cells in cerebellar cGMP increases in vivo. <i>Life Sciences</i> , 1994, 54, 615-620.	2.0	91
20	Specific molecular mass detection of endogenously released neuropeptides using in vivo microdialysis/mass spectrometry. <i>Journal of Neuroscience Methods</i> , 1995, 62, 141-147.	1.3	90
21	Analysis of O-glycan heterogeneity in IgA1 myeloma proteins by Fourier transform ion cyclotron resonance mass spectrometry: implications for IgA nephropathy. <i>Analytical and Bioanalytical Chemistry</i> , 2007, 389, 1397-1407.	1.9	85
22	Enhanced Digestion Efficiency, Peptide Ionization Efficiency, and Sequence Resolution for Protein Hydrogen/Deuterium Exchange Monitored by Fourier Transform Ion Cyclotron Resonance Mass Spectrometry. <i>Analytical Chemistry</i> , 2008, 80, 9034-9041.	3.2	84
23	Protein kinase A phosphorylation characterized by tandem Fourier transform ion cyclotron resonance mass spectrometry. <i>Proteomics</i> , 2004, 4, 970-981.	1.3	79
24	Theoretical and Experimental Prospects for Protein Identification Based Solely on Accurate Mass Measurement. <i>Journal of Proteome Research</i> , 2004, 3, 61-67.	1.8	76
25	High-Sensitivity Electron Capture Dissociation Tandem FTICR Mass Spectrometry of Microelectrosprayed Peptides. <i>Analytical Chemistry</i> , 2001, 73, 3605-3610.	3.2	73
26	Conformational and Dynamic Changes of Yersinia Protein Tyrosine Phosphatase Induced by Ligand Binding and Active Site Mutation and Revealed by H/D Exchange and Electrospray Ionization Fourier Transform Ion Cyclotron Resonance Mass Spectrometry. <i>Biochemistry</i> , 1998, 37, 15289-15299.	1.2	72
27	New Reagents for Enhanced Liquid Chromatographic Separation and Charging of Intact Protein Ions for Electrospray Ionization Mass Spectrometry. <i>Analytical Chemistry</i> , 2010, 82, 7515-7519.	3.2	68
28	Fast reversed-phase liquid chromatography to reduce back exchange and increase throughput in H/D exchange monitored by FT-ICR mass spectrometry. <i>Journal of the American Society for Mass Spectrometry</i> , 2009, 20, 520-524.	1.2	67
29	High Sensitivity Fourier Transform Ion Cyclotron Resonance Mass Spectrometry for Biological Analysis with Nano-LC and Microelectrospray Ionization. <i>Analytical Chemistry</i> , 2001, 73, 1721-1725.	3.2	66
30	Identification and analysis of phosphopeptides. <i>Journal of Chromatography B: Analytical Technologies in the Biomedical and Life Sciences</i> , 2004, 803, 111-120.	1.2	65
31	Method for Lipidomic Analysis: p53 Expression Modulation of Sulfatide, Ganglioside, and Phospholipid Composition of U87 MG Glioblastoma Cells. <i>Analytical Chemistry</i> , 2007, 79, 8423-8430.	3.2	65
32	Ion Activation in Electron Capture Dissociation To Distinguish between N-Terminal and C-Terminal Product Ions. <i>Analytical Chemistry</i> , 2007, 79, 7596-7602.	3.2	64
33	Overexpression of ST6GalNAcV, a ganglioside-specific α 2,6-sialyltransferase, inhibits glioma growth in vivo. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010, 107, 12646-12651.	3.3	60
34	High-field fourier transform ion cyclotron resonance mass spectrometry for simultaneous trapping and gas-phase hydrogen/deuterium exchange of peptide ions. <i>Journal of the American Society for Mass Spectrometry</i> , 1998, 9, 1012-1019.	1.2	57
35	Functional visualization of viral molecular motor by hydrogen-deuterium exchange reveals transient states. <i>Nature Structural and Molecular Biology</i> , 2005, 12, 460-466.	3.6	57
36	Automated data reduction for hydrogen/deuterium exchange experiments, enabled by high-resolution fourier transform ion cyclotron resonance mass spectrometry. <i>Journal of the American Society for Mass Spectrometry</i> , 2010, 21, 550-558.	1.2	57

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37	Quantitative Proteomics Reveals Protein-Protein Interactions with Fibroblast Growth Factor 12 as a Component of the Voltage-Gated Sodium Channel 1.2 (Nav1.2) Macromolecular Complex in Mammalian Brain*. <i>Molecular and Cellular Proteomics</i> , 2015, 14, 1288-1300.	2.5	52
38	Role of miR-2392 in driving SARS-CoV-2 infection. <i>Cell Reports</i> , 2021, 37, 109839.	2.9	52
39	Simultaneous Reduction and Digestion of Proteins with Disulfide Bonds for Hydrogen/Deuterium Exchange Monitored by Mass Spectrometry. <i>Analytical Chemistry</i> , 2010, 82, 1450-1454.	3.2	51
40	Proteomic Investigation of Glioblastoma Cell Lines Treated with Wild-Type p53 and Cytotoxic Chemotherapy Demonstrates an Association between Galectin-1 and p53 Expression. <i>Journal of Proteome Research</i> , 2007, 6, 869-875.	1.8	48
41	Mapping of protein:protein contact surfaces by hydrogen/deuterium exchange, followed by on-line high-performance liquid chromatography-electrospray ionization fourier-transform ion-cyclotron-resonance mass analysis. <i>Journal of Chromatography A</i> , 2002, 982, 85-95.	1.8	46
42	De Novo Sequencing and Disulfide Mapping of a Bromotryptophan-Containing Conotoxin by Fourier Transform Ion Cyclotron Resonance Mass Spectrometry. <i>Analytical Chemistry</i> , 2006, 78, 8082-8088.	3.2	46
43	Detection, Number, and Sequence Location of Sulfur-Containing Amino Acids and Disulfide Bridges in Peptides by Ultrahigh-Resolution MALDI FTICR Mass Spectrometry. <i>Analytical Chemistry</i> , 1997, 69, 1163-1168.	3.2	45
44	Liquid Chromatography-Fourier Transform Ion Cyclotron Resonance Mass Spectrometric Characterization of Protein Kinase C Phosphorylation. <i>Journal of Proteome Research</i> , 2003, 2, 373-382.	1.8	44
45	Periodic sequence distribution of product ion abundances in electron capture dissociation of amphipathic peptides and proteins. <i>Journal of the American Society for Mass Spectrometry</i> , 2009, 20, 1182-1192.	1.2	44
46	ESI-MS/MS and MALDI-IMS Localization Reveal Alterations in Phosphatidic Acid, Diacylglycerol, and DHA in Glioma Stem Cell Xenografts. <i>Journal of Proteome Research</i> , 2015, 14, 2511-2519.	1.8	43
47	Computing H/D-Exchange rates of single residues from data of proteolytic fragments. <i>BMC Bioinformatics</i> , 2010, 11, 424.	1.2	41
48	Mapping of the Allosteric Network in the Regulation of β -Isopropylmalate Synthase from <i>Mycobacterium tuberculosis</i> by the Feedback Inhibitor <i>Leucine</i> : Solution-Phase H/D Exchange Monitored by FT-ICR Mass Spectrometry. <i>Biochemistry</i> , 2009, 48, 7457-7464.	1.2	40
49	Supercritical Fluid Chromatography Reduction of Hydrogen/Deuterium Back Exchange in Solution-Phase Hydrogen/Deuterium Exchange with Mass Spectrometric Analysis. <i>Analytical Chemistry</i> , 2006, 78, 7058-7060.	3.2	38
50	Structural characterization of an unusually stable cyclic peptide, kalata B2 from <i>Oldenlandia affinis</i> . <i>Biochimica Et Biophysica Acta - Proteins and Proteomics</i> , 2006, 1764, 1568-1576.	1.1	36
51	Structural Analysis of 2D-Gel-Separated Glycoproteins from Human Cerebrospinal Fluid by Tandem High-Resolution Mass Spectrometry. <i>Journal of Proteome Research</i> , 2003, 2, 581-588.	1.8	34
52	Glycomic and Transcriptomic Response of GSC11 Glioblastoma Stem Cells to STAT3 Phosphorylation Inhibition and Serum-Induced Differentiation. <i>Journal of Proteome Research</i> , 2010, 9, 2098-2108.	1.8	34
53	Effects of sigma ligands on mouse cerebellar cyclic guanosine monophosphate (cGMP) levels in vivo: further evidence for a functional modulation of N-methyl-D-aspartate (NMDA) receptor complex-mediated events by sigma ligands. <i>Brain Research</i> , 1991, 561, 43-50.	1.1	33
54	Neurochemical Interactions of Competitive N-Methyl-D-Aspartate Antagonists with Dopaminergic Neurotransmission and the Cerebellar Cyclic GMP System: Functional Evidence for a Phasic Glutamatergic Control of the Nigrostriatal Dopaminergic Pathway. <i>Journal of Neurochemistry</i> , 1991, 56, 907-913.	2.1	32

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55	Fourier transform ion cyclotron resonance mass spectrometric detection of small Ca ²⁺ -induced conformational changes in the regulatory domain of human cardiac troponin C. <i>Journal of the American Society for Mass Spectrometry</i> , 1999, 10, 703-710.	1.2	32
56	Charge location directs electron capture dissociation of peptide dications. <i>Journal of the American Society for Mass Spectrometry</i> , 2006, 17, 1704-1711.	1.2	32
57	Interaction of packaging motor with the polymerase complex of dsRNA bacteriophage. <i>Virology</i> , 2006, 351, 73-79.	1.1	31
58	Blood-brain barrier penetration of 3-aminopropyl-n-butylphosphinic acid (CGP 36742) in rat brain by microdialysis/mass spectrometry. , 1998, 33, 281-287.		28
59	Gas-phase cleavage of PTC-derivatized electrosprayed tryptic peptides in an FT-ICR trapped-ion cell: Mass-based protein identification without liquid chromatographic separation. <i>Journal of the American Society for Mass Spectrometry</i> , 2001, 12, 288-295.	1.2	28
60	Dephosphorylation of Major Sperm Protein (MSP) Fiber Protein 3 by Protein Phosphatase 2A during Cell Body Retraction in the MSP-based Amoeboid Motility of <i>Ascaris</i> Sperm. <i>Molecular Biology of the Cell</i> , 2009, 20, 3200-3208.	0.9	28
61	Liquid Chromatography Electrospray Ionization Fourier Transform Ion Cyclotron Resonance Mass Spectrometric Characterization of N-Linked Glycans and Glycopeptides. <i>Analytical Chemistry</i> , 2010, 82, 6542-6548.	3.2	28
62	Conformational States of Human Purine Nucleoside Phosphorylase at Rest, at Work, and with Transition State Analogues. <i>Biochemistry</i> , 2010, 49, 2058-2067.	1.2	28
63	Glycoproteomics of cerebrospinal fluid in neurodegenerative disease. <i>International Journal of Mass Spectrometry</i> , 2004, 234, 145-152.	0.7	27
64	Efficacy of Bacterial Bioremediation: A Demonstration of Complete Incorporation of Hydrocarbons into Membrane Phospholipids from <i>Rhodococcus</i> Hydrocarbon Degrading Bacteria by Electrospray Ionization Fourier Transform Ion Cyclotron Resonance Mass Spectrometry. <i>Environmental Science & Technology</i> , 2000, 34, 535-540.	4.6	26
65	Characterization of the Capsid Protein Glycosylation of Adeno-Associated Virus Type 2 by High-Resolution Mass Spectrometry. <i>Journal of Virology</i> , 2006, 80, 6171-6176.	1.5	26
66	Drug binding and resistance mechanism of KIT tyrosine kinase revealed by hydrogen/deuterium exchange FTICR mass spectrometry. <i>Protein Science</i> , 2010, 19, 703-715.	3.1	26
67	Determining and interpreting correlations in lipidomic networks found in glioblastoma cells. <i>BMC Systems Biology</i> , 2010, 4, 126.	3.0	25
68	Polar Aprotic Modifiers for Chromatographic Separation and Back-Exchange Reduction for Protein Hydrogen/Deuterium Exchange Monitored by Fourier Transform Ion Cyclotron Resonance Mass Spectrometry. <i>Journal of the American Society for Mass Spectrometry</i> , 2012, 23, 699-707.	1.2	23
69	The polyamines, spermine and spermidine, negatively modulate N-methyl-d-aspartate (NMDA) and quisqualate receptor mediated responses in vivo: Cerebellar cyclic GMP measurements. <i>Neurochemistry International</i> , 1990, 16, 199-206.	1.9	22
70	Advantages of Isotopic Depletion of Proteins for Hydrogen/Deuterium Exchange Experiments Monitored by Mass Spectrometry. <i>Analytical Chemistry</i> , 2010, 82, 3293-3299.	3.2	20
71	d-Glucose and d-mannose-based metabolic probes. Part 3: Synthesis of specifically deuterated d-glucose, d-mannose, and 2-deoxy-d-glucose. <i>Carbohydrate Research</i> , 2013, 368, 111-119.	1.1	19
72	An antibiotic linked to peptides and proteins is released by electron capture dissociation fourier transform ion cyclotron resonance mass spectrometry. <i>Journal of the American Society for Mass Spectrometry</i> , 2003, 14, 302-310.	1.2	18

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73	Identifying bryostatins and potential precursors from the bryozoan <i>Bugula neritina</i> . <i>Natural Product Research</i> , 2005, 19, 467-491.	1.0	17
74	Integrative Biological Analysis For Neuropsychopharmacology. <i>Neuropsychopharmacology</i> , 2014, 39, 5-23.	2.8	17
75	Use of ENCODE Resources to Characterize Novel Proteoforms and Missing Proteins in the Human Proteome. <i>Journal of Proteome Research</i> , 2015, 14, 603-608.	1.8	17
76	Computing H/D-exchange speeds of single residues from data of peptic fragments. , 2008, , .		14
77	Measurement of 2-hydroxyglutarate enantiomers in serum by chiral gas chromatography-tandem mass spectrometry and its application as a biomarker for IDH mutant gliomas. <i>Clinical Mass Spectrometry</i> , 2020, 15, 16-24.	1.9	14
78	Polar lipid remodeling and increased sulfatide expression are associated with the glioma therapeutic candidates, wild type p53 elevation and the topoisomerase-1 inhibitor, Irinotecan. <i>Glycoconjugate Journal</i> , 2010, 27, 27-38.	1.4	13
79	Characterization of the Phosphoproteome in Androgen-Repressed Human Prostate Cancer Cells by Fourier Transform Ion Cyclotron Resonance Mass Spectrometry. <i>Journal of Proteome Research</i> , 2011, 10, 3920-3928.	1.8	12
80	High mass accuracy and resolution facilitate identification of glycosphingolipids and phospholipids. <i>International Journal of Mass Spectrometry</i> , 2011, 305, 116-119.	0.7	12
81	Effects of Low Dose Space Radiation Exposures on the Splenic Metabolome. <i>International Journal of Molecular Sciences</i> , 2021, 22, 3070.	1.8	12
82	Chemical cross-linking of the urease complex from <i>Helicobacter pylori</i> and analysis by Fourier transform ion cyclotron resonance mass spectrometry and molecular modeling. <i>International Journal of Mass Spectrometry</i> , 2004, 234, 137-144.	0.7	10
83	Global stability analysis and robust design of multi-time-scale biological networks under parametric uncertainties. <i>Neural Networks</i> , 2009, 22, 658-663.	3.3	9
84	Sequential Proteolysis and High-Field FTICR MS To Determine Disulfide Connectivity and 4-Maleimide TEMPO Spin-Label Location in L126C GM2 Activator Protein. <i>Analytical Chemistry</i> , 2009, 81, 7611-7617.	3.2	9
85	Efficient identification of multiple pathways: RNA-Seq analysis of livers from 56Fe ion irradiated mice. <i>BMC Bioinformatics</i> , 2020, 21, 118.	1.2	9
86	Complexation and calcium-induced conformational changes in the cardiac troponin complex monitored by hydrogen/deuterium exchange and FT-ICR mass spectrometry. <i>International Journal of Mass Spectrometry</i> , 2011, 302, 116-124.	0.7	7
87	Measurement of Postreplicative DNA Metabolism and Damage in the Rodent Brain. <i>Chemical Research in Toxicology</i> , 2015, 28, 2352-2363.	1.7	7
88	Associations between lipids in selected brain regions, plasma miRNA, and behavioral and cognitive measures following 28Si ion irradiation. <i>Scientific Reports</i> , 2021, 11, 14899.	1.6	7
89	Comparative RNA-Seq transcriptome analyses reveal dynamic time-dependent effects of 56Fe, 16O, and 28Si irradiation on the induction of murine hepatocellular carcinoma. <i>BMC Genomics</i> , 2020, 21, 453.	1.2	5
90	Mitochondrial Effects in the Liver of C57BL/6 Mice by Low Dose, High Energy, High Charge Irradiation. <i>International Journal of Molecular Sciences</i> , 2021, 22, 11806.	1.8	5

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91	Expression, purification, and characterization of avian Thy-1 from Lec1 mammalian and Tn5 insect cells. Protein Expression and Purification, 2004, 33, 274-287.	0.6	4
92	Sites and extent of selenomethionine incorporation into recombinant Cas6 protein by top-down and bottom-up proteomics with 14.5 T Fourier transform ion cyclotron resonance mass spectrometry. Rapid Communications in Mass Spectrometry, 2010, 24, 2386-2392.	0.7	4
93	Post-translational Modifications in the Human Proteome. Translational Bioinformatics, 2014, , 101-136.	0.0	2
94	Differentiation of 2-oxohydroxyglutarate enantiomers and its lactones by gas chromatography/electron ionization tandem mass spectrometry. Rapid Communications in Mass Spectrometry, 2019, 33, 1401-1409.	0.7	2
95	Isotopic Amplification, H/D Exchange, and Other Mass Spectrometric Strategies for Characterization of Biomacromolecular Topology and Binding Sites. , 2000, , 31-52.		2
96	Graph clustering techniques applied to the glycomic response in glioblastoma cells to treatments with STAT3 phosphorylation inhibition and fetal bovine serum. Proceedings of SPIE, 2011, , .	0.8	1
97	Ultrahigh-Resolution Lipid Analysis with Fourier Transform Ion Cyclotron Resonance Mass Spectrometry. Neuromethods, 2017, , 21-43.	0.2	1
98	¹³⁷ Cs γ Ray and ²⁸ Si Irradiation Induced Murine Hepatocellular Carcinoma Lipid Changes in Liver Assessed by MALDI-MSI Combined with Spatial Shrunken Centroid Clustering Algorithm: A Pilot Study. ACS Omega, 2020, 5, 25164-25174.	1.6	1
99	Novel insights into the lipidome of glioblastoma cells based on a combined PLSR and DD-HDS computational analysis. , 2009, , .		0
100	Computational techniques to the topology and dynamics of lipidomic networks found in glioblastoma cells. , 2010, , .		0
101	Visual analysis and dynamical control of phosphoproteomic networks. Proceedings of SPIE, 2013, , .	0.8	0