## Richard M Caprioli

List of Publications by Year in descending order

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382 papers 33,018 citations

94 h-index 165 g-index

415 all docs

415 docs citations

415 times ranked

18932 citing authors

#	Article	IF	CITATIONS
1	Molecular Imaging of Biological Samples:Â Localization of Peptides and Proteins Using MALDI-TOF MS. Analytical Chemistry, 1997, 69, 4751-4760.	6.5	1,918
2	Imaging mass spectrometry: A new technology for the analysis of protein expression in mammalian tissues. Nature Medicine, 2001, 7, 493-496.	30.7	1,121
3	MALDI imaging mass spectrometry: molecular snapshots of biochemical systems. Nature Methods, 2007, 4, 828-833.	19.0	767
4	Metal Chelation and Inhibition of Bacterial Growth in Tissue Abscesses. Science, 2008, 319, 962-965.	12.6	751
5	Proteomic patterns of tumour subsets in non-small-cell lung cancer. Lancet, The, 2003, 362, 433-439.	13.7	597
6	Direct tissue analysis using matrix-assisted laser desorption/ionization mass spectrometry: practical aspects of sample preparation. Journal of Mass Spectrometry, 2003, 38, 699-708.	1.6	596
7	Analysis of Tissue Specimens by Matrix-Assisted Laser Desorption/Ionization Imaging Mass Spectrometry in Biological and Clinical Research. Chemical Reviews, 2013, 113, 2309-2342.	47.7	585
8	Micro-electrospray mass spectrometry: Ultra-high-sensitivity analysis of peptides and proteins. Journal of the American Society for Mass Spectrometry, 1994, 5, 605-613.	2.8	481
9	Direct Molecular Analysis of Whole-Body Animal Tissue Sections by Imaging MALDI Mass Spectrometry. Analytical Chemistry, 2006, 78, 6448-6456.	6.5	476
10	A Sperm Cytoskeletal Protein That Signals Oocyte Meiotic Maturation and Ovulation. Science, 2001, 291, 2144-2147.	12.6	367
11	Proteome analysis of human colon cancer by two-dimensional difference gel electrophoresis and mass spectrometry. Proteomics, 2004, 4, 793-811.	2.2	352
12	Identification of proteins directly from tissue:in situ tryptic digestions coupled with imaging mass spectrometry. Journal of Mass Spectrometry, 2007, 42, 254-262.	1.6	345
13	Direct analysis of drug candidates in tissue by matrix-assisted laser desorption/ionization mass spectrometry. Journal of Mass Spectrometry, 2003, 38, 1081-1092.	1.6	341
14	Integrating Histology and Imaging Mass Spectrometry. Analytical Chemistry, 2004, 76, 1145-1155.	6.5	332
15	Matrix Sublimation/Recrystallization for Imaging Proteins by Mass Spectrometry at High Spatial Resolution. Analytical Chemistry, 2011, 83, 5728-5734.	6.5	330
16	A continuous-flow sample probe for fast atom bombardment mass spectrometry. Analytical Chemistry, 1986, 58, 2949-2954.	6.5	326
17	Automated Acoustic Matrix Deposition for MALDI Sample Preparation. Analytical Chemistry, 2006, 78, 827-834.	6.5	320
18	MALDI-FTICR Imaging Mass Spectrometry of Drugs and Metabolites in Tissue. Analytical Chemistry, 2008, 80, 5648-5653.	6.5	320

#	Article	IF	Citations
19	Molecular imaging by mass spectrometry — looking beyond classical histology. Nature Reviews Cancer, 2010, 10, 639-646.	28.4	320
20	MALDI Imaging of Lipid Biochemistry in Tissues by Mass Spectrometry. Chemical Reviews, 2011, 111, 6491-6512.	47.7	320
21	Organic ion imaging of biological tissue with secondary ion mass spectrometry and matrix-assisted laser desorption/ionization. Journal of Mass Spectrometry, 2001, 36, 355-369.	1.6	312
22	Mass Spectrometry to Classify Non–Small-Cell Lung Cancer Patients for Clinical Outcome After Treatment With Epidermal Growth Factor Receptor Tyrosine Kinase Inhibitors: A Multicohort Cross-Institutional Study. Journal of the National Cancer Institute, 2007, 99, 838-846.	6.3	303
23	Direct Profiling of Proteins in Biological Tissue Sections by MALDI Mass Spectrometry. Analytical Chemistry, 1999, 71, 5263-5270.	6.5	275
24	Highâ€throughput proteomic analysis of formalinâ€fixed paraffinâ€embedded tissue microarrays using MALDI imaging mass spectrometry. Proteomics, 2008, 8, 3715-3724.	2.2	274
25	Molecular imaging of proteins in tissues by mass spectrometry. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 18126-18131.	7.1	269
26	New Developments in Profiling and Imaging of Proteins from Tissue Sections by MALDI Mass Spectrometry. Journal of Proteome Research, 2006, 5, 2889-2900.	3.7	260
27	Proteomics in Diagnostic Pathology. American Journal of Pathology, 2004, 165, 1057-1068.	3.8	257
28	Enhancement of protein sensitivity for MALDI imaging mass spectrometry after chemical treatment of tissue sections. Journal of the American Society for Mass Spectrometry, 2008, 19, 1069-1077.	2.8	252
29	Proteomic analysis of formalin-fixed paraffin-embedded tissue by MALDI imaging mass spectrometry. Nature Protocols, 2011, 6, 1695-1709.	12.0	242
30	Image fusion of mass spectrometry and microscopy: a multimodality paradigm for molecular tissue mapping. Nature Methods, 2015, 12, 366-372.	19.0	240
31	Imaging mass spectrometry: a new tool to investigate the spatial organization of peptides and proteins in mammalian tissue sections. Current Opinion in Chemical Biology, 2002, 6, 676-681.	6.1	239
32	MALDI imaging mass spectrometry: Spatial molecular analysis to enable a new age of discovery. Journal of Proteomics, 2014, 107, 71-82.	2.4	230
33	Tissue Profiling by Mass Spectrometry. Molecular and Cellular Proteomics, 2005, 4, 394-401.	3.8	229
34	Identification of an Acinetobacter baumannii Zinc Acquisition System that Facilitates Resistance to Calprotectin-mediated Zinc Sequestration. PLoS Pathogens, 2012, 8, e1003068.	4.7	226
35	Imaging mass spectrometry of proteins and peptides: 3D volume reconstruction. Nature Methods, 2008, 5, 101-108.	19.0	225
36	Mass Spectrometric Profiling of Intact Biological Tissue by Using Desorption Electrospray Ionization. Angewandte Chemie - International Edition, 2005, 44, 7094-7097.	13.8	224

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37	Proteomic-Based Prognosis of Brain Tumor Patients Using Direct-Tissue Matrix-Assisted Laser Desorption Ionization Mass Spectrometry. Cancer Research, 2005, 65, 7674-7681.	0.9	221
38	Solvent-free matrix dry-coating for MALDI imaging of phospholipids. Journal of the American Society for Mass Spectrometry, 2008, 19, 882-886.	2.8	211
39	MALDI-MS-based imaging of small molecules and proteins in tissues. Current Opinion in Chemical Biology, 2007, 11, 29-35.	6.1	207
40	Direct profiling and imaging of peptides and proteins from mammalian cells and tissue sections by mass spectrometry. Electrophoresis, 2002, 23, 3125-3135.	2.4	206
41	Profiling and imaging of tissues by imaging ion mobilityâ€mass spectrometry. Journal of Mass Spectrometry, 2007, 42, 1099-1105.	1.6	202
42	Dietary zinc alters the microbiota and decreases resistance to Clostridium difficile infection. Nature Medicine, 2016, 22, 1330-1334.	30.7	201
43	Direct imaging of single cells and tissue at subâ€eellular spatial resolution using transmission geometry MALDI MS. Journal of Mass Spectrometry, 2012, 47, 1473-1481.	1.6	199
44	Protein Profiling in Brain Tumors Using Mass Spectrometry. Clinical Cancer Research, 2004, 10, 981-987.	7.0	198
45	Enhanced Sensitivity for High Spatial Resolution Lipid Analysis by Negative Ion Mode Matrix Assisted Laser Desorption Ionization Imaging Mass Spectrometry. Analytical Chemistry, 2012, 84, 1557-1564.	6.5	194
46	Processing MALDI mass spectra to improve mass spectral direct tissue analysis. International Journal of Mass Spectrometry, 2007, 260, 212-221.	1.5	188
47	Automated mass spectrometry imaging with a matrix-assisted laser desorption ionization time-of-flight instrument. Journal of the American Society for Mass Spectrometry, 1999, 10, 67-71.	2.8	184
48	MALDI imaging mass spectrometry of human tissue: method challenges and clinical perspectives. Trends in Biotechnology, 2011, 29, 136-143.	9.3	175
49	MntABC and MntH Contribute to Systemic Staphylococcus aureus Infection by Competing with Calprotectin for Nutrient Manganese. Infection and Immunity, 2013, 81, 3395-3405.	2.2	173
50	A Novel Histology-directed Strategy for MALDI-MS Tissue Profiling That Improves Throughput and Cellular Specificity in Human Breast Cancer. Molecular and Cellular Proteomics, 2006, 5, 1975-1983.	3.8	169
51	Identification of Markers of Taxane Sensitivity Using Proteomic and Genomic Analyses of Breast Tumors from Patients Receiving Neoadjuvant Paclitaxel and Radiation. Clinical Cancer Research, 2010, 16, 681-690.	7.0	167
52	Molecular Profiling of Experimental Parkinson's Disease:Â Direct Analysis of Peptides and Proteins on Brain Tissue Sections by MALDI Mass Spectrometry. Journal of Proteome Research, 2004, 3, 289-295.	3.7	162
53	Imaging Mass Spectrometry: Principles and Potentials. Toxicologic Pathology, 2005, 33, 92-101.	1.8	161
54	Spatial mapping of protein composition and tissue organization: a primer for multiplexed antibody-based imaging. Nature Methods, 2022, 19, 284-295.	19.0	156

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55	Direct analysis of laser capture microdissected cells by MALDI mass spectrometry. Journal of the American Society for Mass Spectrometry, 2002, 13, 1292-1297.	2.8	153
56	Integrating spatially resolved three-dimensional MALDI IMS with in vivo magnetic resonance imaging. Nature Methods, 2008, 5, 57-59.	19.0	153
57	Molecular Analysis of Tumor Margins by MALDI Mass Spectrometry in Renal Carcinoma. Journal of Proteome Research, 2010, 9, 2182-2190.	3.7	152
58	Assessing Protein Patterns in Disease Using Imaging Mass Spectrometry. Journal of Proteome Research, 2004, 3, 245-252.	3.7	151
59	Signal Transducer and Activator of Transcription 3, Mediated Remodeling of the Tumor Microenvironment Results in Enhanced Tumor Drug Delivery in a Mouse Model of Pancreatic Cancer. Gastroenterology, 2015, 149, 1932-1943.e9.	1.3	151
60	Tissue protein imaging at $1\hat{A}\hat{1}\frac{1}{4}$ m laser spot diameter for high spatial resolution and high imaging speed using transmission geometry MALDI TOF MS. Analytical and Bioanalytical Chemistry, 2015, 407, 2337-2342.	3.7	149
61	High-Performance Molecular Imaging with MALDI Trapped Ion-Mobility Time-of-Flight (timsTOF) Mass Spectrometry. Analytical Chemistry, 2019, 91, 14552-14560.	6.5	148
62	Three-dimensional visualization of protein expression in mouse brain structures using imaging mass spectrometry. Journal of the American Society for Mass Spectrometry, 2005, 16, 1093-1099.	2.8	147
63	Unsupervised machine learning for exploratory data analysis in imaging mass spectrometry. Mass Spectrometry Reviews, 2020, 39, 245-291.	5.4	147
64	Absolute Quantitative MALDI Imaging Mass Spectrometry: A Case of Rifampicin in Liver Tissues. Analytical Chemistry, 2016, 88, 2392-2398.	6.5	145
65	Nonâ€small cell lung cancer is characterized by dramatic changes in phospholipid profiles. International Journal of Cancer, 2015, 137, 1539-1548.	5.1	143
66	Accumulation of long-chain fatty acids in the tumor microenvironment drives dysfunction in intrapancreatic CD8+ T cells. Journal of Experimental Medicine, 2020, $217$ , .	8.5	142
67	Early Changes in Protein Expression Detected by Mass Spectrometry Predict Tumor Response to Molecular Therapeutics. Cancer Research, 2004, 64, 9093-9100.	0.9	141
68	Perspective: A Program to Improve Protein Biomarker Discovery for Cancerâ€. Journal of Proteome Research, 2005, 4, 1104-1109.	3.7	141
69	High-Speed MALDI-TOF Imaging Mass Spectrometry: Rapid Ion Image Acquisition and Considerations for Next Generation Instrumentation. Journal of the American Society for Mass Spectrometry, 2011, 22, 1022-1031.	2.8	137
70	Spatial and temporal alterations of phospholipids determined by mass spectrometry during mouse embryo implantation. Journal of Lipid Research, 2009, 50, 2290-2298.	4.2	136
71	3D Imaging by Mass Spectrometry: A New Frontier. Analytical Chemistry, 2012, 84, 2105-2110.	6.5	134
72	Profiling and imaging proteins in the mouse epididymis by imaging mass spectrometry. Proteomics, 2003, 3, 2221-2239.	2.2	133

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73	Determination of protein-protein interactions by matrix-assisted laser desorption/ionization mass spectrometry., 1998, 33, 697-704.		131
74	Micro-Electrospray: Zeptomole/attomole per microliter sensitivity for peptides. Journal of the American Society for Mass Spectrometry, 1994, 5, 867-869.	2.8	130
75	The pros and cons of peptide-centric proteomics. Nature Biotechnology, 2010, 28, 659-664.	17.5	130
76	Biomarker Discovery by Imaging Mass Spectrometry. Molecular and Cellular Proteomics, 2006, 5, 1876-1886.	3.8	128
77	Nextâ€generation technologies for spatial proteomics: Integrating ultraâ€high speed MALDIâ€TOF and high mass resolution MALDI FTICR imaging mass spectrometry for protein analysis. Proteomics, 2016, 16, 1678-1689.	2.2	123
78	Profiling proteins from azoxymethane-induced colon tumors at the molecular level by matrix-assisted laser desorption/ionization mass spectrometry. Proteomics, 2001, 1, 1320-1326.	2.2	122
79	Instrument design and characterization for high resolution MALDI-MS imaging of tissue sections. Journal of Mass Spectrometry, 2007, 42, 476-489.	1.6	121
80	Protein identification strategies in MALDI imaging mass spectrometry: a brief review. Current Opinion in Chemical Biology, 2019, 48, 64-72.	6.1	121
81	Brain delivery and activity of a lysosomal enzyme using a blood-brain barrier transport vehicle in mice. Science Translational Medicine, 2020, 12, .	12.4	121
82	Matrix-Assisted Laser Desorption Ionization Imaging Mass Spectrometry: In Situ Molecular Mapping. Biochemistry, 2013, 52, 3818-3828.	2.5	118
83	Decreased Striatal Levels of PEP-19 Following MPTP Lesion in the Mouse. Journal of Proteome Research, 2006, 5, 262-269.	3.7	115
84	The innate immune protein calprotectin promotes Pseudomonas aeruginosa and Staphylococcus aureus interaction. Nature Communications, 2016, 7, 11951.	12.8	114
85	Diagnostic Accuracy of MALDI Mass Spectrometric Analysis of Unfractionated Serum in Lung Cancer. Journal of Thoracic Oncology, 2007, 2, 893-901.	1.1	111
86	Alterations in the diabetic myocardial proteome coupled with increased myocardial oxidative stress underlies diabetic cardiomyopathy. Journal of Molecular and Cellular Cardiology, 2007, 42, 884-895.	1.9	111
87	From Whole-body Sections Down to Cellular Level, Multiscale Imaging of Phospholipids by MALDI Mass Spectrometry. Molecular and Cellular Proteomics, 2011, 10, S1-S11.	3.8	108
88	MALDI Imaging Mass Spectrometry – Painting Molecular Pictures. Molecular Oncology, 2010, 4, 529-538.	4.6	107
89	Human tissue distribution of platinum after cis-diamminedichloroplatinum. Cancer Chemotherapy and Pharmacology, 1982, 10, 51-4.	2.3	106
90	MALDI Mass Spectrometry for Direct Tissue Analysis: A New Tool for Biomarker Discoveryâ€. Journal of Proteome Research, 2005, 4, 1138-1142.	3.7	104

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91	Protein signatures for survival and recurrence in metastatic melanoma. Journal of Proteomics, 2011, 74, 1002-1014.	2.4	104
92	Molecular imaging of thin mammalian tissue sections by mass spectrometry. Current Opinion in Biotechnology, 2006, 17, 431-436.	6.6	103
93	Imaging Mass Spectrometryâ€"A New and Promising Method to Differentiate Spitz Nevi From Spitzoid Malignant Melanomas. American Journal of Dermatopathology, 2012, 34, 82-90.	0.6	103
94	Imaging of Intact Tissue Sections: Moving beyond the Microscope. Journal of Biological Chemistry, 2011, 286, 25459-25466.	3.4	102
95	Proteomic Patterns and Prediction of Glomerulosclerosis and Its Mechanisms. Journal of the American Society of Nephrology: JASN, 2005, 16, 2967-2975.	6.1	100
96	MALDI Imaging Mass Spectrometry of Integral Membrane Proteins from Ocular Lens and Retinal Tissue. Journal of Proteome Research, 2009, 8, 3278-3283.	3.7	99
97	Coupling capillary zone electrophoresis and continuous- flow fast atom bombardment mass spectrometry for the analysis of peptide mixtures. Journal of Chromatography A, 1989, 480, 247-257.	3.7	98
98	High spatial resolution imaging mass spectrometry and classical histology on a single tissue section. Journal of Mass Spectrometry, 2011, 46, 568-571.	1.6	98
99	Capillary Electrophoresis Combined with Matrix-Assisted Laser Desorption/Ionization Mass Spectrometry; Continuous Sample Deposition on a Matrix-precoated Membrane Target. Journal of Mass Spectrometry, 1996, 31, 1039-1046.	1.6	97
100	Diabetic nephropathy induces alterations in the glomerular and tubule lipid profiles. Journal of Lipid Research, 2014, 55, 1375-1385.	4.2	95
101	MALDI FTICR IMS of Intact Proteins: Using Mass Accuracy to Link Protein Images with Proteomics Data. Journal of the American Society for Mass Spectrometry, 2015, 26, 974-985.	2.8	95
102	Loss of selenium from selenoproteins: Conversion of selenocysteine to dehydroalanine in vitro. Journal of the American Society for Mass Spectrometry, 2003, 14, 593-600.	2.8	92
103	High Resolution MALDI Imaging Mass Spectrometry of Retinal Tissue Lipids. Journal of the American Society for Mass Spectrometry, 2014, 25, 1394-1403.	2.8	92
104	Detection of pre-neoplastic and neoplastic prostate disease by MADI profiling of urine. Biochemical and Biophysical Research Communications, 2007, 353, 829-834.	2.1	91
105	Specific molecular mass detection of endogenously released neuropeptides using in vivo microdialysis/mass spectrometry. Journal of Neuroscience Methods, 1995, 62, 141-147.	2.5	90
106	Mass Spectrometric Characterization of Full-length Rat Selenoprotein P and Three Isoforms Shortened at the C Terminus. Journal of Biological Chemistry, 2002, 277, 12749-12754.	3.4	89
107	Structural Characterization of Phospholipids and Peptides Directly from Tissue Sections by MALDI Traveling-Wave Ion Mobility-Mass Spectrometry. Analytical Chemistry, 2010, 82, 1881-1889.	6.5	88
108	Proteomic Patterns of Preinvasive Bronchial Lesions. American Journal of Respiratory and Critical Care Medicine, 2005, 172, 1556-1562.	5.6	87

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109	Matrix-Assisted Laser Desorption/Ionization Imaging Mass Spectrometry for the Investigation of Proteins and Peptides. Annual Review of Analytical Chemistry, 2008, 1, 689-705.	5.4	86
110	Variations in the expressed antimicrobial peptide repertoire of northern leopard frog (Rana pipiens) populations suggest intraspecies differences in resistance to pathogens. Developmental and Comparative Immunology, 2009, 33, 1247-1257.	2.3	86
111	Highâ€speed MALDI MS/MS imaging mass spectrometry using continuous raster sampling. Journal of Mass Spectrometry, 2015, 50, 703-710.	1.6	85
112	A derivatization and validation strategy for determining the spatial localization of endogenous amine metabolites in tissues using MALDI imaging mass spectrometry. Journal of Mass Spectrometry, 2014, 49, 665-673.	1.6	81
113	Adhesive Fiber Stratification in Uropathogenic Escherichia coli Biofilms Unveils Oxygen-Mediated Control of Type 1 Pili. PLoS Pathogens, 2015, 11, e1004697.	4.7	78
114	Advanced Registration and Analysis of MALDI Imaging Mass Spectrometry Measurements through Autofluorescence Microscopy. Analytical Chemistry, 2018, 90, 12395-12403.	6.5	78
115	Peer Reviewed: Profiling and Imaging Proteins in Tissue Sections by MS. Analytical Chemistry, 2004, 76, 86 A-93 A.	6.5	76
116	Gastric Cancer-Specific Protein Profile Identified Using Endoscopic Biopsy Samples via MALDI Mass Spectrometry. Journal of Proteome Research, 2010, 9, 4123-4130.	3.7	76
117	The Anti-tumorigenic Properties of Peroxisomal Proliferator-activated Receptor α Are Arachidonic Acid Epoxygenase-mediated. Journal of Biological Chemistry, 2010, 285, 12840-12850.	3.4	75
118	Direct imaging of single cells and tissue at sub-cellular spatial resolution using transmission geometry MALDI MS. Journal of Mass Spectrometry, 2012, 47, i-i.	1.6	75
119	Laser Beam Filtration for High Spatial Resolution MALDI Imaging Mass Spectrometry. Journal of the American Society for Mass Spectrometry, 2013, 24, 1153-1156.	2.8	75
120	Improved detection of †suppressed' peptides in enzymic digests analyzed by fab mass spectrometry. Rapid Communications in Mass Spectrometry, 1987, 1, 15-18.	1.5	74
121	Dual Analysis for Mycobacteria and Propionibacteria in Sarcoidosis BAL. Journal of Clinical Immunology, 2012, 32, 1129-1140.	3.8	73
122	Mass Spectrometry of Intracellular and Membrane Proteins Using Cleavable Detergents. Analytical Chemistry, 2003, 75, 6642-6647.	6.5	71
123	Monitoring the Inflammatory Response to Infection through the Integration of MALDI IMS and MRI. Cell Host and Microbe, 2012, 11, 664-673.	11.0	71
124	Resolving the Complexity of Spatial Lipidomics Using MALDI TIMS Imaging Mass Spectrometry. Analytical Chemistry, 2020, 92, 13290-13297.	6.5	70
125	Carboxy-Terminal Proteolytic Processing of Helicobacter pylori Vacuolating Toxin. Infection and Immunity, 2001, 69, 543-546.	2.2	69
126	Heparin-binding Histidine and Lysine Residues of Rat Selenoprotein P. Journal of Biological Chemistry, 2001, 276, 15823-15831.	3.4	69

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127	Determination of extracellular release of neurotensin in discrete rat brain regions utilizing in vivo microdialysis/electrospray mass spectrometry. Brain Research, 1999, 845, 123-129.	2.2	68
128	Multimodal Imaging Mass Spectrometry: Next Generation Molecular Mapping in Biology and Medicine. Journal of the American Society for Mass Spectrometry, 2020, 31, 2401-2415.	2.8	68
129	Imaging Mass Spectrometry of Intact Proteins from Alcohol-Preserved Tissue Specimens: Bypassing Formalin Fixation. Journal of Proteome Research, 2008, 7, 3543-3555.	3.7	67
130	Imaging mass spectrometry: A new tool for pathology in a molecular age. Proteomics - Clinical Applications, 2013, 7, 733-738.	1.6	67
131	Design of a coaxial continuous flow fast atom bombardment probe. Rapid Communications in Mass Spectrometry, 1988, 2, 100-104.	1.5	66
132	[9] Continuous-flow fast atom bombardment mass spectrometry. Methods in Enzymology, 1990, 193, 214-237.	1.0	66
133	In vivo metabolism of substance P in rat striatum utilizing microdialysis/liquid chromatography/micro-electrospray mass spectrometry. Journal of Mass Spectrometry, 1995, 30, 817-824.	1.6	65
134	Monitoring Mouse Prostate Development by Profiling and Imaging Mass Spectrometry. Molecular and Cellular Proteomics, 2008, 7, 411-423.	3.8	65
135	Reagent Precoated Targets for Rapid In-Tissue Derivatization of the Anti-Tuberculosis Drug Isoniazid Followed by MALDI Imaging Mass Spectrometry. Journal of the American Society for Mass Spectrometry, 2011, 22, 1409-1419.	2.8	65
136	Lung Cancer Diagnosis from Proteomic Analysis of Preinvasive Lesions. Cancer Research, 2011, 71, 3009-3017.	0.9	64
137	Direct Tissue Analysis by Matrix-Assisted Laser Desorption Ionization Mass Spectrometry: Application to Kidney Biology. Seminars in Nephrology, 2007, 27, 597-608.	1.6	62
138	Uterine FK506-binding protein 52 (FKBP52)–peroxiredoxin-6 (PRDX6) signaling protects pregnancy from overt oxidative stress. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 15577-15582.	7.1	62
139	<i>Staphylococcus aureus</i> exhibits heterogeneous siderophore production within the vertebrate host. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 21980-21982.	7.1	62
140	Deciphering Protein Molecular Signatures in Cancer Tissues to Aid in Diagnosis, Prognosis, and Therapy: Figure 1 Cancer Research, 2005, 65, 10642-10645.	0.9	61
141	Imaging Mass Spectrometry Reveals Unique Protein Profiles during Embryo Implantation. Endocrinology, 2008, 149, 3274-3278.	2.8	61
142	Detection of Tumor Epidermal Growth Factor Receptor Pathway Dependence by Serum Mass Spectrometry in Cancer Patients. Cancer Epidemiology Biomarkers and Prevention, 2010, 19, 358-365.	2.5	61
143	Combining solid-phase preconcentration, capillary electrophoresis and off-line matrix-assisted laser desorption/ionization mass spectrometry: intracerebral metabolic processing of peptide Ein vivo. Journal of Mass Spectrometry, 1999, 34, 377-383.	1.6	60
144	Proteomic profiling of mucosal and submucosal colonic tissues yields protein signatures that differentiate the inflammatory colitides. Inflammatory Bowel Diseases, 2011, 17, 875-883.	1.9	59

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145	Prostaglandin H2 (PGH2) accelerates formation of amyloidâ€∫β1â^'42 oligomers. Journal of Neurochemistry, 2002, 82, 1003-1006.	3.9	58
146	Integrated molecular imaging reveals tissue heterogeneity driving host-pathogen interactions. Science Translational Medicine, 2018, 10, .	12.4	58
147	Phospholipid profiling identifies acyl chain elongation as a ubiquitous trait and potential target for the treatment of lung squamous cell carcinoma. Oncotarget, 2016, 7, 12582-12597.	1.8	58
148	High sensitivity mass spectrometric determination of peptides: Direct analysis of aqueous solutions. Biochemical and Biophysical Research Communications, 1986, 141, 1058-1065.	2.1	57
149	Differentiating Proteomic Biomarkers in Breast Cancer by Laser Capture Microdissection and MALDI MS. Journal of Proteome Research, 2008, 7, 1500-1507.	3.7	57
150	Matrix Pre-Coated MALDI MS Targets for Small Molecule Imaging in Tissues. Journal of the American Society for Mass Spectrometry, 2011, 22, 192-195.	2.8	57
151	Differential Intrahepatic Phospholipid Zonation in Simple Steatosis and Nonalcoholic Steatohepatitis. PLoS ONE, 2013, 8, e57165.	2.5	57
152	Microbore high-performance liquid chromatographyâ€"mass spectrometry for the analysis of proteolytic digests by continuous-flow fast-atom bombardment mass spectrometry. Journal of Chromatography A, 1988, 443, 355-362.	3.7	56
153	Assessing the multimeric states of proteins: Studies using laser desorption mass spectrometry. Biological Mass Spectrometry, 1991, 20, 796-800.	0.5	56
154	Onâ€tissue chemical derivatization of 3â€methoxysalicylamine for MALDIâ€imaging mass spectrometry. Journal of Mass Spectrometry, 2011, 46, 840-846.	1.6	56
155	Absolute Quantification of Rifampicin by MALDI Imaging Mass Spectrometry Using Multiple TOF/TOF Events in a Single Laser Shot. Journal of the American Society for Mass Spectrometry, 2017, 28, 136-144.	2.8	56
156	Microbore HPLC / mass spectrometry for the analysis of peptide mixtures using a continuous flow interface. Biochemical and Biophysical Research Communications, 1987, 146, 291-299.	2.1	55
157	Fast atom bombardment mass spectrometry for determination of dissociation constants of weak acids in solution. Analytical Chemistry, 1983, 55, 2387-2391.	6.5	51
158	Dietary Manganese Promotes Staphylococcal Infection of the Heart. Cell Host and Microbe, 2017, 22, 531-542.e8.	11.0	51
159	MicroLESA: Integrating Autofluorescence Microscopy, In Situ Micro-Digestions, and Liquid Extraction Surface Analysis for High Spatial Resolution Targeted Proteomic Studies. Analytical Chemistry, 2019, 91, 7578-7585.	6.5	51
160	Selective Profiling of Proteins in Lung Cancer Cells from Fine-Needle Aspirates by Matrix-Assisted Laser Desorption Ionization Time-of-Flight Mass Spectrometry. Clinical Cancer Research, 2006, 12, 5142-5150.	7.0	50
161	Liquid Chromatography-Tandem and MALDI Imaging Mass Spectrometry Analyses of RCL2/CS100-Fixed, Paraffin-Embedded Tissues: Proteomics Evaluation of an Alternate Fixative for Biomarker Discovery. Journal of Proteome Research, 2009, 8, 5619-5628.	3.7	49
162	Targeted Multiplex Imaging Mass Spectrometry in Transmission Geometry for Subcellular Spatial Resolution. Journal of the American Society for Mass Spectrometry, 2013, 24, 609-614.	2.8	49

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163	Spatial Metabolomics of the Human Kidney using MALDI Trapped Ion Mobility Imaging Mass Spectrometry. Analytical Chemistry, 2020, 92, 13084-13091.	6.5	49
164	Proteomic patterns of colonic mucosal tissues delineate Crohn's colitis and ulcerative colitis. Proteomics - Clinical Applications, 2013, 7, 541-549.	1.6	48
165	Imaging mass spectrometry for assessing temporal proteomics: Analysis of calprotectin in <i>Acinetobacter baumannii</i>	2.2	48
166	Imaging mass spectrometry: Molecular microscopy for the new age of biology and medicine. Proteomics, 2016, 16, 1607-1612.	2.2	48
167	Uncovering matrix effects on lipid analyses in MALDI imaging mass spectrometry experiments. Journal of Mass Spectrometry, 2020, 55, e4491.	1.6	48
168	Frequency scan for the analysis of high mass ions generated by matrix-assisted laser desorption/ionization in a Paul trap., 1999, 13, 1792-1796.		47
169	Localized in Situ Hydrogel-Mediated Protein Digestion and Extraction Technique for on-Tissue Analysis. Analytical Chemistry, 2013, 85, 2717-2723.	6.5	46
170	Implementation of a Gaussian Beam Laser and Aspheric Optics for High Spatial Resolution MALDI Imaging MS. Journal of the American Society for Mass Spectrometry, 2014, 25, 1079-1082.	2.8	46
171	Next Generation Histology-Directed Imaging Mass Spectrometry Driven by Autofluorescence Microscopy. Analytical Chemistry, 2018, 90, 12404-12413.	6.5	46
172	Micro-preparation procedure for high-sensitivity matrix-assisted laser desorption ionization mass spectrometry. Journal of Mass Spectrometry, 1995, 30, 1768-1771.	1.6	45
173	Matrix Precoated Targets for Direct Lipid Analysis and Imaging of Tissue. Analytical Chemistry, 2013, 85, 2907-2912.	6.5	44
174	Connecting imaging mass spectrometry and magnetic resonance imaging-based anatomical atlases for automated anatomical interpretation and differential analysis. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2017, 1865, 967-977.	2.3	44
175	Probiotics Modulate a Novel Amphibian Skin Defense Peptide That Is Antifungal and Facilitates Growth of Antifungal Bacteria. Microbial Ecology, 2020, 79, 192-202.	2.8	44
176	Combining Salt Doping and Matrix Sublimation for High Spatial Resolution MALDI Imaging Mass Spectrometry of Neutral Lipids. Analytical Chemistry, 2019, 91, 12928-12934.	6.5	43
177	Enzymes and mass spectrometry: A dynamic combination. Mass Spectrometry Reviews, 1987, 6, 237-287.	5.4	42
178	Peptide sequence analysis using exopeptidases with molecular analysis of the truncated polypeptides by mass spectrometry. Analytical Biochemistry, 1986, 154, 596-603.	2.4	41
179	MALDI Imaging and in Situ Identification of Integral Membrane Proteins from Rat Brain Tissue Sections. Analytical Chemistry, 2013, 85, 7191-7196.	6.5	41
180	Enhanced Ion Transmission Efficiency up to <i>m</i> /i>/ <i>z</i> 24â€⁻000 for MALDI Protein Imaging Mass Spectrometry. Analytical Chemistry, 2018, 90, 5090-5099.	6.5	41

#	Article	lF	Citations
181	Direct Molecular Analysis of Whole-Body Animal Tissue Sections by MALDI Imaging Mass Spectrometry. Methods in Molecular Biology, 2010, 656, 285-301.	0.9	41
182	Indomethacin Amides as a Novel Molecular Scaffold for Targeting <i>Trypanosoma cruzi</i> Sterol 14î±-Demethylase. Journal of Medicinal Chemistry, 2009, 52, 2846-2853.	6.4	40
183	Imaging the Clear Cell Renal Cell Carcinoma Proteome. Journal of Urology, 2013, 189, 1097-1103.	0.4	40
184	Activation of heme biosynthesis by a small molecule that is toxic to fermenting <i>Staphylococcus aureus</i> . Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 8206-8211.	7.1	40
185	Regional differences in brain glucose metabolism determined by imaging mass spectrometry. Molecular Metabolism, 2018, 12, 113-121.	6.5	40
186	Multivariable Difference Gel Electrophoresis and Mass Spectrometry. Molecular and Cellular Proteomics, 2007, 6, 150-169.	3.8	39
187	Zn-regulated GTPase metalloprotein activator 1 modulates vertebrate zinc homeostasis. Cell, 2022, 185, 2148-2163.e27.	28.9	39
188	In situ molecular imaging of proteins in tissues using mass spectrometry. Analytical and Bioanalytical Chemistry, 2008, 391, 899-903.	3.7	38
189	Imaging mass spectrometry assists in the classification of diagnostically challenging atypical Spitzoid neoplasms. Journal of the American Academy of Dermatology, 2016, 75, 1176-1186.e4.	1.2	38
190	Activity-Based Probes Linked with Laser-Cleavable Mass Tags for Signal Amplification in Imaging Mass Spectrometry: Analysis of Serine Hydrolase Enzymes in Mammalian Tissue. Analytical Chemistry, 2012, 84, 3689-3695.	6.5	37
191	Automated Anatomical Interpretation of Ion Distributions in Tissue: Linking Imaging Mass Spectrometry to Curated Atlases. Analytical Chemistry, 2014, 86, 8974-8982.	6.5	37
192	Bis(monoacylglycero)phosphate lipids in the retinal pigment epithelium implicate lysosomal/endosomal dysfunction in a model of Stargardt disease and human retinas. Scientific Reports, 2017, 7, 17352.	3.3	37
193	Zinc intoxication induces ferroptosis in A549 human lung cells. Metallomics, 2019, 11, 982-993.	2.4	37
194	Increased Levels of Ubiquitin in the 6-OHDA-Lesioned Striatum of Rats. Journal of Proteome Research, 2005, 4, 223-226.	3.7	36
195	Imaging mass spectrometry: Towards clinical diagnostics. Proteomics - Clinical Applications, 2008, 2, 1435-1443.	1.6	36
196	Networked-based Characterization of Extracellular Matrix Proteins from Adult Mouse Pulmonary and Aortic Valves. Journal of Proteome Research, 2011, 10, 812-823.	3.7	36
197	Race Disparities in Wilms Tumor Incidence and Biology. Journal of Surgical Research, 2011, 170, 112-119.	1.6	36
198	Acyl-Coenzyme A–Binding Protein Regulates Beta-Oxidation Required for Growth and Survival of Non–Small Cell Lung Cancer. Cancer Prevention Research, 2014, 7, 748-757.	1.5	36

#	Article	IF	CITATIONS
199	Following enzyme catalysis in real-time inside a fast atom bombardment mass spectrometer. Biomedical Mass Spectrometry, 1983, 10, 98-102.	1.9	35
200	Recent advances in liquid chromatographyâ€"mass spectrometry and capillary zone electrophoresisâ€"mass spectrometry for protein analysis. Journal of Chromatography A, 1991, 553, 101-116.	3.7	35
201	Characterization of the Lysyl Adducts of Prostaglandin H-Synthases That Are Derived from Oxygenation of Arachidonic Acidâ€. Biochemistry, 2001, 40, 6948-6955.	2.5	35
202	Synthesis of phosphopeptides containing <i>O</i> àâ€phosphoserine or <i>O</i> â€phosphothreonine. International Journal of Peptide and Protein Research, 1989, 33, 468-476.	0.1	35
203	An LC–MS assay for the screening of cardiovascular medications in human samples. Journal of Chromatography B: Analytical Technologies in the Biomedical and Life Sciences, 2013, 937, 44-53.	2.3	35
204	Imaging Mass Spectrometry for Assessing Cutaneous Wound Healing: Analysis of Pressure Ulcers. Journal of Proteome Research, 2015, 14, 986-996.	3.7	35
205	Combining MALDIâ€2 and transmission geometry laser optics to achieve high sensitivity for ultraâ€high spatial resolution surface analysis. Journal of Mass Spectrometry, 2019, 54, 366-370.	1.6	35
206	Determination of Plasma Fentanyl by Gc-mass Spectrometry and Pharmacokinetic Analysis. Journal of Pharmaceutical Sciences, 1981, 70, 1276-1279.	3.3	34
207	Quantitative aspects of fast atom bombardment mass spectrometry. Biomedical Mass Spectrometry, 1984, 11, 60-62.	1.9	34
208	Advanced mass spectrometry technologies for the study of microbial pathogenesis. Current Opinion in Microbiology, 2014, 19, 45-51.	5.1	34
209	Integrated, High-Throughput, Multiomics Platform Enables Data-Driven Construction of Cellular Responses and Reveals Global Drug Mechanisms of Action. Journal of Proteome Research, 2017, 16, 1364-1375.	3.7	34
210	Heme sensing and detoxification by HatRT contributes to pathogenesis during Clostridium difficile infection. PLoS Pathogens, 2018, 14, e1007486.	4.7	34
211	Imaging mass spectrometry enables molecular profiling of mouse and human pancreatic tissue. Diabetologia, 2019, 62, 1036-1047.	6.3	33
212	Tissue profiling MALDI mass spectrometry reveals prominent calcium-binding proteins in the proteome of regenerative MRL mouse wounds. Wound Repair and Regeneration, 2008, 16, 442-449.	3.0	32
213	Imaging Mass Spectrometry: Viewing the Future. Methods in Molecular Biology, 2010, 656, 3-19.	0.9	32
214	Decellularization of intact tissue enables MALDI imaging mass spectrometry analysis of the extracellular matrix. Journal of Mass Spectrometry, 2015, 50, 1288-1293.	1.6	32
215	Potential of MALDI imaging for the toxicological evaluation of environmental pollutants. Journal of Proteomics, 2016, 144, 133-139.	2.4	32
216	Single-Cell Mass Spectrometry Reveals Changes in Lipid and Metabolite Expression in RAW 264.7 Cells upon Lipopolysaccharide Stimulation. Journal of the American Society for Mass Spectrometry, 2018, 29, 1012-1020.	2.8	32

#	Article	IF	Citations
217	An Integrated, High-Throughput Strategy for Multiomic Systems Level Analysis. Journal of Proteome Research, 2018, 17, 3396-3408.	3.7	32
218	A recommended and verified procedure for <i>in situ</i> tryptic digestion of formalinâ€fixed paraffinâ€embedded tissues for analysis by matrixâ€assisted laser desorption/ionization imaging mass spectrometry. Journal of Mass Spectrometry, 2019, 54, 716-727.	1.6	32
219	Imaging Mass Spectrometry: A Perspective. Journal of Biomolecular Techniques, 2019, 30, 7-11.	1.5	32
220	Combined Src/EGFR Inhibition Targets STAT3 Signaling and Induces Stromal Remodeling to Improve Survival in Pancreatic Cancer. Molecular Cancer Research, 2020, 18, 623-631.	3.4	32
221	Strain-based Sequence Variations and Structure Analysis of Murine Prostate Specific Spermine Binding Protein Using Mass Spectrometryâ€. Biochemistry, 2001, 40, 9725-9733.	2.5	31
222	Combination Detergent/MALDI Matrix:Â Functional Cleavable Detergents for Mass Spectrometry. Analytical Chemistry, 2005, 77, 5036-5040.	6.5	31
223	EXIMS: an improved data analysis pipeline based on a new peak picking method for EXploring Imaging Mass Spectrometry data. Bioinformatics, 2015, 31, 3198-3206.	4.1	31
224	Integrating ion mobility and imaging mass spectrometry for comprehensive analysis of biological tissues: A brief review and perspective. Journal of Mass Spectrometry, 2020, 55, e4614.	1.6	31
225	ScanRanker: Quality Assessment of Tandem Mass Spectra via Sequence Tagging. Journal of Proteome Research, 2011, 10, 2896-2904.	3.7	30
226	Histology-directed and imaging mass spectrometry: An emerging technology in ectopic calcification. Bone, 2015, 74, 83-94.	2.9	30
227	Pragmatic pharmacology: population pharmacokinetic analysis of fentanyl using remnant samples from children after cardiac surgery. British Journal of Clinical Pharmacology, 2016, 81, 1165-1174.	2.4	30
228	Spatial distributions of glutathione and its endogenous conjugates in normal bovine lens and a model of lens aging. Experimental Eye Research, 2017, 154, 70-78.	2.6	30
229	Increased Striatal mRNA and Protein Levels of the Immunophilin FKBP-12 in Experimental Parkinson's Disease and Identification of FKBP-12-Binding Proteins. Journal of Proteome Research, 2007, 6, 3952-3961.	3.7	29
230	Effect of MALDI matrices on lipid analyses of biological tissues using MALDIâ€2 postionization mass spectrometry. Journal of Mass Spectrometry, 2020, 55, e4663.	1.6	29
231	Blood-brain barrier penetration of 3-aminopropyl-n-butylphosphinic acid (CGP 36742) in rat brain by microdialysis/mass spectrometry., 1998, 33, 281-287.		28
232	MALDIâ€MS derived prognostic protein markers for resected nonâ€small cell lung cancer. Proteomics - Clinical Applications, 2008, 2, 1508-1517.	1.6	28
233	Histology-Directed Microwave Assisted Enzymatic Protein Digestion for MALDI MS Analysis of Mammalian Tissue. Analytical Chemistry, 2015, 87, 670-676.	6.5	28
234	Life history linked to immune investment in developing amphibians. , 2016, 4, cow025.		28

#	Article	IF	Citations
235	Lipid Landscape of the Human Retina and Supporting Tissues Revealed by High-Resolution Imaging Mass Spectrometry. Journal of the American Society for Mass Spectrometry, 2020, 31, 2426-2436.	2.8	28
236	In vivoprocessing of LVV-hemorphin-7 in rat brain and blood utilizing microdialysis combined with electrospray mass spectrometry. Rapid Communications in Mass Spectrometry, 2003, 17, 838-844.	1.5	27
237	Molecular characterization of Wilms' tumor from a resourceâ€constrained region of subâ€Saharan Africa. International Journal of Cancer, 2012, 131, E983-94.	5.1	27
238	Imaging Mass Spectrometry: Enabling a New Age of Discovery in Biology and Medicine Through Molecular Microscopy. Journal of the American Society for Mass Spectrometry, 2015, 26, 850-852.	2.8	27
239	Enhanced Spatially Resolved Proteomics Using On-Tissue Hydrogel-Mediated Protein Digestion. Analytical Chemistry, 2017, 89, 2948-2955.	6.5	27
240	Protein identification in imaging mass spectrometry through spatially targeted liquid microâ€extractions. Rapid Communications in Mass Spectrometry, 2018, 32, 442-450.	1.5	27
241	Highly multiplexed immunofluorescence of the human kidney using co-detection by indexing. Kidney International, 2022, 101, 137-143.	5.2	27
242	Phthalate esters in normal and pathological human kidneys. Bulletin of Environmental Contamination and Toxicology, 1979, 22, 536-542.	2.7	26
243	Performance of a fast atom bombardment source on a quadrupole mass spectrometer. Biomedical Mass Spectrometry, 1983, 10, 94-97.	1.9	26
244	Spatial mapping by imaging mass spectrometry offers advancements for rapid definition of human skin proteomic signatures. Experimental Dermatology, 2011, 20, 642-647.	2.9	26
245	Race Disparities in Peptide Profiles of North American and Kenyan Wilms Tumor Specimens. Journal of the American College of Surgeons, 2014, 218, 707-720.	0.5	26
246	Co-registration of multi-modality imaging allows for comprehensive analysis of tumor-induced bone disease. Bone, 2014, 61, 208-216.	2.9	26
247	Discovering New Lipidomic Features Using Cell Type Specific Fluorophore Expression to Provide Spatial and Biological Specificity in a Multimodal Workflow with MALDI Imaging Mass Spectrometry. Analytical Chemistry, 2020, 92, 7079-7086.	6.5	26
248	Proteomic exploration of pancreatic islets in mice null for the $\hat{l}\pm2A$ adrenergic receptor. Journal of Molecular Endocrinology, 2005, 35, 73-88.	2.5	25
249	Identification of dimethyldioctadecylammonium ion (m/z 550.6) and related species (m/z 522.6, 494.6) as a source of contamination in mass spectrometry. Journal of the American Society for Mass Spectrometry, 2008, 19, 666-670.	2.8	25
250	Mechanism of the expulsion of oh from the [M ï£; C2H4]+Ë™ ion from ethyl benzoate. Organic Mass Spectrometry, 1970, 3, 1333-1340.	1.3	24
251	In vitro metabolism of LVV-hemorphin-7 in human plasma studied by reversed-phase high-performance liquid chromatography and micro-electrospray mass spectrometry. Journal of Chromatography A, 1996, 743, 207-212.	3.7	24
252	Molecular Fingerprinting in Human Lung Cancer. Clinical Lung Cancer, 2003, 5, 113-118.	2.6	24

#	Article	IF	CITATIONS
253	Identification of Early Intestinal Neoplasia Protein Biomarkers Using Laser Capture Microdissection and MALDI MS. Molecular and Cellular Proteomics, 2009, 8, 936-945.	3.8	24
254	Label-free molecular imaging of the kidney. Kidney International, 2017, 92, 580-598.	5.2	24
255	Impact of temperature-dependent phage expression on Pseudomonas aeruginosa biofilm formation. Npj Biofilms and Microbiomes, 2021, 7, 22.	6.4	24
256	Direct Analysis of Aqueous Samples by Matrix-assisted Laser Description Ionization Mass Spectrometry Using Membrane Targets Precoated with Matrix., 1996, 31, 690-692.		23
257	Multiplexed molecular descriptors of pressure ulcers defined by imaging mass spectrometry. Wound Repair and Regeneration, 2011, 19, 734-744.	3.0	23
258	Targeted Multiplex Imaging Mass Spectrometry with Single Chain Fragment Variable (scfv) Recombinant Antibodies. Journal of the American Society for Mass Spectrometry, 2012, 23, 1689-1696.	2.8	23
259	Imaging mass spectrometry: Molecular microscopy for enabling a new age of discovery. Proteomics, 2014, 14, 807-809.	2.2	23
260	Matrix preâ€coated targets for high throughput MALDI imaging of proteins. Journal of Mass Spectrometry, 2014, 49, 417-422.	1.6	23
261	Determination of Km and Vmax for tryptic peptide hydrolysis using fast atom bombardment mass spectrometry. Analytical Chemistry, 1986, 58, 1080-1083.	6.5	22
262	Mass spectrometric determination of selenenylsulfide linkages in rat selenoprotein P. Journal of Mass Spectrometry, 2005, 40, 400-404.	1.6	22
263	Proteomics in Diagnostic Neuropathology. Journal of Neuropathology and Experimental Neurology, 2006, 65, 837-845.	1.7	22
264	Epididymis-specific lipocalin promoters. Asian Journal of Andrology, 2007, 9, 515-521.	1.6	22
265	Detergent enhancement of onâ€tissue protein analysis by matrixâ€assisted laser desorption/ionization imaging mass spectrometry. Rapid Communications in Mass Spectrometry, 2011, 25, 199-204.	1.5	22
266	Mass Spectrometry Imaging Can Distinguish on a Proteomic Level Between Proliferative Nodules Within a Benign Congenital Nevus and Malignant Melanoma. American Journal of Dermatopathology, 2017, 39, 689-695.	0.6	22
267	Novel vacuum stable ketoneâ€based matrices for high spatial resolution MALDI imaging mass spectrometry. Journal of Mass Spectrometry, 2018, 53, 1005-1012.	1.6	22
268	High-Throughput Quantification of Bioactive Lipids by MALDI Mass Spectrometry: Application to Prostaglandins. Analytical Chemistry, 2011, 83, 6683-6688.	6.5	21
269	Congenital nevi versus metastatic melanoma in a newborn to a mother with malignant melanoma–Âdiagnosis supported by sex chromosome analysis and Imaging Mass Spectrometry. Journal of Cutaneous Pathology, 2015, 42, 757-764.	1.3	21
270	Enzyme reaction rates determined by fast atom bombardment mass spectrometry. Biomedical Mass Spectrometry, 1984, 11, 392-395.	1.9	20

#	Article	IF	CITATIONS
271	Identification of nearest-neighbor peptides in protease digests by mass spectrometry for construction of sequence-ordered tryptic maps. Biological Mass Spectrometry, 1991, 20, 210-214.	0.5	20
272	Mass spectrometry in the exploration of Mars. Journal of Mass Spectrometry, 2003, 38, 1-10.	1.6	20
273	Identification of promethazine as an amyloid-binding molecule using a fluorescence high-throughput assay and MALDI imaging mass spectrometry. Neurolmage: Clinical, 2013, 2, 620-629.	2.7	20
274	Automated biomarker candidate discovery in imaging mass spectrometry data through spatially localized Shapley additive explanations. Analytica Chimica Acta, 2021, 1177, 338522.	5.4	20
275	High Spatial Resolution MALDI Imaging Mass Spectrometry of Fresh-Frozen Bone. Analytical Chemistry, 2022, 94, 3165-3172.	6.5	20
276	Direct analysis of drugs by continuous-flow fast-atom bombardment and tandem mass spectrometry. Rapid Communications in Mass Spectrometry, 1989, 3, 117-122.	1.5	19
277	Identification of Protein Fragments as Pattern Features in MALDIâ^'MS Analyses of Serum. Journal of Proteome Research, 2005, 4, 1672-1680.	3.7	19
278	Perspectives on imaging mass spectrometry in biology and medicine. Proteomics, 2008, 8, 3679-3680.	2.2	19
279	From proteomic multimarker profiling to interesting proteins: thymosinâ€Î² <sub>4</sub> and kininogenâ€Î as new potential biomarkers for inflammatory hepatic lesions. Journal of Cellular and Molecular Medicine, 2011, 15, 2176-2188.	3.6	19
280	Trypsin and MALDI matrix preâ€coated targets simplify sample preparation for mapping proteomic distributions within biological tissues by imaging mass spectrometry. Journal of Mass Spectrometry, 2016, 51, 1168-1179.	1.6	19
281	Optic Nerve Regeneration After Crush Remodels the Injury Site: Molecular Insights From Imaging Mass Spectrometry., 2018, 59, 212.		19
282	Micro-Data-Independent Acquisition for High-Throughput Proteomics and Sensitive Peptide Mass Spectrum Identification. Analytical Chemistry, 2018, 90, 8905-8911.	6.5	19
283	Histopathologic, immunophenotypic, and proteomics characteristics of low-grade phyllodes tumor and fibroadenoma: more similarities than differences. Npj Breast Cancer, 2020, 6, 27.	<b>5.2</b>	19
284	Characterization of mixtures of dipeptides by gas chromatography/mass spectrometry. Analytical Biochemistry, 1978, 88, 149-161.	2.4	18
285	Analyses of carcinogen-modified oligonucleotides by fast atom bombardment/ tandem mass spectrometry. Rapid Communications in Mass Spectrometry, 1987, 1, 69-71.	1.5	18
286	[20] Fast atom bombardment mass spectrometry. Methods in Enzymology, 1996, 270, 453-486.	1.0	18
287	Epididymal Lipocalin-Type Prostaglandin D2 Synthase: Identification Using Mass Spectrometry, Messenger RNA Localization, and Immunodetection in Mouse, Rat, Hamster, and Monkey1. Biology of Reproduction, 2002, 66, 524-533.	2.7	18
288	High-Throughput Profiling of Formalin-Fixed Paraffin-Embedded Tissue Using Parallel Electrophoresis and Matrix-Assisted Laser Desorption Ionization Mass Spectrometry. Analytical Chemistry, 2009, 81, 7490-7495.	6.5	18

#	Article	IF	CITATIONS
289	High spatial resolution proteomic comparison of the brain in humans and chimpanzees. Journal of Comparative Neurology, 2015, 523, 2043-2061.	1.6	18
290	Pyruvate induces torpor in obese mice. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 810-815.	7.1	18
291	Proteomic Strategies for the Characterization and the Early Detection of Lung Cancer. Journal of Thoracic Oncology, 2006, 1, 1027-1039.	1.1	18
292	Quantitative high-performance liquid chromatography and mass spectrometry for the analysis of the in vitro metabolism of the insecticide azinphos-methyl (Guthion) by rat liver homogenates. Journal of Agricultural and Food Chemistry, 1980, 28, 85-88.	5.2	17
293	Analysis of mixtures of hydrophilic peptides by continuous-flow fast atom bombardment mass spectrometry. International Journal of Mass Spectrometry and Ion Processes, 1988, 86, 187-199.	1.8	17
294	Identification of phosphorylation sites in glycine N-methyltransferase from rat liver. Protein Science, 2006, 15, 785-794.	7.6	17
295	3-D imaging mass spectrometry of protein distributions in mouse Neurofibromatosis 1 (NF1)-associated optic glioma. Journal of Proteomics, 2016, 149, 77-84.	2.4	17
296	Dynamic Range Expansion by Gas-Phase Ion Fractionation and Enrichment for Imaging Mass Spectrometry. Analytical Chemistry, 2020, 92, 13092-13100.	6.5	17
297	Integrated molecular imaging technologies for investigation of metals in biological systems: A brief review. Current Opinion in Chemical Biology, 2020, 55, 127-135.	6.1	17
298	Spatially Targeted Proteomics of the Host–Pathogen Interface during Staphylococcal Abscess Formation. ACS Infectious Diseases, 2021, 7, 101-113.	3.8	17
299	Cell-Autonomous and Non-Cell-Autonomous Roles for Irf6 during Development of the Tongue. PLoS ONE, 2013, 8, e56270.	2.5	17
300	The Need for Speed in Matrix-Assisted Laser Desorption/Ionization Imaging Mass Spectrometry. Postdoc Journal, 2016, 4, 3-13.	0.4	17
301	Mapping of surrogate markers of cellular components and structures using laser desorption/ionization mass spectrometry. , 2000, 35, 258-264.		16
302	Nonacid cleavable detergents applied to MALDI mass spectrometry profiling of whole cells. Journal of Mass Spectrometry, 2005, 40, 1319-1326.	1.6	16
303	Direct profiling of the cerebellum by matrix-assisted laser desorption/ionization time-of-flight mass spectrometry: A methodological study in postnatal and adult mouse. Journal of Neuroscience Research, 2005, 81, 613-621.	2.9	16
304	Histologyâ€guided protein digestion/extraction from formalinâ€fixed and paraffinâ€embedded pressure ulcer biopsies. Experimental Dermatology, 2016, 25, 143-146.	2.9	16
305	Clostridioides difficile infection induces a rapid influx of bile acids into the gut during colonization of the host. Cell Reports, 2021, 36, 109683.	6.4	16
306	Proteolytic activity of dipeptidyl carboxypeptidase from human lung. Biochemical and Biophysical Research Communications, 1980, 93, 1290-1296.	2.1	15

#	Article	IF	CITATIONS
307	Reversed-phase high-performance liquid chromatography combined with tandem mass spectrometry in studies of a substance P-converting enzyme from human cerebrospinal fluid. Journal of Chromatography A, 1996, 743, 213-220.	3.7	15
308	Epididymis-specific promoter-driven gene targeting: A transcription factor which regulates epididymis-specific gene expression. Molecular and Cellular Endocrinology, 2006, 250, 184-189.	3.2	15
309	Differential Efficacy of Combined Therapy With Radiation and AEE788 in High and Low EGFR-Expressing Androgen-Independent Prostate Tumor Models. International Journal of Radiation Oncology Biology Physics, 2008, 71, 237-246.	0.8	15
310	Modulating Isoprenoid Biosynthesis Increases Lipooligosaccharides and Restores Acinetobacter baumannii Resistance to Host and Antibiotic Stress. Cell Reports, 2020, 32, 108129.	6.4	14
311	Enhancement of Tryptic Peptide Signals from Tissue Sections Using MALDI IMS Postionization (MALDI-2). Journal of the American Society for Mass Spectrometry, 2021, 32, 2583-2591.	2.8	14
312	Protocol for multimodal analysis of human kidney tissue by imaging mass spectrometry and CODEX multiplexed immunofluorescence. STAR Protocols, 2021, 2, 100747.	1.2	14
313	Genomic and Proteomic Analysis of Mammary Tumors Arising in Transgenic Mice. Journal of Proteome Research, 2005, 4, 2088-2098.	3.7	13
314	MALDI Imaging Mass Spectrometry as a Lipidomic Approach to Heart Valve Research. Journal of Heart Valve Disease, 2016, 25, 240-252.	0.5	13
315	Protein N-terminal analysis using fast atom bombardment mass spectrometry. Analytical Biochemistry, 1983, 130, 328-333.	2.4	12
316	Are clear cell carcinomas of the ovary and endometrium phenotypically identical? A proteomic analysis. Human Pathology, 2015, 46, 1427-1436.	2.0	12
317	Multiple Time-of-Flight/Time-of-Flight Events in a Single Laser Shot for Improved Matrix-Assisted Laser Desorption/Ionization Tandem Mass Spectrometry Quantification. Analytical Chemistry, 2016, 88, 9780-9788.	6.5	12
318	Multiple TOF/TOF events in a single laser shot for multiplexed lipid identifications in MALDI imaging mass spectrometry. International Journal of Mass Spectrometry, 2019, 437, 30-37.	1.5	12
319	Fast atom bombardment for real-time analysis of peptide fragments from protein digestions. International Journal of Mass Spectrometry and Ion Physics, 1983, 46, 419-422.	1.3	11
320	Mass discrimination in matrix-assisted laser desorption ionization time-of-flight mass spectrometry: A study using cross-linked oligomeric complexes. Journal of Mass Spectrometry, 1995, 30, 1245-1254.	1.6	11
321	Proteomic analysis of osteogenic sarcoma: association of tumour necrosis factor with poor prognosis. International Journal of Experimental Pathology, 2010, 91, 335-349.	1.3	11
322	In situ mass spectrometry of autoimmune liver diseases. Cellular and Molecular Immunology, 2011, 8, 237-242.	10.5	11
323	Pathology interface for the molecular analysis of tissue by mass spectrometry. Journal of Pathology Informatics, 2016, 7, 13.	1.7	11
324	Energy-dispersive X-ray fluorescence determination of platinum in plasma, urine, and cerebrospinal fluid of patients administered cis-dichlorodiammineplatinum(II). Cancer Chemotherapy and Pharmacology, 1983, 11, 120-123.	2.3	10

#	Article	IF	CITATIONS
325	Standard Reticle Slide To Objectively Evaluate Spatial Resolution and Instrument Performance in Imaging Mass Spectrometry. Analytical Chemistry, 2016, 88, 7302-7311.	6.5	10
326	Beyond the H&E: Advanced Technologies for in situ Tissue Biomarker Imaging. ILAR Journal, 2018, 59, 51-65.	1.8	10
327	Two Specific Sulfatide Species Are Dysregulated during Renal Development in a Mouse Model of Alport Syndrome. Lipids, 2019, 54, 411-418.	1.7	10
328	Discerning the Primary Carcinoma in Malignant Peritoneal and Pleural Effusions Using Imaging Mass Spectrometry—A Feasibility Study. Proteomics - Clinical Applications, 2019, 13, 1800064.	1.6	10
329	Sample Preparation and Analysis of Single Cells Using High Performance MALDI FTICR Mass Spectrometry. Methods in Molecular Biology, 2020, 2064, 125-134.	0.9	10
330	Inhibition of Human Polymorphonuclear Leukocyte Function by Components of Human Colostrum and Mature Milk. Infection and Immunity, 1983, 40, 8-15.	2.2	10
331	Analysis of dipeptide mixtures by the combination of ion-pair reversed-phase high-performance liquid chromatographic and gas chromatographic-mass spectrometric techniques. Journal of Chromatography A, 1980, 197, 31-41.	3.7	9
332	Proteomic Strategies for the Characterization and the Early Detection of Lung Cancer. Journal of Thoracic Oncology, 2006, 1, 1027-1039.	1.1	9
333	Altered Expression of Nuclear and Cytoplasmic Histone H1Âin Pulmonary Artery and Pulmonary Artery Smooth Muscle Cells in Patients with IPAH. Pulmonary Circulation, 2012, 2, 340-351.	1.7	9
334	Precision Medicine in Pancreatic Diseaseâ€"Knowledge Gaps and Research Opportunities. Pancreas, 2019, 48, 1250-1258.	1.1	9
335	α-Cyano-4-hydroxycinnamic Acid and Tri-Potassium Citrate Salt Pre-Coated Silicon Nanopost Array Provides Enhanced Lipid Detection for High Spatial Resolution MALDI Imaging Mass Spectrometry. Analytical Chemistry, 2021, 93, 12243-12249.	6.5	9
336	Functional analysis of the molecular determinants of cyclooxygenase-2 acetylation by 2-acetoxyphenylhept-2-ynyl sulfide. Archives of Biochemistry and Biophysics, 2003, 409, 127-133.	3.0	8
337	Imaging mass spectrometry for accessing molecular changes during burn wound healing. Wound Repair and Regeneration, 2016, 24, 775-785.	3.0	8
338	Diagnosis of melanoma by imaging mass spectrometry: Development and validation of a melanoma prediction model. Journal of Cutaneous Pathology, 2021, 48, 1455-1462.	1.3	8
339	Proteomic strategies for the characterization and the early detection of lung cancer. Journal of Thoracic Oncology, 2006, $1$ , $1027-39$ .	1.1	8
340	Imaging MS of Rodent Ocular Tissues and the Optic Nerve. Methods in Molecular Biology, 2017, 1618, 15-27.	0.9	7
341	Imaging mass spectrometry reveals direct albumin fragmentation within the diabetic kidney. Kidney International, 2018, 94, 292-302.	5.2	7
342	Population pharmacokinetic analysis of dexmedetomidine in children using realâ€world data from electronic health records and remnant specimens. British Journal of Clinical Pharmacology, 2022, 88, 2885-2898.	2.4	7

#	Article	IF	CITATIONS
343	Towards automated discrimination of lipids versus peptides from full scan mass spectra. EuPA Open Proteomics, 2014, 4, 87-100.	2.5	6
344	Molecular Mapping of Neutral Lipids Using Silicon Nanopost Arrays and TIMS Imaging Mass Spectrometry. Journal of the American Society for Mass Spectrometry, 2021, 32, 2519-2527.	2.8	5
345	Pyridine nucleotide redox potential in coronary smooth muscle couples myocardial blood flow to cardiac metabolism. Nature Communications, 2022, 13, 2051.	12.8	5
346	Fundamental aspects of long-acting tenofovir alafenamide delivery from subdermal implants for HIV prophylaxis. Scientific Reports, 2022, 12, 8224.	3.3	5
347	Synthesis of methyl α- and β-d-xylopyranoside-5-18O. Carbohydrate Research, 1976, 46, 195-200.	2.3	4
348	Oxygen rearrangement of molecular ions of 3-phenylpropionates. Organic Mass Spectrometry, 1980, 15, 157-160.	1.3	4
349	Peptide spectra in Wilms tumor that associate with adverse outcomes. Journal of Surgical Research, 2015, 196, 332-338.	1.6	4
350	Imaging Mass Spectrometry – Molecular Microscopy for Biological and Clinical Research. NATO Science for Peace and Security Series A: Chemistry and Biology, 2017, , 115-132.	0.5	4
351	Referenced Kendrick Mass Defect Annotation and Class-Based Filtering of Imaging MS Lipidomics Experiments. Analytical Chemistry, 2022, 94, 5504-5513.	6.5	4
352	Visualizing Staphylococcus aureus pathogenic membrane modification within the host infection environment by multimodal imaging mass spectrometry. Cell Chemical Biology, 2022, 29, 1209-1217.e4.	5.2	4
353	Rapid Multivariate Analysis Approach to Explore Differential Spatial Protein Profiles in Tissue. Journal of Proteome Research, 2023, 22, 1394-1405.	3.7	4
354	Special Feature on Electrospray Ionization. Journal of Mass Spectrometry, 2000, 35, 761-761.	1.6	3
355	Molecular imaging by mass spectrometry. , 2008, , 533-554.		3
356	The Development of Imaging Mass Spectrometry. , 2016, , 285-304.		3
357	Tissue Profiling by MALDI Mass Spectrometry Distinguishes Clinical Grades of Soft Tissue Sarcomas. Cancer Genomics and Proteomics, 2005, 2, 333-345.	2.0	3
358	Comparison of high-performance liquid chromatography and anticholinesterase assay for measuring azinphos-methyl metabolism in vitro. Journal of Agricultural and Food Chemistry, 1983, 31, 756-759.	5.2	2
359	Proteomics, peptide sequencing and the fragmentation mechanisms of small organic ions. Journal of Mass Spectrometry, 2000, 35, 1375-1375.	1.6	2
360	Mass Spectrometry in Cancer Biology. , 2008, , 293-307.		2

#	Article	IF	CITATIONS
361	An orthogonal methods assessment of topical drug concentrations in skin and the impact for risk assessment in the viable epidermis. Regulatory Toxicology and Pharmacology, 2021, 123, 104934.	2.7	2
362	Imaging Mass Spectrometry. NATO Science for Peace and Security Series A: Chemistry and Biology, 2011, , 267-283.	0.5	2
363	Multimodal Imaging Mass Spectrometry of Murine Gastrointestinal Tract with Retained Luminal Content. Journal of the American Society for Mass Spectrometry, 2022, 33, 1073-1076.	2.8	2
364	Report on FAB mass spectrometry workshop held in Baltimore, Maryland, 11 December, 1981. Biomedical Mass Spectrometry, 1982, 9, 557-558.	1.9	1
365	Applications of mass spectrometry to enzymic reactions. Biochemical Society Transactions, 1987, 15, 162-164.	3.4	1
366	Organizations in Mass Spectrometry: Past, Present and Future. Journal of Mass Spectrometry, 1996, 31, 951-954.	1.6	1
367	MALDI Imaging and Profiling Mass Spectrometry in Neuroproteomics. Frontiers in Neuroscience, 2009, , 115-134.	0.0	1
368	Combining solid-phase preconcentration, capillary electrophoresis and off-line matrix-assisted laser desorption/ionization mass spectrometry: intracerebral metabolic processing of peptide E in vivo This paper is dedicated to the memory of Professor Dr Wilhelm J. Richter. Journal of Mass Spectrometry, 1999, 34, 377.	1.6	1
369	Matrix-Assisted Laser Desorption/Ionization Imaging Mass Spectrometry: Technology and Applications. NATO Science for Peace and Security Series A: Chemistry and Biology, 2020, , 109-128.	0.5	1
370	Studies in protein metabolism (J.Biol.Chem. 127,pp. 285-299, 1939). Journal of Mass Spectrometry, 1998, 33, 1163-1163.	1.6	0
371	Cover Picture: Mass Spectrometric Profiling of Intact Biological Tissue by Using Desorption Electrospray Ionization (Angew. Chem. Int. Ed. 43/2005). Angewandte Chemie - International Edition, 2005, 44, 6967-6967.	13.8	0
372	Chapter 3.2 Microdialysis coupled with liquid chromatography/mass spectrometry. Handbook of Behavioral Neuroscience, 2006, 16, 251-266.	0.7	0
373	Imaging Mass Spectrometry of Intact Biomolecules in Tissue Sections. , 2013, , 393-406.		0
374	Winners of the 2012 JMS award. Journal of Mass Spectrometry, 2013, 48, 287-290.	1.6	0
375	Imaging mass spectrometry of intact biomolecules in tissue sections. , 2013, , 339-352.		0
376	The Use of Multiple Fragmentation Events in a Single Laser Shot for Improved Drug Quantification by MALDI TOF/TOF Mass Spectrometry. NATO Science for Peace and Security Series A: Chemistry and Biology, 2017, , 269-276.	0.5	0
377	Post-translational modification of ApoA-1 in metabolic syndrome. Free Radical Biology and Medicine, 2018, 128, S34.	2.9	0
378	MALDI IMS for Proteins and Biomarkers. , 2009, , 355-375.		0

#	Article	IF	Citations
379	Profiling and Imaging of Tissues by Imaging Ion Mobility–Mass Spectrometry. , 2010, , 269-286.		0
380	MALDI Imaging Mass Spectrometry. NATO Science for Peace and Security Series A: Chemistry and Biology, 2014, , 99-113.	0.5	0
381	David Rittenberg. , 2015, , 177.		0
382	Dear friends and colleagues. Journal of Mass Spectrometry, 2021, 56, e4801.	1.6	0