Fred W Mclafferty

List of Publications by Citations

193 papers	17,084 citations	67 h-index	127 g-index
198 ext. papers	17,727 ext. citations	8.3 avg, IF	6.29 L-index

#	Paper	IF	Citations
193	Electron Capture Dissociation of Multiply Charged Protein Cations. A Nonergodic Process. *Journal of the American Chemical Society*, **1998**, 120, 3265-3266	16.4	1658
192	Electron capture dissociation for structural characterization of multiply charged protein cations. *Analytical Chemistry*, **2000**, 72, 563-73	7.8	852
191	Infrared multiphoton dissociation of large multiply charged ions for biomolecule sequencing. *Analytical Chemistry*, **1994**, 66, 2809-15	7.8	688
190	Electron Capture Dissociation of Gaseous Multiply-Charged Proteins Is Favored at Disulfide Bonds and Other Sites of High Hydrogen Atom Affinity. *Journal of the American Chemical Society*, **1999**, 121, 2857-2862	16.4	512
189	Top Down versus Bottom Up Protein Characterization by Tandem High-Resolution Mass Spectrometry. *Journal of the American Chemical Society*, **1999**, 121, 806-812	16.4	496
188	Automated reduction and interpretation of high resolution electrospray mass spectra of large molecules. *Journal of the American Society for Mass Spectrometry*, **2000**, 11, 320-32	3.5	452
187	Localization of labile posttranslational modifications by electron capture dissociation: the case of gamma-carboxyglutamic acid. *Analytical Chemistry*, **1999**, 71, 4250-3	7.8	346
186	Top down characterization of larger proteins (45 kDa) by electron capture dissociation mass spectrometry. *Journal of the American Chemical Society*, **2002**, 124, 672-8	16.4	336
185	Stepwise evolution of protein native structure with electrospray into the gas phase, 10(-12) to 10(2) s. *Proceedings of the National Academy of Sciences of the United States of America*, **2008**, 105, 18145-52	11.5	329
184	Neutralization-reionization mass spectrometry (NRMS). *Chemical Reviews*, **1987**, 87, 485-500	68.1	320
183	Phosphopeptide/phosphoprotein mapping by electron capture dissociation mass spectrometry. *Analytical Chemistry*, **2001**, 73, 19-22	7.8	313
182	Activated ion electron capture dissociation for mass spectral sequencing of larger (42 kDa) proteins. *Analytical Chemistry*, **2000**, 72, 4778-84	7.8	292
181	Extending top-down mass spectrometry to proteins with masses greater than 200 kilodaltons. *Science*, **2006**, 314, 109-12	33.3	281
180	Detailed unfolding and folding of gaseous ubiquitin ions characterized by electron capture dissociation. *Journal of the American Chemical Society*, **2002**, 124, 6407-20	16.4	273
179	Collisional activation of large multiply charged ions using Fourier transform mass spectrometry. *Analytical Chemistry*, **1994**, 66, 2801-8	7.8	265
178	Quantitative analysis of phospholipids in functionally important membrane domains from RBL-2H3 mast cells using tandem high-resolution mass spectrometry. *Biochemistry*, **1999**, 38, 8056-63	3.2	256
177	Gaseous Conformational Structures of Cytochrome c. *Journal of the American Chemical Society*, **1998**, 120, 4732-4740	16.4	247

176	Thiamin biosynthesis in prokaryotes. *Archives of Microbiology*, **1999**, 171, 293-300	3	237
175	Top-down mass spectrometry of a 29-kDa protein for characterization of any posttranslational modification to within one residue. *Proceedings of the National Academy of Sciences of the United States of America*, **2002**, 99, 1774-9	11.5	232
174	Secondary and tertiary structures of gaseous protein ions characterized by electron capture dissociation mass spectrometry and photofragment spectroscopy. *Proceedings of the National Academy of Sciences of the United States of America*, **2002**, 99, 15863-8	11.5	210
173	Electron capture dissociation of gaseous multiply charged ions by Fourier-transform ion cyclotron resonance. *Journal of the American Society for Mass Spectrometry*, **2001**, 12, 245-9	3.5	207
172	Attomole-sensitivity electrospray source for large-molecule mass spectrometry. *Analytical Chemistry*, **1995**, 67, 3802-5	7.8	197
171	High-resolution tandem FT mass spectrometry above 10 kDa. *Accounts of Chemical Research*, **1994**, 27, 379-386	24.3	189
170	Rapid Sequencing of Oligonucleotides by High-Resolution Mass Spectrometry. *Journal of the American Chemical Society*, **1994**, 116, 4893-4897	16.4	153
169	Tandem mass spectrometry (MS/MS): a promising new analytical technique for specific component determination in complex mixtures. *Accounts of Chemical Research*, **1980**, 13, 33-39	24.3	153
168	Kinetic intermediates in the folding of gaseous protein ions characterized by electron capture dissociation mass spectrometry. *Journal of the American Chemical Society*, **2001**, 123, 9792-9	16.4	152
167	Infrared photodissociation spectroscopy of electrosprayed ions in a Fourier transform mass spectrometer. *Journal of the American Chemical Society*, **2005**, 127, 4076-83	16.4	149
166	Nonergodic and conformational control of the electron capture dissociation of protein cations. *Proceedings of the National Academy of Sciences of the United States of America*, **2004**, 101, 14011-6	11.5	149
165	Top-down MS, a powerful complement to the high capabilities of proteolysis proteomics. *FEBS Journal*, **2007**, 274, 6256-68	5.7	147
164	Fourier-transform electrospray instrumentation for tandem high-resolution mass spectrometry of large molecules. *Journal of the American Society for Mass Spectrometry*, **1993**, 4, 557-65	3.5	129
163	Thiamin biosynthesis in Escherichia coli. Identification of ThiS thiocarboxylate as the immediate sulfur donor in the thiazole formation. *Journal of Biological Chemistry*, **1998**, 273, 16555-60	5.4	128
162	Sequence Information from 42108-mer DNAs (Complete for a 50-mer) by Tandem Mass Spectrometry. *Journal of the American Chemical Society*, **1996**, 118, 9352-9359	16.4	128
161	Collisional activation and metastable ion characteristics. 59. Efficiency of collisional activation of gaseous organic ions. *Journal of the American Chemical Society*, **1978**, 100, 3279-3282	16.4	122
160	Unit resolution mass spectra of 112 kDa molecules with 3 Da accuracy. *Journal of the American Society for Mass Spectrometry*, **1997**, 8, 380-383	3.5	117
159	Biosynthesis of the thiazole moiety of thiamin pyrophosphate (vitamin B1). *Biochemistry*, **2003**, 42, 12430-8	3.8	115

158	Collisional activation and metastable ion characteristics. 73. High-resolution tandem mass spectrometer (MS/MS) of increased sensitivity and mass range. *Journal of the American Chemical Society*, **1980**, 102, 3360-3363	16.4	112
157	Neutralization-reionization mass spectrometry (NRMS). *Journal of the American Chemical Society*, **1983**, 105, 7454-7456	16.4	111
156	Reconstitution and biochemical characterization of a new pyridoxal-5-phosphate biosynthetic pathway. *Journal of the American Chemical Society*, **2005**, 127, 3682-3	16.4	103
155	Automated assignment of charge states from resolved isotopic peaks for multiply charged ions. *Journal of the American Society for Mass Spectrometry*, **1995**, 6, 52-6	3.5	103
154	Surface-induced dissociation of multiply-protonated proteins. *Analytical Chemistry*, **1995**, 67, 1042-6	7.8	102
153	Substituent effects in unimolecular ion decompositions. XV. Mechanistic interpretations and the quasi-equilibrium theory. *Journal of the American Chemical Society*, **1970**, 92, 6867-6880	16.4	100
152	Top-down identification and characterization of biomolecules by mass spectrometry. *Journal of the American Society for Mass Spectrometry*, **2008**, 19, 1045-53	3.5	99
151	Efficient sequence analysis of the six gene products (7-74 kDa) from the Escherichia coli thiamin biosynthetic operon by tandem high-resolution mass spectrometry. *Protein Science*, **1998**, 7, 1796-801	6.3	97
150	193 nm photodissociation of larger multiply-charged biomolecules. *International Journal of Mass Spectrometry and Ion Processes*, **1996**, 157-158, 357-364		97
149	Electrospray ionization with Fourier-transform mass spectrometry. Charge state assignment from resolved isotopic peaks. *Organic Mass Spectrometry*, **1990**, 25, 490-492		95
148	Surface-induced dissociation of peptide ions in Fourier-transform mass spectrometry. *Journal of the American Society for Mass Spectrometry*, **1990**, 1, 413-6	3.5	95
147	Efficiency of collisionally-activated dissociation and 193-nm photodissociation of peptide ions in fourier transform mass spectrometry. *Journal of the American Society for Mass Spectrometry*, **1990**, 1, 288-94	3.5	94
146	Early gas chromatography/mass spectrometry. *Journal of the American Society for Mass Spectrometry*, **1993**, 4, 367-71	3.5	91
145	Separation/identification system for complex mixtures using mass separation and mass spectral characterization. *Analytical Chemistry*, **1978**, 50, 69-76	7.8	90
144	Developments in analytical fourier-transform mass spectrometry. *Analytica Chimica Acta*, **1985**, 178, 43-66	6.6	89
143	High-resolution electrospray mass spectra of large molecules. *Journal of the American Chemical Society*, **1991**, 113, 5447-5449	16.4	87
142	Mass spectrometric studies on noncovalent dimers of leucine zipper peptides. *Journal of the American Chemical Society*, **1993**, 115, 8409-8413	16.4	84
141	High-resolution tandem mass spectra of 37-67 kDa proteins. *Journal of Mass Spectrometry*, **1995**, 30, 39-42	2.2	82

140	How ubiquitin unfolds after transfer into the gas phase. *Journal of the American Society for Mass Spectrometry*, **2012**, 23, 1011-4	3.5	81
139	Electron capture dissociation of multiply charged peptide cations. *International Journal of Mass Spectrometry*, **1999**, 185-187, 787-793	1.9	81
138	Sequencing 50-mer DNAs Using Electrospray Tandem Mass Spectrometry and Complementary Fragmentation Methods. *Journal of the American Chemical Society*, **1995**, 117, 6783-6784	16.4	80
137	Native electron capture dissociation for the structural characterization of noncovalent interactions in native cytochrome C. *Angewandte Chemie - International Edition*, **2003**, 42, 4900-4	16.4	76
136	Oligomer Characterization of 4-23 kDa Polymers by Electrospray Fourier Transform Mass Spectrometry. *Journal of the American Chemical Society*, **1995**, 117, 12826-12831	16.4	76
135	Multiple remeasurement of ions in Fourier-transform mass spectrometry. *Journal of the American Chemical Society*, **1990**, 112, 6157-6162	16.4	76
134	Mass Spectrometry: Recent Advances and Future Directions. *The Journal of Physical Chemistry*, **1996**, 100, 12897-12910		73
133	Collisionally activated decompositions of gaseous ions: the effect of multiple collisions. *International Journal of Mass Spectrometry and Ion Physics*, **1981**, 38, 371-378		73
132	Electron capture versus energetic dissociation of protein ions. *International Journal of Mass Spectrometry*, **1999**, 182-183, 1-5	1.9	72
131	Plasma electron capture dissociation for the characterization of large proteins by top down mass spectrometry. *Analytical Chemistry*, **2003**, 75, 1599-603	7.8	71
130	Top down characterization of secreted proteins from Mycobacterium tuberculosis by electron capture dissociation mass spectrometry. *Journal of the American Society for Mass Spectrometry*, **2003**, 14, 253-61	3.5	70
129	Phosphopantothenoylcysteine synthetase from Escherichia coli. Identification and characterization of the last unidentified coenzyme A biosynthetic enzyme in bacteria. *Journal of Biological Chemistry* , **2001**, 276, 13513-6	5.4	69
128	Improved fourier-transform ion-cyclotron-resonance mass spectrometry of large biomolecules. *Journal of the American Society for Mass Spectrometry*, **1993**, 4, 190-2	3.5	69
127	Unknown identification using reference mass spectra. Quality evaluation of databases. *Journal of the American Society for Mass Spectrometry*, **1999**, 10, 1229-40	3.5	68
126	Stepwise deamidation of ribonuclease A at five sites determined by top down mass spectrometry. *Biochemistry*, **2006**, 45, 987-92	3.2	67
125	The thermal unfolding of native cytochrome c in the transition from solution to gas phase probed by native electron capture dissociation. *Angewandte Chemie - International Edition*, **2005**, 44, 4911-4	16.4	66
124	High-resolution tandem mass spectrometry of carbonic anhydrase. *Analytical Chemistry*, **1994**, 66, 415-8	7.8	66
123	Neutralization-reionization mass spectrometry. *International Journal of Mass Spectrometry and Ion Processes*, **1992**, 118-119, 221-235		65

122	A new approach for plant proteomics: characterization of chloroplast proteins of Arabidopsis thaliana by top-down mass spectrometry. *Molecular and Cellular Proteomics*, **2003**, 2, 1253-60	7.6	64
121	Long-lived metallized tips for nanoliter electrospray mass spectrometry. *Journal of the American Society for Mass Spectrometry*, **1996**, 7, 1270-2	3.5	64
120	Distonic oxonium and ammonium radical cations. A neutralization-reionization and collisional activation study. *Journal of the American Chemical Society*, **1985**, 107, 8059-8066	16.4	61
119	Hadamard transform measurement of tandem Fourier-transform mass spectra. *Analytical Chemistry* , **1990**, 62, 698-703	7.8	60
118	Comparison of algorithms and databases for matching unknown mass spectra. *Journal of the American Society for Mass Spectrometry*, **1998**, 9, 92-5	3.5	59
117	Heterogeneous glycosylation of immunoglobulin E constructs characterized by top-down high-resolution 2-D mass spectrometry. *Biochemistry*, **2000**, 39, 3369-76	3.2	58
116	Early structural evolution of native cytochrome c after solvent removal. *ChemBioChem*, **2008**, 9, 2417-23	3.8	57
115	Sequencing of specific copolymer oligomers by electron-capture-dissociation mass spectrometry. *Journal of the American Chemical Society*, **2002**, 124, 9287-91	16.4	56
114	Stable ylides H2CClH, H2CFH, H2COH2, and H2CNH3 studied by neutralization-reionization mass spectrometry. *Journal of the American Chemical Society*, **1986**, 108, 5847-53	16.4	56
113	A century of progress in molecular mass spectrometry. *Annual Review of Analytical Chemistry*, **2011**, 4, 1-22	12.5	52
112	Neutralization-reionization mass spectrometry (NRMS). Structural information from vertical neutralization and reionization efficiencies. *Organic Mass Spectrometry*, **1986**, 21, 689-695		51
111	Biosynthesis of the thioquinolobactin siderophore: an interesting variation on sulfur transfer. *Journal of Bacteriology*, **2007**, 189, 2941-4	3.5	50
110	Electron Capture Dissociation of Multiply-Charged Oxygenated Cations. A Nonergodic Process. *European Journal of Mass Spectrometry*, **1999**, 5, 335		50
109	Tandem mass specatrometry of carbonic anhydrase (29 kDa). *Journal of Mass Spectrometry*, **1995**, 30, 88-93	2.2	50
108	Retrieval and interpretative computer programs for mass spectrometry. *Journal of Chemical Information and Computer Sciences*, **1985**, 25, 245-252		49
107	Hydrogen Atom Loss in Electron-Capture Dissociation: A Fourier Transform-Ion Cyclotron Resonance Study with Single Isotopomeric Ubiquitin Ions. *European Journal of Mass Spectrometry*, **2002**, 8, 177-180	1.1	48
106	Thiaminase I (42 kDa) heterogeneity, sequence refinement, and active site location from high-resolution tandem mass spectrometry. *Journal of the American Society for Mass Spectrometry*, **1995**, 6, 981-4	3.5	48
105	Mechanistic studies on thiaminase I. Overexpression and identification of the active site nucleophile. *Journal of Biological Chemistry*, **1996**, 271, 3445-52	5.4	48

104	Reliability ranking and scaling improvements to the probability based matching system for unknown mass spectra. *Analytical Chemistry*, **1985**, 57, 899-903	7.8	47
103	Neutralization agents for neutralization-reionization mass spectrometry. *Analytical Chemistry*, **1986**, 58, 348-54	7.8	47
102	Overexpression of recombinant proteins with a C-terminal thiocarboxylate: implications for protein semisynthesis and thiamin biosynthesis. *Protein Science*, **1998**, 7, 1839-42	6.3	46
101	Consecutive ion activation for top down mass spectrometry: improved protein sequencing by nozzle-skimmer dissociation. *Analytical Chemistry*, **2005**, 77, 5777-84	7.8	46
100	The mechanism of inactivation of 3-hydroxyanthranilate-3,4-dioxygenase by 4-chloro-3-hydroxyanthranilate. *Biochemistry*, **2005**, 44, 7623-31	3.2	46
99	Charge/radical site initiation versus coulombic repulsion for cleavage of multiply charged ions. Charge solvation in poly(alkene glycol) ions. *Journal of the American Society for Mass Spectrometry*, **2001**, 12, 565-70	3.5	46
98	Non-ergodic behavior in acetone-enol ion dissociations. *Journal of the American Chemical Society*, **1984**, 106, 2525-2528	16.4	46
97	Tandem mass spectrometric analysis of complex biological mixtures. *International Journal of Mass Spectrometry*, **2001**, 212, 81-87	1.9	45
96	Formation and stability of gaseous tolyl ions. *Organic Mass Spectrometry*, **1979**, 14, 181-184		45
95	Identification of modification sites in large biomolecules by stable isotope labeling and tandem high resolution mass spectrometry. The active site nucleophile of thiaminase I. *Journal of Biological Chemistry*, **1997**, 272, 32215-20	5.4	43
94	The biosynthesis of the thiazole phosphate moiety of thiamin (vitamin B1): the early steps catalyzed by thiazole synthase. *Journal of the American Chemical Society*, **2004**, 126, 3091-6	16.4	43
93	Mass Spectrometry in Chemical Research and Production. *Applied Spectroscopy*, **1957**, 11, 148-156	3.1	43
92	Two-dimensional mass spectrometry of biomolecules at the subfemtomole level. *Current Opinion in Chemical Biology*, **1998**, 2, 571-8	9.7	36
91	Cesium ion desorption ionization with Fourier transform mass spectrometry. *Analytical Chemistry*, **1987**, 59, 313-7	7.8	36
90	Numerous isomers of serine octamer ions characterized by infrared photodissociation spectroscopy. *ChemPhysChem*, **2009**, 10, 2603-6	3.2	35
89	Direct sequence data from heterogeneous creatine kinase (43 kDa) by high-resolution tandem mass spectrometry. *Biochemistry*, **1995**, 34, 16251-4	3.2	35
88	Infrared photodissociation of non-covalent adducts of electrosprayed nucleotide ions. *Journal of the American Society for Mass Spectrometry*, **1996**, 7, 209-10	3.5	35
87	A quality index for reference mass spectra. *Organic Mass Spectrometry*, **1978**, 13, 209-213		35

86	Mechanistic studies on phosphopantothenoylcysteine decarboxylase: trapping of an enethiolate intermediate with a mechanism-based inactivating agent. *Biochemistry*, **2004**, 43, 15520-33	3.2	34
85	Automatic reduction of high-resolution mass spectral data. Computer techniques for improved mass-measuring accuracy and resolution. *Analytical Chemistry*, **1967**, 39, 178-185	7.8	34
84	Thiamin biosynthesis in Bacillus subtilis: structure of the thiazole synthase/sulfur carrier protein complex. *Biochemistry*, **2004**, 43, 11647-57	3.2	33
83	Quantitation of isomeric ion mixtures using collisional activation mass spectra. *Organic Mass Spectrometry*, **1983**, 18, 193-197		33
82	The reactions of metastable [C5 H10 O]+□ions with the oxygen on the second carbon. *Organic Mass Spectrometry*, **1984**, 19, 353-362		33
81	Detection of mass 16 241 ions by Fourier-transform mass spectrometry. *Analytical Chemistry*, **1986**, 58, 483-5	7.8	32
80	Thiamin biosynthesis: still yielding fascinating biological chemistry. *Biochemical Society Transactions* , **2012**, 40, 555-60	5.1	31
79	Rearrangement and methyl loss from ionized propene oxide and methyl vinyl ether. *Journal of the American Chemical Society*, **1984**, 106, 2528-2531	16.4	31
78	Blackbody infrared radiative dissociation of larger (42 kDa) multiply charged proteins. *International Journal of Mass Spectrometry*, **2001**, 210-211, 203-214	1.9	30
77	High-resolution ion isolation with the ion cyclotron resonance capacitively coupled open cell. *Journal of the American Society for Mass Spectrometry*, **1995**, 6, 533-5	3.5	30
76	Dissimilarity in the reductive unfolding pathways of two ribonuclease homologues. *Journal of Molecular Biology*, **2004**, 338, 795-809	6.5	29
75	Accurate base composition of double-strand DNA by mass spectrometry. *Journal of the American Society for Mass Spectrometry*, **1996**, 7, 1266-9	3.5	29
74	An improved tandem double-focusing mass spectrometer for neutralization□reionization and collisional activation studies. *International Journal of Mass Spectrometry and Ion Processes*, **1988**, 86, 95-107		29
73	Detection of four oxidation sites in viral prolyl-4-hydroxylase by top-down mass spectrometry. *Protein Science*, **2003**, 12, 2320-6	6.3	28
72	Electron impact excitation of ions from larger organic molecules. *Organic Mass Spectrometry*, **1990**, 25, 554-556		28
71	Protonated ethanol and its neutral counterparts. *Journal of the American Society for Mass Spectrometry*, **1991**, 2, 459-63	3.5	27
70	193 nm Laser photoionization and photodissociation for isomer differentiation in Fourier-transform mass spectrometry. *Journal of the American Society for Mass Spectrometry*, **1990**, 1, 361-5	3.5	27
69	The biosynthesis of the thiazole phosphate moiety of thiamin: the sulfur transfer mediated by the sulfur carrier protein ThiS. *Chemistry and Biology*, **2004**, 11, 1373-81		26

68	Electrospray mass spectra from protein electroeluted from sodium dodecylsulfate polyacrylamide gel electrophoresis gels. *Journal of the American Society for Mass Spectrometry*, **1999**, 10, 453-5	3.5	26
67	Comparative evaluations of mass spectral data bases. *Journal of the American Society for Mass Spectrometry*, **1991**, 2, 438-40	3.5	26
66	Distinguishing N- and C-terminus ions for mass spectrometry sequencing of proteins without prior degradation. *Rapid Communications in Mass Spectrometry*, **1995**, 9, 871-6	2.2	24
65	Isotopic assignment in large-molecule mass spectra by fragmentation of a selected isotopic peak. *Analytical Chemistry*, **1996**, 68, 542-5	7.8	24
64	Sampling error in small-bore sheathless capillary electrophoresis/electrospray-ionization mass spectrometry. *Rapid Communications in Mass Spectrometry*, **1996**, 10, 825-8	2.2	24
63	Small carbon clusters (Cn0, Cn+, Cn from acyclic and cyclic precursors. *International Journal of Mass Spectrometry*, **2002**, 217, 81-96	1.9	23
62	Unimolecular reactions of ionized methyl acetate and its hydrogen-rearranged isomers. *Organic Mass Spectrometry*, **1985**, 20, 98-103		23
61	DNA sequencing with blackbody infrared radiative dissociation of electrosprayed ions. *International Journal of Mass Spectrometry and Ion Processes*, **1997**, 167-168, 705-712		22
60	Mass and charge assignment for electrospray ions by cation adduction. *Journal of the American Society for Mass Spectrometry*, **1993**, 4, 828-30	3.5	21
59	Isomeric characterization via ion neutralization and dissociation. Experimental variables. *Organic Mass Spectrometry*, **1989**, 24, 663-668		21
58	Polypeptide sequencing by liquid chromatography mass spectrometry. *Biomedical Mass Spectrometry*, **1978**, 5, 1-6		21
57	Targeted class analysis of actam antibiotics by tandem mass spectrometry. *Biomedical Mass Spectrometry*, **1983**, 10, 258-261		20
56	Simplest chloronium radical. A neutralization-reionization mass spectrometry study. *Journal of the American Chemical Society*, **1986**, 108, 5656-5657	16.4	20
55	Double stranded DNA sequencing by tandem mass spectrometry. *International Journal of Mass Spectrometry and Ion Processes*, **1997**, 165-166, 457-466		19
54	Neutralization-reionization study of C6H6O isomers. *Organic Mass Spectrometry*, **1989**, 24, 669-672		19
53	Charge site mass spectra: conformation-sensitive components of the electron capture dissociation spectrum of a protein. *Journal of the American Society for Mass Spectrometry*, **2013**, 24, 807-10	3.5	18
52	Mass spectrometry across the sciences. *Proceedings of the National Academy of Sciences of the United States of America*, **2008**, 105, 18088-9	11.5	18
51	Angle-resolved neutralization-reionization mass spectrometry. *Journal of the American Society for Mass Spectrometry*, **1991**, 2, 492-6	3.5	18

50	Adding forward searching capabilities to a reverse search algorithm for unknown mass spectra. *Analytical Chemistry*, **1985**, 57, 771-773	7.8	18
49	Collisional activation mass spectra of ions containing polyisotopic elements. *Organic Mass Spectrometry*, **1982**, 17, 79-80		18
48	Organic neutralization agents for neutralization-reionization mass spectrometry. *Journal of the American Society for Mass Spectrometry*, **1992**, 3, 108-12	3.5	17
47	High resolution and tandem fourier-transform mass spectrometry with californium-252 plasma desorption. *Journal of the American Society for Mass Spectrometry*, **1990**, 1, 427-30	3.5	17
46	Tandem mass spectrometry: structural and stereochemical information from steroids. *Journal of the American Chemical Society*, **1983**, 105, 1510-1513	16.4	17
45	Energy independence of the collisional activation mass spectra of benzoyl ions. *International Journal of Mass Spectrometry and Ion Physics*, **1980**, 35, 299-303		17
44	Relative stabilities of the methyltropylium and □phenylethyl cations. *Organic Mass Spectrometry*, **1982**, 17, 640-642		17
43	Neutralization-reionization and ab initio study of the CH2?CHSOH ? CH3CH?S?O rearrangement. *International Journal of Mass Spectrometry and Ion Processes*, **1990**, 101, 283-300		16
42	Billionfold data increase from mass spectrometry instrumentation. *Journal of the American Society for Mass Spectrometry*, **1997**, 8, 1-7	3.5	15
41	Simultaneous kinetic characterization of multiple protein forms by top down mass spectrometry. *Journal of the American Society for Mass Spectrometry*, **2005**, 16, 1052-9	3.5	15
40	IgE receptor-mediated alteration of membrane-cytoskeleton interactions revealed by mass spectrometric analysis of detergent-resistant membranes. *Biochemistry*, **2009**, 48, 6540-50	3.2	14
39	Native Elektroneneinfang-Dissoziation zur strukturellen Charakterisierung nichtkovalenter Wechselwirkungen in nativem Cytochrom c. *Angewandte Chemie*, **2003**, 115, 5048-5052	3.6	13
38	An enlarged data base of electron-ionization mass spectra. *Journal of the American Society for Mass Spectrometry*, **1991**, 2, 432-7	3.5	13
37	A personal computer-based data control interface for neutralization-reionization and tandem mass spectrometry. *Organic Mass Spectrometry*, **1991**, 26, 559-562		13
36	Complete large-molecule high-resolution mass spectra from 50-femtomole microvolume injection. *Journal of the American Society for Mass Spectrometry*, **1995**, 6, 220-1	3.5	12
35	Biosynthesis of thiamin thiazole: determination of the regiochemistry of the S/O acyl shift by using 1,4-dideoxy-D-xylulose-5-phosphate. *Angewandte Chemie - International Edition*, **2006**, 45, 3507-10	16.4	11
34	Simultaneous characterization of the reductive unfolding pathways of RNase B isoforms by top-down mass spectrometry. *Chemistry and Biology*, **2004**, 11, 517-24		11
33	Tandem mass spectrometry: From infancy to maturity in twenty-five years. *Organic Mass Spectrometry*, **1993**, 28, 1403-1406		11

32	Tandem Fourier Transform Mass Spectrometry of Large Molecules. *ACS Symposium Series*, **1987**, 116-126	0.4	11
31	Weighted file ordering for fast matching of mass spectra against a comprehensive data base. *Analytical Chemistry*, **1981**, 53, 1938-1939	7.8	11
30	Tandem mass spectrometry in trace toxicant analysis. *Biological Mass Spectrometry*, **1981**, 8, 446-8		11
29	Tandem Fourier-transform mass spectrometry. *International Journal of Mass Spectrometry and Ion Processes*, **1986**, 72, 85-91		10
28	Library of collisional actiavation mass spectra. *Organic Mass Spectrometry*, **1980**, 15, 327-328		10
27	Acid catalyzed aldol condensation in the gas phase. *Organic Mass Spectrometry*, **1981**, 16, 381-382		10
26	Multi-step evolution of protein conformation on electrospray into the gas phase. *European Journal of Mass Spectrometry*, **2010**, 16, 437-42	1.1	9
25	Detecting native folds in mixtures of proteins that contain disulfide bonds. *Nature Biotechnology*, **2008**, 26, 427-9	44.5	9
24	Das thermische Entfalten von nativem Cytochrom c im Übergang von der Lösung in die Gasphase, untersucht mit Nativer Elektroneneinfang-Dissoziation. *Angewandte Chemie*, **2005**, 117, 4989-4992	3.6	9
23	Broadband quadrupolar axialization of large multiply charged ions to enhance measurement and minimize conformational restrictions. *Journal of Mass Spectrometry*, **1996**, 31, 555-9	2.2	9
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20	Femtosecond laser vaporization that preserves protein-folded structure: an unproven idea. *Proceedings of the National Academy of Sciences of the United States of Americа*, **2012**, 109, E206; author reply E207	11.5	7
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