

Alan G Marshall

List of Publications by Year in descending order

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428
papers

34,850
citations

2213

99
h-index

5820

161
g-index

431
all docs

431
docs citations

431
times ranked

15298
citing authors

#	ARTICLE	IF	CITATIONS
1	Fourier transform ion cyclotron resonance mass spectrometry: A primer. , 1998, 17, 1-35.		1,733
2	Fourier transform ion cyclotron resonance spectroscopy. Chemical Physics Letters, 1974, 25, 282-283.	1.2	959
3	Petroleomics: The Next Grand Challenge for Chemical Analysis. Accounts of Chemical Research, 2004, 37, 53-59.	7.6	698
4	Kendrick Mass Defect Spectrum: A Compact Visual Analysis for Ultrahigh-Resolution Broadband Mass Spectra. Analytical Chemistry, 2001, 73, 4676-4681.	3.2	697
5	Tailored excitation for Fourier transform ion cyclotron mass spectrometry. Journal of the American Chemical Society, 1985, 107, 7893-7897.	6.6	638
6	Petroleomics: Chemistry of the underworld. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 18090-18095.	3.3	581
7	Exact Masses and Chemical Formulas of Individual Suwannee River Fulvic Acids from Ultrahigh Resolution Electrospray Ionization Fourier Transform Ion Cyclotron Resonance Mass Spectra. Analytical Chemistry, 2003, 75, 1275-1284.	3.2	537
8	A universal algorithm for fast and automated charge state deconvolution of electrospray mass-to-charge ratio spectra. Journal of the American Society for Mass Spectrometry, 1998, 9, 225-233.	1.2	478
9	The role of electron capture dissociation in biomolecular analysis. Mass Spectrometry Reviews, 2005, 24, 201-222.	2.8	453
10	External accumulation of ions for enhanced electrospray ionization fourier transform ion cyclotron resonance mass spectrometry. Journal of the American Society for Mass Spectrometry, 1997, 8, 970-976.	1.2	442
11	Resolution and Identification of Elemental Compositions for More than 3000 Crude Acids in Heavy Petroleum by Negative-Ion Microelectrospray High-Field Fourier Transform Ion Cyclotron Resonance Mass Spectrometry. Energy & Fuels, 2001, 15, 1505-1511.	2.5	383
12	Resolution of 11,000 Compositionally Distinct Components in a Single Electrospray Ionization Fourier Transform Ion Cyclotron Resonance Mass Spectrum of Crude Oil. Analytical Chemistry, 2002, 74, 4145-4149.	3.2	375
13	Electron Capture Dissociation and Infrared Multiphoton Dissociation MS/MS of an N-Glycosylated Tryptic Peptide To Yield Complementary Sequence Information. Analytical Chemistry, 2001, 73, 4530-4536.	3.2	362
14	Frequency-sweep fourier transform ion cyclotron resonance spectroscopy. Chemical Physics Letters, 1974, 26, 489-490.	1.2	352
15	KIT kinase mutants show unique mechanisms of drug resistance to imatinib and sunitinib in gastrointestinal stromal tumor patients. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 1542-1547.	3.3	345
16	High-Resolution Mass Spectrometers. Annual Review of Analytical Chemistry, 2008, 1, 579-599.	2.8	311
17	Reading Chemical Fine Print: 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. Energy & Fuels, 2001, 15, 492-498.	2.5	310
18	Key Generation From Wireless Channels: A Review. IEEE Access, 2016, 4, 614-626.	2.6	306

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19	Stored waveform inverse Fourier transform (SWIFT) ion excitation in trapped-ion mass spectrometry: Theory and applications. <i>International Journal of Mass Spectrometry and Ion Processes</i> , 1996, 157-158, 5-37.	1.9	304
20	Identification of acidic NSO compounds in crude oils of different geochemical origins by negative ion electrospray Fourier transform ion cyclotron resonance mass spectrometry. <i>Organic Geochemistry</i> , 2002, 33, 743-759.	0.9	292
21	Probing Protein Ligand Interactions by Automated Hydrogen/Deuterium Exchange Mass Spectrometry. <i>Analytical Chemistry</i> , 2006, 78, 1005-1014.	3.2	289
22	Free electron laser-Fourier transform ion cyclotron resonance mass spectrometry facility for obtaining infrared multiphoton dissociation spectra of gaseous ions. <i>Review of Scientific Instruments</i> , 2005, 76, 023103.	0.6	287
23	An ultrahigh-resolution mass spectrometry index to estimate natural organic matter lability. <i>Rapid Communications in Mass Spectrometry</i> , 2015, 29, 2385-2401.	0.7	276
24	Milestones in fourier transform ion cyclotron resonance mass spectrometry technique development. <i>International Journal of Mass Spectrometry</i> , 2000, 200, 331-356.	0.7	271
25	Petroleomics: MS Returns to Its Roots.. <i>Analytical Chemistry</i> , 2005, 77, 20 A-27 A.	3.2	271
26	Ionization and Fragmentation of Humic Substances in Electrospray Ionization Fourier Transform-Ion Cyclotron Resonance Mass Spectrometry. <i>Analytical Chemistry</i> , 2002, 74, 4397-4409.	3.2	269
27	Fourier transform ion cyclotron resonance mass spectrometry. <i>Accounts of Chemical Research</i> , 1985, 18, 316-322.	7.6	264
28	Two- and Three-Dimensional van Krevelen Diagrams: A Graphical Analysis Complementary to the Kendrick Mass Plot for Sorting Elemental Compositions of Complex Organic Mixtures Based on Ultrahigh-Resolution Broadband Fourier Transform Ion Cyclotron Resonance Mass Measurements. <i>Analytical Chemistry</i> , 2004, 76, 2511-2516.	3.2	257
29	A High-performance Modular Data System for Fourier Transform Ion Cyclotron Resonance Mass Spectrometry. , 1996, 10, 1839-1844.		248
30	Atmospheric Pressure Photoionization Fourier Transform Ion Cyclotron Resonance Mass Spectrometry for Complex Mixture Analysis. <i>Analytical Chemistry</i> , 2006, 78, 5906-5912.	3.2	246
31	Combined Electron Capture and Infrared Multiphoton Dissociation for Multistage MS/MS in a Fourier Transform Ion Cyclotron Resonance Mass Spectrometer. <i>Analytical Chemistry</i> , 2003, 75, 3256-3262.	3.2	241
32	Predator data station: A fast data acquisition system for advanced FT-ICR MS experiments. <i>International Journal of Mass Spectrometry</i> , 2011, 306, 246-252.	0.7	221
33	High Resolution Mass Spectrometry. <i>Analytical Chemistry</i> , 2012, 84, 708-719.	3.2	216
34	A Novel 9.4 Tesla FTICR Mass Spectrometer with Improved Sensitivity, Mass Resolution, and Mass Range. <i>Journal of the American Society for Mass Spectrometry</i> , 2011, 22, 1343-1351.	1.2	205
35	Microbial alteration of the acidic and neutral polar NSO compounds revealed by Fourier transform ion cyclotron resonance mass spectrometry. <i>Organic Geochemistry</i> , 2005, 36, 1117-1134.	0.9	201
36	Electrospray Ionization Fourier Transform Ion Cyclotron Resonance at 9.4 T. , 1996, 10, 1824-1828.		200

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37	Fourier transform ion cyclotron resonance mass spectrometry: the teenage years. <i>Analytical Chemistry</i> , 1991, 63, 215A-229A.	3.2	199
38	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
39	Water-Soluble Atmospheric Organic Matter in Fog: Exact Masses and Chemical Formula Identification by Ultrahigh-Resolution Fourier Transform Ion Cyclotron Resonance Mass Spectrometry. <i>Environmental Science & Technology</i> , 2010, 44, 3690-3697.	4.6	197
40	Parts-Per-Billion Fourier Transform Ion Cyclotron Resonance Mass Measurement Accuracy with a "Walking" Calibration Equation. <i>Analytical Chemistry</i> , 2011, 83, 1732-1736.	3.2	190
41	21 Tesla Fourier Transform Ion Cyclotron Resonance Mass Spectrometer: A National Resource for Ultrahigh Resolution Mass Analysis. <i>Journal of the American Society for Mass Spectrometry</i> , 2015, 26, 1626-1632.	1.2	188
42	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
43	High-Performance Mass Spectrometry: Fourier Transform Ion Cyclotron Resonance at 14.5 Tesla. <i>Analytical Chemistry</i> , 2008, 80, 3985-3990.	3.2	186
44	Identification of Vanadyl Porphyrins in a Heavy Crude Oil and Raw Asphaltene by Atmospheric Pressure Photoionization Fourier Transform Ion Cyclotron Resonance (FT-ICR) Mass Spectrometry. <i>Energy & Fuels</i> , 2009, 23, 2122-2128.	2.5	185
45	Sulfur Speciation in Petroleum: Atmospheric Pressure Photoionization or Chemical Derivatization and Electrospray Ionization Fourier Transform Ion Cyclotron Resonance Mass Spectrometry. <i>Energy & Fuels</i> , 2007, 21, 2869-2874.	2.5	176
46	Comparison and interconversion of the two most common frequency-to-mass calibration functions for Fourier transform ion cyclotron resonance mass spectrometry. <i>International Journal of Mass Spectrometry</i> , 2000, 195-196, 591-598.	0.7	175
47	Elemental Composition Analysis of Processed and Unprocessed Diesel Fuel by Electrospray Ionization Fourier Transform Ion Cyclotron Resonance Mass Spectrometry. <i>Energy & Fuels</i> , 2001, 15, 1186-1193.	2.5	175
48	Petroleomics: advanced molecular probe for petroleum heavy ends. <i>Journal of Mass Spectrometry</i> , 2011, 46, 337-343.	0.7	172
49	Fourier transform ion cyclotron resonance detection: principles and experimental configurations. <i>International Journal of Mass Spectrometry</i> , 2002, 215, 59-75.	0.7	171
50	Acidic and neutral polar NSO compounds in Smackover oils of different thermal maturity revealed by electrospray high field Fourier transform ion cyclotron resonance mass spectrometry. <i>Organic Geochemistry</i> , 2004, 35, 863-880.	0.9	169
51	Heavy Petroleum Composition. 5. Compositional and Structural Continuum of Petroleum Revealed. <i>Energy & Fuels</i> , 2013, 27, 1268-1276.	2.5	166
52	Petroleum Crude Oil Characterization by IMS-MS and FTICR MS. <i>Analytical Chemistry</i> , 2009, 81, 9941-9947.	3.2	164
53	Relaxation and spectral line shape in Fourier transform ion resonance spectroscopy. <i>Journal of Chemical Physics</i> , 1979, 71, 4434-4444.	1.2	162
54	Heavy Petroleum Composition. 3. Asphaltene Aggregation. <i>Energy & Fuels</i> , 2013, 27, 1246-1256.	2.5	162

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55	Contrasting Perspective on Asphaltene Molecular Weight. This Comment vs the Overview of A. A. Herod, K. D. Bartle, and R. Kandiyoti. <i>Energy & Fuels</i> , 2008, 22, 1765-1773.	2.5	159
56	Theory of Fourier transform ion cyclotron resonance mass spectroscopy. I. Fundamental equations and low-pressure line shape. <i>Journal of Chemical Physics</i> , 1976, 64, 110-119.	1.2	158
57	Theory of Fourier transform ion cyclotron resonance mass spectroscopy: Response to frequency-sweep excitation. <i>Journal of Chemical Physics</i> , 1980, 73, 1581-1590.	1.2	158
58	Observation of the doubly charged, gas-phase fullerene anions C60 ²⁻ and C70 ²⁻ . <i>Journal of the American Chemical Society</i> , 1991, 113, 6795-6798.	6.6	157
59	Closed network growth of fullerenes. <i>Nature Communications</i> , 2012, 3, 855.	5.8	157
60	Automated Broadband Phase Correction of Fourier Transform Ion Cyclotron Resonance Mass Spectra. <i>Analytical Chemistry</i> , 2010, 82, 8807-8812.	3.2	153
61	Chemical Sniffing Instrumentation for Security Applications. <i>Chemical Reviews</i> , 2016, 116, 8146-8172.	23.0	151
62	Improved ion extraction from a linear octopole ion trap: SIMION analysis and experimental demonstration. <i>Journal of the American Society for Mass Spectrometry</i> , 2002, 13, 1304-1312.	1.2	150
63	Mass Spectral Analysis of Asphaltenes. II. Detailed Compositional Comparison of Asphaltenes Deposit to Its Crude Oil Counterpart for Two Geographically Different Crude Oils by ESI FT-ICR MS. <i>Energy & Fuels</i> , 2006, 20, 1973-1979.	2.5	147
64	Heavy Petroleum Composition. 4. Asphaltene Compositional Space. <i>Energy & Fuels</i> , 2013, 27, 1257-1267.	2.5	147
65	Characterization of amino acid side chain losses in electron capture dissociation. <i>Journal of the American Society for Mass Spectrometry</i> , 2002, 13, 241-249.	1.2	146
66	Truly "exact" mass: Elemental composition can be determined uniquely from molecular mass measurement at $\sim 1/40$ mDa accuracy for molecules up to ~ 4500 Da. <i>International Journal of Mass Spectrometry</i> , 2006, 251, 260-265.	0.7	146
67	Quadrupolar excitation and collisional cooling for axialization and high pressure trapping of ions in Fourier transform ion cyclotron resonance mass spectrometry. <i>International Journal of Mass Spectrometry and Ion Processes</i> , 1992, 120, 71-83.	1.9	144
68	Expansion of the Analytical Window for Oil Spill Characterization by Ultrahigh Resolution Mass Spectrometry: Beyond Gas Chromatography. <i>Environmental Science & Technology</i> , 2013, 47, 7530-7539.	4.6	144
69	Advantages of High Magnetic Field for Fourier Transform Ion Cyclotron Resonance Mass Spectrometry. <i>Rapid Communications in Mass Spectrometry</i> , 1996, 10, 1819-1823.	0.7	141
70	Heavy Petroleum Composition. 1. Exhaustive Compositional Analysis of Athabasca Bitumen HVGO Distillates by Fourier Transform Ion Cyclotron Resonance Mass Spectrometry: A Definitive Test of the Boduszynski Model. <i>Energy & Fuels</i> , 2010, 24, 2929-2938.	2.5	138
71	Molecular characterization of dissolved organic matter in a North Brazilian mangrove porewater and mangrove-fringed estuaries by ultrahigh resolution Fourier Transform-Ion Cyclotron Resonance mass spectrometry and excitation/emission spectroscopy. <i>Marine Chemistry</i> , 2007, 105, 15-29.	0.9	134
72	Fourier transform ion cyclotron resonance mass spectrometry: technique developments. <i>International Journal of Mass Spectrometry and Ion Processes</i> , 1992, 118-119, 37-70.	1.9	133

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73	Mass Spectral Analysis of Asphaltenes. I. Compositional Differences between Pressure-Drop and Solvent-Drop Asphaltenes Determined by Electrospray Ionization Fourier Transform Ion Cyclotron Resonance Mass Spectrometry. <i>Energy & Fuels</i> , 2006, 20, 1965-1972.	2.5	133
74	Resolution and Chemical Formula Identification of Aromatic Hydrocarbons and Aromatic Compounds Containing Sulfur, Nitrogen, or Oxygen in Petroleum Distillates and Refinery Streams. <i>Analytical Chemistry</i> , 1996, 68, 46-71.	3.2	132
75	Structural Switch of Lysyl-tRNA Synthetase between Translation and Transcription. <i>Molecular Cell</i> , 2013, 49, 30-42.	4.5	131
76	Targeted Petroleomics: Analytical Investigation of Macondo Well Oil Oxidation Products from Pensacola Beach. <i>Energy & Fuels</i> , 2014, 28, 4043-4050.	2.5	130
77	Use of Saturates/Aromatics/Resins/Asphaltenes (SARA) Fractionation To Determine Matrix Effects in Crude Oil Analysis by Electrospray Ionization Fourier Transform Ion Cyclotron Resonance Mass Spectrometry. <i>Energy & Fuels</i> , 2006, 20, 668-672.	2.5	129
78	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
79	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
80	Photodissociation of Gas-Phase Polycyclic Aromatic Hydrocarbon Cations. <i>Journal of Physical Chemistry A</i> , 1998, 102, 3498-3504.	1.1	123
81	Stepwise Structural Characterization of Asphaltenes during Deep Hydroconversion Processes Determined by Atmospheric Pressure Photoionization (APPI) Fourier Transform Ion Cyclotron Resonance (FT-ICR) Mass Spectrometry. <i>Energy & Fuels</i> , 2010, 24, 2257-2265.	2.5	121
82	Characterization of naphthenic acids in crude oils and naphthenates by electrospray ionization FT-ICR mass spectrometry. <i>International Journal of Mass Spectrometry</i> , 2011, 300, 149-157.	0.7	120
83	Shrink-wrapping an ion cloud for high-performance Fourier transform ion cyclotron resonance mass spectrometry. <i>Chemical Reviews</i> , 1994, 94, 2161-2182.	23.0	118
84	Identification of Water-Soluble Heavy Crude Oil Organic-Acids, Bases, and Neutrals by Electrospray Ionization and Field Desorption Ionization Fourier Transform Ion Cyclotron Resonance Mass Spectrometry. <i>Environmental Science & Technology</i> , 2007, 41, 2696-2702.	4.6	118
85	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
86	Ion traps for Fourier transform ion cyclotron resonance mass spectrometry: principles and design of geometric and electric configurations. <i>International Journal of Mass Spectrometry and Ion Processes</i> , 1995, 146-147, 261-296.	1.9	114
87	Speciation of nitrogen containing aromatics by atmospheric pressure photoionization or electrospray ionization fourier transform ion cyclotron resonance mass spectrometry. <i>Journal of the American Society for Mass Spectrometry</i> , 2007, 18, 1265-1273.	1.2	113
88	Top-Down Structural Analysis of an Intact Monoclonal Antibody by Electron Capture Dissociation-Fourier Transform Ion Cyclotron Resonance-Mass Spectrometry. <i>Analytical Chemistry</i> , 2013, 85, 4239-4246.	3.2	113
89	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
90	Protein Molecular Mass to 1 Da by ¹³ C, ¹⁵ N Double-Depletion and FT-ICR Mass Spectrometry. <i>Journal of the American Chemical Society</i> , 1997, 119, 433-434.	6.6	111

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91	A "screened" electrostatic ion trap for enhanced mass resolution, mass accuracy, reproducibility, and upper mass limit in Fourier-transform ion cyclotron resonance mass spectrometry. <i>Analytical Chemistry</i> , 1989, 61, 1288-1293.	3.2	110
92	Compositional Characterization of Bitumen/Water Emulsion Films by Negative- and Positive-Ion Electrospray Ionization and Field Desorption/Ionization Fourier Transform Ion Cyclotron Resonance Mass Spectrometry. <i>Energy & Fuels</i> , 2007, 21, 963-972.	2.5	109
93	Construction of a hybrid quadrupole/fourier transform ion cyclotron resonance mass spectrometer for versatile MS/MS above 10 kDa. <i>Journal of the American Society for Mass Spectrometry</i> , 2004, 15, 1099-1108.	1.2	107
94	Characterization of IHSS Pony Lake fulvic acid dissolved organic matter by electrospray ionization Fourier transform ion cyclotron resonance mass spectrometry and fluorescence spectroscopy. <i>Organic Geochemistry</i> , 2013, 65, 19-28.	0.9	107
95	Peer Reviewed: Scaling MS Plateaus with High-Resolution FT-ICRMS. <i>Analytical Chemistry</i> , 2002, 74, 252 A-259 A.	3.2	106
96	Characterization of Vegetable Oils: A Detailed Compositional Fingerprints Derived from Electrospray Ionization Fourier Transform Ion Cyclotron Resonance Mass Spectrometry. <i>Journal of Agricultural and Food Chemistry</i> , 2004, 52, 5322-5328.	2.4	106
97	Heavy Petroleum Composition. 2. Progression of the Boduszynski Model to the Limit of Distillation by Ultrahigh-Resolution FT-ICR Mass Spectrometry. <i>Energy & Fuels</i> , 2010, 24, 2939-2946.	2.5	106
98	Petroleomics: Advanced Characterization of Petroleum-Derived Materials by Fourier Transform Ion Cyclotron Resonance Mass Spectrometry (FT-ICR MS). , 2007, , 63-93.		105
99	Resolution of 10 ⁴ Compositionally Distinct Components in Polar Coal Extracts by Negative-Ion Electrospray Ionization Fourier Transform Ion Cyclotron Resonance Mass Spectrometry. <i>Energy & Fuels</i> , 2003, 17, 946-953.	2.5	104
100	Atmospheric pressure photoionization proton transfer for complex organic mixtures investigated by fourier transform ion cyclotron resonance mass spectrometry. <i>Journal of the American Society for Mass Spectrometry</i> , 2007, 18, 1682-1689.	1.2	104
101	Comprehensive characterization of marine dissolved organic matter by Fourier transform ion cyclotron resonance mass spectrometry with electrospray and atmospheric pressure photoionization. <i>Rapid Communications in Mass Spectrometry</i> , 2010, 24, 643-650.	0.7	104
102	Compositional Boundaries for Fossil Hydrocarbons. <i>Energy & Fuels</i> , 2011, 25, 2174-2178.	2.5	103
103	Electrically Compensated Fourier Transform Ion Cyclotron Resonance Cell for Complex Mixture Mass Analysis. <i>Analytical Chemistry</i> , 2011, 83, 6907-6910.	3.2	103
104	Baseline Mass Resolution of Peptide Isobars: A Record for Molecular Mass Resolution. <i>Analytical Chemistry</i> , 2001, 73, 647-650.	3.2	102
105	Insight into the Mechanism of Graphene Oxide Degradation via the Photo-Fenton Reaction. <i>Journal of Physical Chemistry C</i> , 2014, 118, 10519-10529.	1.5	101
106	Selective-phase Ion Cyclotron Resonance Spectroscopy. <i>Canadian Journal of Chemistry</i> , 1974, 52, 1997-1999.	0.6	98
107	Experimental determination of the number of trapped ions, detection limit, and dynamic range in Fourier transform ion cyclotron resonance mass spectrometry. <i>Analytical Chemistry</i> , 1993, 65, 135-140.	3.2	97
108	Unique domain appended to vertebrate tRNA synthetase is essential for vascular development. <i>Nature Communications</i> , 2012, 3, 681.	5.8	96

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109	Excitation modes for fourier transform-ion cyclotron resonance mass spectrometry. <i>Journal of the American Society for Mass Spectrometry</i> , 1993, 4, 433-452.	1.2	95
110	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
111	Characterization of Pine Pellet and Peanut Hull Pyrolysis Bio-oils by Negative-Ion Electrospray Ionization Fourier Transform Ion Cyclotron Resonance Mass Spectrometry. <i>Energy & Fuels</i> , 2012, 26, 3810-3815.	2.5	93
112	Combined Top-Down and Bottom-Up Mass Spectrometric Approach to Characterization of Biomarkers for Renal Disease. <i>Analytical Chemistry</i> , 2005, 77, 7163-7171.	3.2	91
113	A robust two-dimensional separation for top-down tandem mass spectrometry of the low-mass proteome. <i>Journal of the American Society for Mass Spectrometry</i> , 2009, 20, 2183-2191.	1.2	91
114	Comprehensive theory of the Fourier transform ion cyclotron resonance signal for all ion trap geometries. <i>Journal of Chemical Physics</i> , 1991, 94, 5341-5352.	1.2	89
115	Unprecedented Ultrahigh Resolution FT-ICR Mass Spectrometry and Parts-Per-Billion Mass Accuracy Enable Direct Characterization of Nickel and Vanadyl Porphyrins in Petroleum from Natural Seeps. <i>Energy & Fuels</i> , 2014, 28, 2454-2464.	2.5	88
116	Resolution, Elemental Composition, and Simultaneous Monitoring by Fourier Transform Ion Cyclotron Resonance Mass Spectrometry of Organosulfur Species before and after Diesel Fuel Processing. <i>Analytical Chemistry</i> , 1998, 70, 4743-4750.	3.2	87
117	Efficient Key Generation by Exploiting Randomness From Channel Responses of Individual OFDM Subcarriers. <i>IEEE Transactions on Communications</i> , 2016, 64, 2578-2588.	4.9	87
118	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
119	Characterization of Athabasca Bitumen Heavy Vacuum Gas Oil Distillation Cuts by Negative/Positive Electrospray Ionization and Automated Liquid Injection Field Desorption Ionization Fourier Transform Ion Cyclotron Resonance Mass Spectrometry. <i>Energy & Fuels</i> , 2008, 22, 3118-3125.	2.5	85
120	Theory of ion cyclotron resonance mass spectrometry: resonant excitation and radial ejection in orthorhombic and cylindrical ion traps. <i>International Journal of Mass Spectrometry and Ion Processes</i> , 1990, 100, 347-379.	1.9	84
121	The Early Development of Fourier Transform Ion Cyclotron Resonance (FT-ICR) Spectroscopy. <i>Journal of Mass Spectrometry</i> , 1996, 31, 581-585.	0.7	84
122	High-Resolution Field Desorption/Ionization Fourier Transform Ion Cyclotron Resonance Mass Analysis of Nonpolar Molecules. <i>Analytical Chemistry</i> , 2003, 75, 2172-2176.	3.2	84
123	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
124	Characterization of Compositional Changes in Vacuum Gas Oil Distillation Cuts by Electrospray Ionization Fourier Transform Ion Cyclotron Resonance (FT-ICR) Mass Spectrometry. <i>Energy & Fuels</i> , 2006, 20, 1664-1673.	2.5	82
125	Structural Characterization and Interfacial Behavior of Acidic Compounds Extracted from a North Sea Oil. <i>Energy & Fuels</i> , 2006, 20, 1980-1987.	2.5	82
126	Secondary fragmentation of linear peptides in electron capture dissociation. <i>International Journal of Mass Spectrometry</i> , 2003, 228, 723-728.	0.7	81

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127	Characterization of Acidic Species in Athabasca Bitumen and Bitumen Heavy Vacuum Gas Oil by Negative-Ion ESI FT-ICR MS with and without Acid Ion Exchange Resin Prefractionation. <i>Energy & Fuels</i> , 2008, 22, 2372-2378.	2.5	81
128	Stored waveform inverse Fourier transform axial excitation/ejection for quadrupole ion trap mass spectrometry. <i>Analytical Chemistry</i> , 1993, 65, 1288-1294.	3.2	79
129	Protein kinase A phosphorylation characterized by tandem Fourier transform ion cyclotron resonance mass spectrometry. <i>Proteomics</i> , 2004, 4, 970-981.	1.3	79
130	Solid-Phase Extraction Fractionation To Extend the Characterization of Naphthenic Acids in Crude Oil by Electrospray Ionization Fourier Transform Ion Cyclotron Resonance Mass Spectrometry. <i>Energy & Fuels</i> , 2014, 28, 5043-5048.	2.5	79
131	Detailed Elemental Compositions of Emulsion Interfacial Material versus Parent Oil for Nine Geographically Distinct Light, Medium, and Heavy Crude Oils, Detected by Negative- and Positive-Ion Electrospray Ionization Fourier Transform Ion Cyclotron Resonance Mass Spectrometry. <i>Energy & Fuels</i> , 2007, 21, 973-981.	2.5	78
132	Chemical Speciation of Calcium and Sodium Naphthenate Deposits by Electrospray Ionization FT-ICR Mass Spectrometry. <i>Energy & Fuels</i> , 2009, 23, 349-355.	2.5	78
133	Stored waveform simultaneous mass-selective ejection/excitation for Fourier transform ion cyclotron resonance mass spectrometry. <i>International Journal of Mass Spectrometry and Ion Processes</i> , 1987, 79, 115-125.	1.9	77
134	Mass Spectrometry: A Recent Advances and Future Directions. <i>The Journal of Physical Chemistry</i> , 1996, 100, 12897-12910.	2.9	77
135	Enhancement of the effective resolution of mass spectra of high-mass biomolecules by maximum entropy-based deconvolution to eliminate the isotopic natural abundance distribution. <i>Journal of the American Society for Mass Spectrometry</i> , 1997, 8, 659-670.	1.2	77
136	Comprehensive Compositional Analysis of Hydrotreated and Untreated Nitrogen-Concentrated Fractions from Syncrude Oil by Electron Ionization, Field Desorption Ionization, and Electrospray Ionization Ultrahigh-Resolution FT-ICR Mass Spectrometry. <i>Energy & Fuels</i> , 2006, 20, 1235-1241.	2.5	77
137	Human recombinant [C22A] FK506-binding protein amide hydrogen exchange rates from mass spectrometry match and extend those from NMR. <i>Protein Science</i> , 1997, 6, 2203-2217.	3.1	77
138	Electron capture dissociation and infrared multiphoton dissociation of oligodeoxynucleotide dications. <i>Journal of the American Society for Mass Spectrometry</i> , 2003, 14, 23-41.	1.2	76
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