

# Ron M A Heeren

## List of Publications by Year in descending order

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355  
papers

15,073  
citations

20759

60  
h-index

32761

100  
g-index

366  
all docs

366  
docs citations

366  
times ranked

11187  
citing authors

#	ARTICLE	IF	CITATIONS
1	Imaging mass spectrometry. <i>Mass Spectrometry Reviews</i> , 2007, 26, 606-643.	2.8	980
2	Mass Spectrometric Imaging for Biomedical Tissue Analysis. <i>Chemical Reviews</i> , 2010, 110, 3237-3277.	23.0	553
3	A concise review of mass spectrometry imaging. <i>Journal of Chromatography A</i> , 2010, 1217, 3946-3954.	1.8	354
4	Gold-Enhanced Biomolecular Surface Imaging of Cells and Tissue by SIMS and MALDI Mass Spectrometry. <i>Analytical Chemistry</i> , 2006, 78, 734-742.	3.2	273
5	imzML – A common data format for the flexible exchange and processing of mass spectrometry imaging data. <i>Journal of Proteomics</i> , 2012, 75, 5106-5110.	1.2	272
6	High-Spatial Resolution Mass Spectrometric Imaging of Peptide and Protein Distributions on a Surface. <i>Analytical Chemistry</i> , 2004, 76, 5339-5344.	3.2	246
7	Auto-aggressive CXCR6+ CD8 T cells cause liver immune pathology in NASH. <i>Nature</i> , 2021, 592, 444-449.	13.7	233
8	Direct Molecular Imaging of <i>Lymnaea stagnalis</i> Nervous Tissue at Subcellular Spatial Resolution by Mass Spectrometry. <i>Analytical Chemistry</i> , 2005, 77, 735-741.	3.2	182
9	On-tissue protein identification and imaging by MALDI-Ion mobility mass spectrometry. <i>Journal of the American Society for Mass Spectrometry</i> , 2010, 21, 338-347.	1.2	182
10	Subcellular imaging mass spectrometry of brain tissue. <i>Journal of Mass Spectrometry</i> , 2005, 40, 160-168.	0.7	173
11	Sample preparation issues for tissue imaging by imaging MS. <i>Proteomics</i> , 2009, 9, 2622-2633.	1.3	169
12	Mass spectrometry imaging for clinical research – latest developments, applications, and current limitations. <i>Analyst</i> , 2017, 142, 2690-2712.	1.7	162
13	Automated, parallel mass spectrometry imaging and structural identification of lipids. <i>Nature Methods</i> , 2018, 15, 515-518.	9.0	158
14	A critical evaluation of the current state-of-the-art in quantitative imaging mass spectrometry. <i>Analytical and Bioanalytical Chemistry</i> , 2014, 406, 1275-1289.	1.9	157
15	Quantitative MALDI Tandem Mass Spectrometric Imaging of Cocaine from Brain Tissue with a Deuterated Internal Standard. <i>Analytical Chemistry</i> , 2013, 85, 1081-1089.	3.2	154
16	Hypertension Is Associated with Marked Alterations in Sphingolipid Biology: A Potential Role for Ceramide. <i>PLoS ONE</i> , 2011, 6, e21817.	1.1	151
17	Imaging of peptides in the rat brain using MALDI-FTICR mass spectrometry. <i>Journal of the American Society for Mass Spectrometry</i> , 2007, 18, 145-151.	1.2	144
18	Mass Spectrometry Imaging with Isomeric Resolution Enabled by Ozone-Induced Dissociation. <i>Angewandte Chemie - International Edition</i> , 2018, 57, 10530-10534.	7.2	143

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19	Understanding Detrimental and Beneficial Grain Boundary Effects in Halide Perovskites. <i>Advanced Materials</i> , 2018, 30, e1804792.	11.1	128
20	Mass spectrometry images acylcarnitines, phosphatidylcholines, and sphingomyelin in MDA-MB-231 breast tumor models. <i>Journal of Lipid Research</i> , 2013, 54, 333-344.	2.0	124
21	Effect of Local Matrix Crystal Variations in Matrix-Assisted Ionization Techniques for Mass Spectrometry. <i>Analytical Chemistry</i> , 2003, 75, 2333-2341.	3.2	121
22	Use of advantageous, volatile matrices enabled by next-generation high-speed matrix-assisted laser desorption/ionization time-of-flight imaging employing a scanning laser beam. <i>Rapid Communications in Mass Spectrometry</i> , 2015, 29, 2195-2203.	0.7	119
23	<i>Escherichia coli</i> Minicell Membranes Are Enriched in Cardiolipin. <i>Journal of Bacteriology</i> , 2001, 183, 6144-6147.	1.0	116
24	Imaging mass spectrometry: Hype or hope?. <i>Journal of the American Society for Mass Spectrometry</i> , 2009, 20, 1006-1014.	1.2	116
25	Imaging mass spectrometry at cellular length scales. <i>Nature Protocols</i> , 2007, 2, 1185-1196.	5.5	108
26	Concise Representation of Mass Spectrometry Images by Probabilistic Latent Semantic Analysis. <i>Analytical Chemistry</i> , 2008, 80, 9649-9658.	3.2	108
27	High-resolution MALDI imaging mass spectrometry allows localization of peptide distributions at cellular length scales in pituitary tissue sections. <i>International Journal of Mass Spectrometry</i> , 2007, 260, 203-211.	0.7	107
28	Lysozyme distribution and conformation in a biodegradable polymer matrix as determined by FTIR techniques. <i>Journal of Controlled Release</i> , 2000, 68, 31-40.	4.8	105
29	Why don't biologists use SIMS?. <i>Applied Surface Science</i> , 2006, 252, 6827-6835.	3.1	104
30	Matrix-Assisted Laser Desorption Ionization Mass Spectrometry Imaging for Peptide and Protein Analyses: A Critical Review of On-Tissue Digestion. <i>Journal of Proteome Research</i> , 2014, 13, 325-335.	1.8	103
31	A New Method and Mass Spectrometer Design for TOF-SIMS Parallel Imaging MS/MS. <i>Analytical Chemistry</i> , 2016, 88, 6433-6440.	3.2	98
32	Monitoring macromolecular complexes involved in the chaperonin-assisted protein folding cycle by mass spectrometry. <i>Nature Methods</i> , 2005, 2, 371-376.	9.0	96
33	Thermal energy distribution observed in electrospray ionization. , 1999, 34, 1373-1379.		90
34	Tandem Mass Spectrometry of Intact GroEL-Substrate Complexes Reveals Substrate-Specific Conformational Changes in the trans Ring. <i>Journal of the American Chemical Society</i> , 2006, 128, 4694-4702.	6.6	87
35	Toward Digital Staining using Imaging Mass Spectrometry and Random Forests. <i>Journal of Proteome Research</i> , 2009, 8, 3558-3567.	1.8	87
36	Deciphering Metabolic Heterogeneity by Single-Cell Analysis. <i>Analytical Chemistry</i> , 2019, 91, 13314-13323.	3.2	87

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37	Cellular resolution in clinical MALDI mass spectrometry imaging: the latest advancements and current challenges. <i>Clinical Chemistry and Laboratory Medicine</i> , 2020, 58, 914-929.	1.4	84
38	Evaluation of lipid coverage and high spatial resolution MALDI-imaging capabilities of oversampling combined with laser post-ionisation. <i>Analytical and Bioanalytical Chemistry</i> , 2020, 412, 2277-2289.	1.9	84
39	The Impact of N-terminal Acetylation of $\alpha$ -Synuclein on Phospholipid Membrane Binding and Fibril Structure. <i>Journal of Biological Chemistry</i> , 2016, 291, 21110-21122.	1.6	81
40	Analytical Study of the Chemical and Physical Changes Induced by KrF Laser Cleaning of Tempera Paints. <i>Analytical Chemistry</i> , 2002, 74, 4662-4671.	3.2	80
41	Laser post-ionisation combined with a high resolving power orbitrap mass spectrometer for enhanced MALDI-MS imaging of lipids. <i>Chemical Communications</i> , 2017, 53, 7246-7249.	2.2	79
42	Time-of-Flight Secondary Ion Mass Spectrometry-Based Molecular Distribution Distinguishing Healthy and Osteoarthritic Human Cartilage. <i>Analytical Chemistry</i> , 2012, 84, 8909-8916.	3.2	78
43	Endgroup analysis of polyethylene glycol polymers by matrix-assisted laser desorption/ionization Fourier-transform ion cyclotron resonance mass spectrometry. <i>Rapid Communications in Mass Spectrometry</i> , 1995, 9, 957-962.	0.7	73
44	Realistic modeling of ion cloud motion in a Fourier transform ion cyclotron resonance cell by use of a particle-in-cell approach. <i>Rapid Communications in Mass Spectrometry</i> , 2007, 21, 3527-3546.	0.7	73
45	Derivatization Strategies for the Detection of Triamcinolone Acetonide in Cartilage by Using Matrix-Assisted Laser Desorption/Ionization Mass Spectrometry Imaging. <i>Analytical Chemistry</i> , 2016, 88, 12051-12059.	3.2	73
46	Sphingolipids control dermal fibroblast heterogeneity. <i>Science</i> , 2022, 376, eabh1623.	6.0	73
47	Label-free characterization of biomembranes: from structure to dynamics. <i>Chemical Society Reviews</i> , 2014, 43, 887-900.	18.7	72
48	Ultra-High Mass Resolving Power, Mass Accuracy, and Dynamic Range MALDI Mass Spectrometry Imaging by 21-T FT-ICR MS. <i>Analytical Chemistry</i> , 2020, 92, 3133-3142.	3.2	71
49	Perspectives for imaging mass spectrometry in the proteomics landscape. <i>Proteomics</i> , 2009, 9, 819-834.	1.3	70
50	Enhanced capabilities for imaging gangliosides in murine brain with matrix-assisted laser desorption/ionization and desorption electrospray ionization mass spectrometry coupled to ion mobility separation. <i>Methods</i> , 2016, 104, 69-78.	1.9	70
51	High resolution end group determination of low molecular weight polymers by matrix-assisted laser desorption ionization on an external ion source fourier transform ion cyclotron resonance mass spectrometer. <i>Journal of the American Society for Mass Spectrometry</i> , 1996, 7, 449-457.	1.2	69
52	Multimodal Mass Spectrometric Imaging of Small Molecules Reveals Distinct Spatio-Molecular Signatures in Differentially Metastatic Breast Tumor Models. <i>Cancer Research</i> , 2010, 70, 9012-9021.	0.4	69
53	Methods for full resolution data exploration and visualization for large 2D and 3D mass spectrometry imaging datasets. <i>International Journal of Mass Spectrometry</i> , 2014, 362, 40-47.	0.7	69
54	Increased throughput and ultra-high mass resolution in DESI FT-ICR MS imaging through new-generation external data acquisition system and advanced data processing approaches. <i>Scientific Reports</i> , 2019, 9, 8.	1.6	69

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55	Identifying Tissue-Specific Signal Variation in MALDI Mass Spectrometric Imaging by Use of an Internal Standard. <i>Analytical Chemistry</i> , 2013, 85, 1090-1096.	3.2	68
56	Apocryphal FADS2 activity promotes fatty acid diversification in cancer. <i>Cell Reports</i> , 2021, 34, 108738.	2.9	68
57	Higher sensitivity secondary ion mass spectrometry of biological molecules for high resolution, chemically specific imaging. <i>Journal of the American Society for Mass Spectrometry</i> , 2006, 17, 1195-1202.	1.2	67
58	Enhanced Sensitivity Using MALDI Imaging Coupled with Laser Postionization (MALDI-2) for Pharmaceutical Research. <i>Analytical Chemistry</i> , 2019, 91, 10840-10848.	3.2	67
59	Determination of Block Length Distributions of Poly(oxypropylene) and Poly(oxyethylene) Block Copolymers by MALDI-FTICR Mass Spectrometry. <i>Analytical Chemistry</i> , 1998, 70, 843-850.	3.2	65
60	Design and Performance of a Novel Interface for Combined Matrix-Assisted Laser Desorption Ionization at Elevated Pressure and Electrospray Ionization with Orbitrap Mass Spectrometry. <i>Analytical Chemistry</i> , 2017, 89, 7493-7501.	3.2	65
61	Emerging technologies in mass spectrometry imaging. <i>Journal of Proteomics</i> , 2012, 75, 5077-5092.	1.2	64
62	imzML: Imaging Mass Spectrometry Markup Language: A Common Data Format for Mass Spectrometry Imaging. <i>Methods in Molecular Biology</i> , 2011, 696, 205-224.	0.4	64
63	Atypical behavior in the electron capture induced dissociation of biologically relevant transition metal ion complexes of the peptide hormone oxytocin. <i>International Journal of Mass Spectrometry</i> , 2006, 253, 217-224.	0.7	62
64	Automatic Generic Registration of Mass Spectrometry Imaging Data to Histology Using Nonlinear Stochastic Embedding. <i>Analytical Chemistry</i> , 2014, 86, 9204-9211.	3.2	62
65	Spatial differentiation of metabolism in prostate cancer tissue by MALDI-TOF MSI. <i>Cancer &amp; Metabolism</i> , 2021, 9, 9.	2.4	62
66	MALDI-Mass Spectrometric Imaging Revealing Hypoxia-Driven Lipids and Proteins in a Breast Tumor Model. <i>Analytical Chemistry</i> , 2015, 87, 5947-5956.	3.2	61
67	Correlating MALDI and SIMS imaging mass spectrometric datasets of biological tissue surfaces. <i>Surface and Interface Analysis</i> , 2009, 41, 675-685.	0.8	60
68	Matrix-assisted laser desorption/ionization Fourier transform mass spectrometric analysis of oxygenated triglycerides and phosphatidylcholines in egg tempera paint dosimeters used for environmental monitoring of museum display conditions. <i>Journal of Mass Spectrometry</i> , 2001, 36, 479-492.	0.7	59
69	Electron capture dissociation at low temperatures reveals selective dissociations. <i>Journal of the American Society for Mass Spectrometry</i> , 2004, 15, 1869-1873.	1.2	58
70	C60Secondary Ion Fourier Transform Ion Cyclotron Resonance Mass Spectrometry. <i>Analytical Chemistry</i> , 2011, 83, 9552-9556.	3.2	58
71	Three-Dimensional Mass Spectrometry Imaging Identifies Lipid Markers of Medulloblastoma Metastasis. <i>Scientific Reports</i> , 2019, 9, 2205.	1.6	57
72	LipostarMSI: Comprehensive, Vendor-Neutral Software for Visualization, Data Analysis, and Automated Molecular Identification in Mass Spectrometry Imaging. <i>Journal of the American Society for Mass Spectrometry</i> , 2020, 31, 155-163.	1.2	57

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73	Structural analysis of synthetic homo- and copolyesters by electrospray ionization on a Fourier transform ion cyclotron resonance mass spectrometer. <i>Journal of Mass Spectrometry</i> , 2000, 35, 739-748.	0.7	56
74	Extended data analysis strategies for high resolution imaging MS: New methods to deal with extremely large image hyperspectral datasets. <i>International Journal of Mass Spectrometry</i> , 2007, 260, 222-236.	0.7	56
75	Fast, high resolution mass spectrometry imaging using a medipix pixelated detector. <i>Journal of the American Society for Mass Spectrometry</i> , 2010, 21, 2023-2030.	1.2	56
76	A concise tutorial review of TOF-SIMS based molecular and cellular imaging. <i>Journal of Analytical Atomic Spectrometry</i> , 2019, 34, 2217-2228.	1.6	56
77	Lysophosphatidic acid triggers mast cell-driven atherosclerotic plaque destabilization by increasing vascular inflammation. <i>Journal of Lipid Research</i> , 2013, 54, 1265-1274.	2.0	55
78	Fourier Transform Infrared Microscopic Imaging of an Embedded Paint Cross-Section. <i>Applied Spectroscopy</i> , 2002, 56, 275-283.	1.2	54
79	A modular data and control system to improve sensitivity, selectivity, speed of analysis, ease of use, and transient duration in an external source FTICR-MS. <i>International Journal of Mass Spectrometry</i> , 2004, 235, 243-253.	0.7	54
80	On-tissue chemical derivatization in mass spectrometry imaging. <i>Mass Spectrometry Reviews</i> , 2022, 41, 662-694.	2.8	54
81	High Dynamic Range Bio-Molecular Ion Microscopy with the Timepix Detector. <i>Analytical Chemistry</i> , 2011, 83, 7888-7894.	3.2	53
82	High mass accuracy and high mass resolving power FT-ICR secondary ion mass spectrometry for biological tissue imaging. <i>Analytical and Bioanalytical Chemistry</i> , 2013, 405, 6069-6076.	1.9	53
83	Discussion point: reporting guidelines for mass spectrometry imaging. <i>Analytical and Bioanalytical Chemistry</i> , 2015, 407, 2035-2045.	1.9	51
84	Advances in mass spectrometry imaging enabling observation of localised lipid biochemistry within tissues. <i>TrAC - Trends in Analytical Chemistry</i> , 2019, 120, 115197.	5.8	51
85	A mini-review of mass spectrometry using high-performance FTICR-MS methods. <i>Analytical and Bioanalytical Chemistry</i> , 2004, 378, 1048-1058.	1.9	49
86	Identification of leptomeningeal metastasis-related proteins in cerebrospinal fluid of patients with breast cancer by a combination of MALDI-TOF, MALDI-FTICR and nanoLC-FTICR MS. <i>Proteomics</i> , 2007, 7, 474-481.	1.3	49
87	Electron Capture Dissociation as Structural Probe for Noncovalent Gas-Phase Protein Assemblies. <i>Analytical Chemistry</i> , 2006, 78, 7191-7196.	3.2	48
88	Preparation of longitudinal sections of hair samples for the analysis of cocaine by MALDI-IMS/MS and TOF-SIMS imaging. <i>Drug Testing and Analysis</i> , 2015, 7, 859-865.	1.6	48
89	Getting the picture: The coming of age of imaging MS. <i>International Journal of Mass Spectrometry</i> , 2015, 377, 672-680.	0.7	48
90	Correction of Time-of-Flight Shifted Polymeric Molecular Weight Distributions in Matrix-Assisted Laser Desorption/Ionization Fourier Transform Mass Spectrometry. <i>Analytical Chemistry</i> , 1997, 69, 2751-2755.	3.2	47

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91	Fiducial Markers for Combined 3-Dimensional Mass Spectrometric and Optical Tissue Imaging. <i>Analytical Chemistry</i> , 2012, 84, 1817-1823.	3.2	47
92	Morphometric Cell Classification for Single-Cell MALDI-Mass Spectrometry Imaging. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 17447-17450.	7.2	47
93	Mass Spectrometry Imaging of Lipids with Isomer Resolution Using High-Pressure Ozone-Induced Dissociation. <i>Analytical Chemistry</i> , 2021, 93, 9826-9834.	3.2	47
94	Size, weight and position: ion mobility spectrometry and imaging MS combined. <i>Analytical and Bioanalytical Chemistry</i> , 2011, 399, 2623-2634.	1.9	45
95	Fourier Transform Ion Cyclotron Resonance Mass Resolution and Dynamic Range Limits Calculated by Computer Modeling of Ion Cloud Motion. <i>Journal of the American Society for Mass Spectrometry</i> , 2012, 23, 375-384.	1.2	45
96	Consequences of Decontamination Procedures in Forensic Hair Analysis Using Metal-Assisted Secondary Ion Mass Spectrometry Analysis. <i>Analytical Chemistry</i> , 2016, 88, 3091-3097.	3.2	45
97	Screening and Quantification of Aliphatic Primary Alkyl Corrosion Inhibitor Amines in Water Samples by Paper Spray Mass Spectrometry. <i>Analytical Chemistry</i> , 2016, 88, 1391-1400.	3.2	45
98	Manipulating internal energy of protonated biomolecules in electrospray ionization Fourier transform ion cyclotron resonance mass spectrometry. <i>Journal of Mass Spectrometry</i> , 2003, 38, 597-606.	0.7	44
99	Controlled UV laser cleaning of painted artworks: a systematic effect study on egg tempera paint samples. <i>Journal of Cultural Heritage</i> , 2003, 4, 209-215.	1.5	44
100	Quality of surface: The influence of sample preparation on MS-based biomolecular tissue imaging with MALDI-MS and (ME-)SIMS. <i>Applied Surface Science</i> , 2008, 255, 1289-1297.	3.1	44
101	Top-down mass spectrometry imaging of intact proteins by laser ablation ESI FT-ICR MS. <i>Proteomics</i> , 2014, 14, 1283-1289.	1.3	44
102	Spatial Systems Lipidomics Reveals Nonalcoholic Fatty Liver Disease Heterogeneity. <i>Analytical Chemistry</i> , 2018, 90, 5130-5138.	3.2	44
103	Performance of Orbitrap Mass Analyzer at Various Space Charge and Non-Ideal Field Conditions: Simulation Approach. <i>Journal of the American Society for Mass Spectrometry</i> , 2012, 23, 977-987.	1.2	43
104	Matrix-assisted laser desorption ionization-imaging mass spectrometry: A new methodology to study human osteoarthritic cartilage. <i>Arthritis and Rheumatism</i> , 2013, 65, 710-720.	6.7	43
105	Hand-Held Portable Desorption Atmospheric Pressure Chemical Ionization Ion Source for <i>in Situ</i> Analysis of Nitroaromatic Explosives. <i>Analytical Chemistry</i> , 2015, 87, 10047-10055.	3.2	42
106	Clinical importance of high-mannose, fucosylated, and complex N-glycans in breast cancer metastasis. <i>JCI Insight</i> , 2021, 6, .	2.3	42
107	Controlled laser cleaning of painted artworks using accurate beam manipulation and on-line LIBS-detection. <i>Journal of Cultural Heritage</i> , 2000, 1, S215-S220.	1.5	41
108	Detection systems for mass spectrometry imaging: A perspective on novel developments with a focus on active pixel detectors. <i>Rapid Communications in Mass Spectrometry</i> , 2013, 27, 1-23.	0.7	41

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109	Norharmane matrix enhances detection of endotoxin by MALDI-MS for simultaneous profiling of pathogen, host and vector systems. <i>Pathogens and Disease</i> , 2016, 74, .	0.8	41
110	Localization of Intramolecular Monosulfide Bridges in Lantibiotics Determined with Electron Capture Induced Dissociation. <i>Analytical Chemistry</i> , 2003, 75, 3219-3225.	3.2	40
111	Dissociation and vibrational excitation of H <sub>2</sub> molecules and wall influence on the densities in a multicusp ion source. <i>Physical Review A</i> , 1989, 40, 3613-3625.	1.0	39
112	Matrix assisted laser desorption ionization mass spectrometry imaging identifies markers of ageing and osteoarthritic cartilage. <i>Arthritis Research and Therapy</i> , 2014, 16, R110.	1.6	39
113	Tumor classification with MALDI-MSI data of tissue microarrays: A case study. <i>Methods</i> , 2018, 151, 21-27.	1.9	39
114	Round robin study of formalin-fixed paraffin-embedded tissues in mass spectrometry imaging. <i>Analytical and Bioanalytical Chemistry</i> , 2018, 410, 5969-5980.	1.9	39
115	Endgroup determination of synthetic polymers by electrospray ionization Fourier transform ion cyclotron resonance mass spectrometry. <i>Journal of the American Society for Mass Spectrometry</i> , 2000, 11, 536-543.	1.2	38
116	Structural characterization of $\alpha$ -lactalbumin nanotubes. <i>Soft Matter</i> , 2009, 5, 2020.	1.2	38
117	Mass spectrometry imaging of biological tissue: an approach for multicenter studies. <i>Analytical and Bioanalytical Chemistry</i> , 2015, 407, 2329-2335.	1.9	38
118	More from less: high-throughput dual polarity lipid imaging of biological tissues. <i>Analyst</i> , 2016, 141, 3832-3841.	1.7	38
119	Development and evaluation of matrix application techniques for high throughput mass spectrometry imaging of tissues in the clinic. <i>Clinical Mass Spectrometry</i> , 2019, 12, 7-15.	1.9	38
120	Electron capture and collisionally activated dissociation mass spectrometry of doubly charged hyperbranched polyesteramides. <i>Journal of the American Society for Mass Spectrometry</i> , 2003, 14, 332-341.	1.2	37
121	Infrared Mass Spectrometric Imaging below the Diffraction Limit. <i>Journal of Proteome Research</i> , 2005, 4, 671-673.	1.8	37
122	Fast and automated large-area imaging MALDI mass spectrometry in microprobe and microscope mode. <i>International Journal of Mass Spectrometry</i> , 2009, 285, 19-25.	0.7	37
123	High-Reactivity Matrices Increase the Sensitivity of Matrix Enhanced Secondary Ion Mass Spectrometry. <i>Analytical Chemistry</i> , 2011, 83, 8308-8313.	3.2	37
124	An Alternative Paper Based Tissue Washing Method for Mass Spectrometry Imaging: Localized Washing and Fragile Tissue Analysis. <i>Journal of the American Society for Mass Spectrometry</i> , 2011, 22, 1885-90.	1.2	37
125	Targeted Drug and Metabolite Imaging: Desorption Electrospray Ionization Combined with Triple Quadrupole Mass Spectrometry. <i>Analytical Chemistry</i> , 2018, 90, 13229-13235.	3.2	37
126	Disulfide bond cleavages observed in SORI-CID of three nonapeptides complexed with divalent transition-metal cations. <i>Journal of Mass Spectrometry</i> , 2007, 42, 450-458.	0.7	36



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127	Comparison of particle-in-cell simulations with experimentally observed frequency shifts between ions of the same mass-to-charge in fourier transform ion cyclotron resonance mass spectrometry. <i>Journal of the American Society for Mass Spectrometry</i> , 2010, 21, 203-208.	1.2	36
128	Faster raster matrix-assisted laser desorption/ionization mass spectrometry imaging of lipids at high lateral resolution. <i>International Journal of Mass Spectrometry</i> , 2019, 437, 38-48.	0.7	36
129	Angular "Selection Rules" for the Resonant Population of O <sup>2+</sup> ( <sup>2</sup> P <sub>i</sub> ) and C <sup>4+</sup> ( <sup>4</sup> S <sub>i</sub> ) in Grazing Ion-Surface Collisions. <i>Europhysics Letters</i> , 1989, 10, 715-719.	0.7	35
130	Mass Spectrometry Imaging of Drug Related Crystal-Like Structures in Formalin-Fixed Frozen and Paraffin-Embedded Rabbit Kidney Tissue Sections. <i>Journal of the American Society for Mass Spectrometry</i> , 2016, 27, 117-123.	1.2	35
131	Precise co-registration of mass spectrometry imaging, histology, and laser microdissection-based omics. <i>Analytical and Bioanalytical Chemistry</i> , 2019, 411, 5647-5653.	1.9	35
132	Automated, feature-based image alignment for high-resolution imaging mass spectrometry of large biological samples. <i>Journal of the American Society for Mass Spectrometry</i> , 2008, 19, 823-832.	1.2	34
133	TOF-Secondary Ion Mass Spectrometry Imaging of Polymeric Scaffolds with Surrounding Tissue after in Vivo Implantation. <i>Analytical Chemistry</i> , 2010, 82, 4337-4343.	3.2	34
134	Localized Hypoxia Results in Spatially Heterogeneous Metabolic Signatures in Breast Tumor Models. <i>Neoplasia</i> , 2012, 14, 732-741.	2.3	34
135	Detection of Localized Hepatocellular Amino Acid Kinetics by using Mass Spectrometry Imaging of Stable Isotopes. <i>Angewandte Chemie - International Edition</i> , 2017, 56, 7146-7150.	7.2	34
136	A novel method to determine collisional energy transfer efficiency by Fourier transform ion cyclotron resonance mass spectrometry. <i>Rapid Communications in Mass Spectrometry</i> , 1998, 12, 1175-1181.	0.7	33
137	Using Matrix Peaks To Map Topography: "Increased Mass Resolution and Enhanced Sensitivity in Chemical Imaging. <i>Analytical Chemistry</i> , 2003, 75, 4373-4381.	3.2	33
138	Biological Tissue Imaging with a Position and Time Sensitive Pixelated Detector. <i>Journal of the American Society for Mass Spectrometry</i> , 2012, 23, 1679-1688.	1.2	33
139	Advanced Mass Calibration and Visualization for FT-ICR Mass Spectrometry Imaging. <i>Journal of the American Society for Mass Spectrometry</i> , 2012, 23, 1865-1872.	1.2	33
140	Sequencing and Identification of Endogenous Neuropeptides with Matrix-Enhanced Secondary Ion Mass Spectrometry Tandem Mass Spectrometry. <i>Analytical Chemistry</i> , 2017, 89, 8223-8227.	3.2	33
141	Host-based lipid inflammation drives pathogenesis in <i>Francisella</i> infection. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, 12596-12601.	3.3	33
142	Structural Analysis of Polyoxyalkyleneamines by Matrix-Assisted Laser Desorption/Ionization on an External Ion Source FT-ICR-MS and NMR. <i>Macromolecules</i> , 1997, 30, 4302-4309.	2.2	32
143	Multimodal Elucidation of Choline Metabolism in a Murine Glioma Model Using Magnetic Resonance Spectroscopy and <sup>11</sup> C-Choline Positron Emission Tomography. <i>Cancer Research</i> , 2013, 73, 1470-1480.	0.4	32
144	MALDI Mass Spectrometry Imaging in Microscope Mode with Infrared Lasers: Bypassing the Diffraction Limits. <i>Analytical Chemistry</i> , 2014, 86, 321-325.	3.2	32

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145	Mass Spectrometry Imaging of the Hypoxia Marker Pimonidazole in a Breast Tumor Model. <i>Analytical Chemistry</i> , 2016, 88, 3107-3114.	3.2	32
146	Simultaneous Detection of Zinc and Its Pathway Metabolites Using MALDI MS Imaging of Prostate Tissue. <i>Analytical Chemistry</i> , 2020, 92, 3171-3179.	3.2	32
147	Direct Analysis and Quantification of Metaldehyde in Water using Reactive Paper Spray Mass Spectrometry. <i>Scientific Reports</i> , 2016, 6, 35643.	1.6	31
148	Isotope beating effects in the analysis of polymer distributions by Fourier transform mass spectrometry. <i>Journal of the American Society for Mass Spectrometry</i> , 1999, 10, 1074-1082.	1.2	30
149	Discrimination of Polymers by Using Their Characteristic Collision Energy in Tandem Mass Spectrometry. <i>Analytical Chemistry</i> , 2010, 82, 9350-9356.	3.2	30
150	Multimodal Spectroscopic Study of Amyloid Fibril Polymorphism. <i>Journal of Physical Chemistry B</i> , 2016, 120, 8809-8817.	1.2	30
151	Digestion-Free Analysis of Peptides from 30-year-old Formalin-Fixed, Paraffin-Embedded Tissue by Mass Spectrometry Imaging. <i>Analytical Chemistry</i> , 2018, 90, 9272-9280.	3.2	30
152	Trends in mass spectrometry imaging for cardiovascular diseases. <i>Analytical and Bioanalytical Chemistry</i> , 2019, 411, 3709-3720.	1.9	30
153	Tools and strategies for visualization of large image data sets in high-resolution imaging mass spectrometry. <i>Review of Scientific Instruments</i> , 2007, 78, 053716.	0.6	29
154	Characterization of lipidic markers of chondrogenic differentiation using mass spectrometry imaging. <i>Proteomics</i> , 2015, 15, 702-713.	1.3	29
155	Spatial Autocorrelation in Mass Spectrometry Imaging. <i>Analytical Chemistry</i> , 2016, 88, 5871-5878.	3.2	29
156	Integration of Ion Mobility MS <sup>E</sup> after Fully Automated, Online, High-Resolution Liquid Extraction Surface Analysis Micro-Liquid Chromatography. <i>Analytical Chemistry</i> , 2017, 89, 11143-11150.	3.2	29
157	Simultaneous lipidomic and transcriptomic profiling in mouse brain punches of acute epileptic seizure model compared to controls. <i>Journal of Lipid Research</i> , 2018, 59, 283-297.	2.0	29
158	Tissue classification by rapid evaporative ionization mass spectrometry (REIMS): comparison between a diathermic knife and CO <sub>2</sub> laser sampling on classification performance. <i>Analytical and Bioanalytical Chemistry</i> , 2019, 411, 7943-7955.	1.9	29
159	Examples of Fourier Transform Ion Cyclotron Resonance Mass Spectrometry Developments: From Ion Physics to Remote Access Biochemical Mass Spectrometry. <i>European Journal of Mass Spectrometry</i> , 2005, 11, 443-456.	0.5	28
160	Hydrogen peroxide reactions on cocaine in hair using imaging mass spectrometry. <i>Forensic Science International</i> , 2014, 242, 103-110.	1.3	28
161	Mass Spectrometry Imaging with Isomeric Resolution Enabled by Ozone-Induced Dissociation. <i>Angewandte Chemie</i> , 2018, 130, 10690-10694.	1.6	28
162	A multimodal mass spectrometry imaging approach for the study of musculoskeletal tissues. <i>International Journal of Mass Spectrometry</i> , 2012, 325-327, 150-160.	0.7	27

#	ARTICLE	IF	CITATIONS
163	Microscope mode secondary ion mass spectrometry imaging with a Timepix detector. Review of Scientific Instruments, 2013, 84, 013704.	0.6	27
164	The Use of Mass Spectrometry Imaging to Predict Treatment Response of Patient-Derived Xenograft Models of Triple-Negative Breast Cancer. Journal of Proteome Research, 2015, 14, 1069-1075.	1.8	27
165	Efficient Functionalization of Additives at Supramolecular Material Surfaces. Advanced Materials, 2017, 29, 1604652.	11.1	27
166	NF- $\kappa$ B-mediated metabolic remodelling in the inflamed heart in acute viral myocarditis. Biochimica Et Biophysica Acta - Molecular Basis of Disease, 2018, 1864, 2579-2589.	1.8	27
167	Rapid Identification of Ischemic Injury in Renal Tissue by Mass-Spectrometry Imaging. Analytical Chemistry, 2019, 91, 3575-3581.	3.2	27
168	Sample preparation of bone tissue for MALDI-MSI for forensic and (pre)clinical applications. Analytical and Bioanalytical Chemistry, 2021, 413, 2683-2694.	1.9	27
169	Quantitative mass spectrometry imaging of drugs and metabolites: a multiplatform comparison. Analytical and Bioanalytical Chemistry, 2021, 413, 2779-2791.	1.9	27
170	Evaluation of the chemical and physical changes induced by KrF laser irradiation of tempera paints. Journal of Cultural Heritage, 2003, 4, 257-263.	1.5	26
171	Design and performance of a new FT-ICR cell operating at a temperature range of 77-438 K. International Journal of Mass Spectrometry, 2004, 231, 37-45.	0.7	26
172	C60+ Secondary Ion Microscopy Using a Delay Line Detector. Analytical Chemistry, 2010, 82, 801-807.	3.2	26
173	Specific Lipid and Metabolic Profiles of R-CHOP-Resistant Diffuse Large B-Cell Lymphoma Elucidated by Matrix-Assisted Laser Desorption Ionization Mass Spectrometry Imaging and in Vivo Imaging. Analytical Chemistry, 2018, 90, 14198-14206.	3.2	26
174	Diagnostic Accuracy of Biomarkers of Alcohol Use in Patients With Liver Disease: A Systematic Review. Alcoholism: Clinical and Experimental Research, 2021, 45, 25-37.	1.4	26
175	Batch Effects in MALDI Mass Spectrometry Imaging. Journal of the American Society for Mass Spectrometry, 2021, 32, 628-635.	1.2	26
176	Rapid microscale analyses with an external ion source Fourier transform ion cyclotron resonance mass spectrometer. International Journal of Mass Spectrometry and Ion Processes, 1996, 157-158, 391-403.	1.9	25
177	Large ion yields in hydrogen scattering from a graphite surface. Journal of Applied Physics, 1997, 81, 6390-6396.	1.1	25
178	Identification of Pigments in Paint Cross Sections by Reflection Visible Light Imaging Microspectroscopy. Analytical Chemistry, 2003, 75, 716-722.	3.2	25
179	An External Matrix-Assisted Laser Desorption Ionization Source for Flexible FT-ICR Mass Spectrometry Imaging with Internal Calibration on Adjacent Samples. Journal of the American Society for Mass Spectrometry, 2011, 22, 130-137.	1.2	25
180	Direct Analysis of Thin-Layer Chromatography Separations of Petroleum Samples by Laser Desorption Ionization Fourier Transform Ion Cyclotron Resonance Mass Spectrometry Imaging. Energy & Fuels, 2014, 28, 6284-6288.	2.5	25

#	ARTICLE	IF	CITATIONS
181	Differentiation of Mesenchymal Stem Cells under Hypoxia and Normoxia: Lipid Profiles Revealed by Time-of-Flight Secondary Ion Mass Spectrometry and Multivariate Analysis. <i>Analytical Chemistry</i> , 2015, 87, 3981-3988.	3.2	25
182	Optimization of Sample Preparation and Instrumental Parameters for the Rapid Analysis of Drugs of Abuse in Hair samples by MALDI-MS/MS Imaging. <i>Journal of the American Society for Mass Spectrometry</i> , 2017, 28, 2462-2468.	1.2	25
183	MS Imagingâ€œGuided Microproteomics for Spatial Omics on a Single Instrument. <i>Proteomics</i> , 2020, 20, e1900369.	1.3	25
184	Spatial Localization of Vitamin D Metabolites in Mouse Kidney by Mass Spectrometry Imaging. <i>ACS Omega</i> , 2020, 5, 13430-13437.	1.6	25
185	Experimental and Data Analysis Considerations for Three-Dimensional Mass Spectrometry Imaging in Biomedical Research. <i>Molecular Imaging and Biology</i> , 2021, 23, 149-159.	1.3	25
186	Direct Temperature Resolved HRMS of Fire-Retarded Polymers by In-Source PyMS on an External Ion Source Fourier Transform Ion Cyclotron Resonance Mass Spectrometer. <i>Analytical Chemistry</i> , 1995, 67, 3965-3970.	3.2	24
187	Fragmentation of Suberin and Composition of Aliphatic Monomers Released by Methanolysis of Cork from <i>Quercus suber</i> L., Analysed by GC-MS, SEC and MALDI-MS. <i>Holzforschung</i> , 2001, 55, 487-493.	0.9	24
188	Combined infrared multiphoton dissociation and electron-capture dissociation using co-linear and overlapping beams in Fourier transform ion cyclotron resonance mass spectrometry. <i>Rapid Communications in Mass Spectrometry</i> , 2006, 20, 1838-1844.	0.7	24
189	A database application for pre-processing, storage and comparison of mass spectra derived from patients and controls. <i>BMC Bioinformatics</i> , 2006, 7, 403.	1.2	24
190	Highâ€œResolution Ion Mobility Spectrometryâ€œMass Spectrometry on Poly(methyl methacrylate). <i>Angewandte Chemie - International Edition</i> , 2010, 49, 10168-10171.	7.2	24
191	Going forward: Increasing the accessibility of imaging mass spectrometry. <i>Journal of Proteomics</i> , 2012, 75, 5113-5121.	1.2	24
192	Protein identification in mass-spectrometry imaging. <i>TrAC - Trends in Analytical Chemistry</i> , 2012, 40, 28-37.	5.8	24
193	Three-dimensional molecular reconstruction of rat heart with mass spectrometry imaging. <i>Analytical and Bioanalytical Chemistry</i> , 2012, 404, 2927-2938.	1.9	23
194	Software Tools of the Computis European Project to Process Mass Spectrometry Images. <i>European Journal of Mass Spectrometry</i> , 2014, 20, 351-360.	0.5	23
195	Precise Anatomic Localization of Accumulated Lipids in <i>Mfp2</i> Deficient Murine Brains Through Automated Registration of SIMS Images to the Allen Brain Atlas. <i>Journal of the American Society for Mass Spectrometry</i> , 2015, 26, 948-957.	1.2	23
196	Mass Spectrometry Imaging for the Investigation of Intratumor Heterogeneity. <i>Advances in Cancer Research</i> , 2017, 134, 201-230.	1.9	23
197	Class-specific depletion of lipid ion signals in tissues upon formalin fixation. <i>International Journal of Mass Spectrometry</i> , 2019, 446, 116212.	0.7	23
198	Negative ion formation at a barium surface in contact with a hydrogen plasma. <i>Applied Physics Letters</i> , 1987, 51, 1495-1497.	1.5	22

#	ARTICLE	IF	CITATIONS
199	Experimental calibration of the SORI-CID internal energy scale: energy uptake and loss. <i>International Journal of Mass Spectrometry</i> , 2003, 225, 71-82.	0.7	22
200	Imaging Mass Spectrometry Using a Delay-Line Detector. <i>European Journal of Mass Spectrometry</i> , 2010, 16, 35-45.	0.5	22
201	A new imaging method for understanding chemical dynamics: Efficient slice imaging using an in-vacuum pixel detector. <i>Review of Scientific Instruments</i> , 2010, 81, 103112.	0.6	22
202	“Afterlife Experiment”: Use of MALDI-MS and SIMS Imaging for the Study of the Nitrogen Cycle within Plants. <i>Analytical Chemistry</i> , 2014, 86, 10071-10077.	3.2	22
203	The Paradoxical Effects of Chronic Intra-Amniotic <i>Ureaplasma parvum</i> Exposure on Ovine Fetal Brain Development. <i>Developmental Neuroscience</i> , 2017, 39, 472-486.	1.0	22
204	Cross-Species Molecular Imaging of Bile Salts and Lipids in Liver: Identification of Molecular Structural Markers in Health and Disease. <i>Analytical Chemistry</i> , 2018, 90, 11835-11846.	3.2	22
205	MALDI-Mass Spectrometry Imaging to Investigate Lipid and Bile Acid Modifications Caused by Lentil Extract Used as a Potential Hypocholesterolemic Treatment. <i>Journal of the American Society for Mass Spectrometry</i> , 2019, 30, 2041-2050.	1.2	22
206	Proteomics analysis of human intestinal organoids during hypoxia and reoxygenation as a model to study ischemia-reperfusion injury. <i>Cell Death and Disease</i> , 2021, 12, 95.	2.7	22
207	Mass Spectrometry Spatial-Omics on a Single Conductive Slide. <i>Analytical Chemistry</i> , 2021, 93, 2527-2533.	3.2	22
208	Analysis of phase dependent frequency shifts in simulated FTMS transients using the filter diagonalization method. <i>International Journal of Mass Spectrometry</i> , 2012, 325-327, 19-24.	0.7	21
209	Enhanced Detection of High-Mass Proteins by Using an Active Pixel Detector. <i>Angewandte Chemie - International Edition</i> , 2013, 52, 11261-11264.	7.2	21
210	Visualizing molecular distributions for biomaterials applications with mass spectrometry imaging: a review. <i>Journal of Materials Chemistry B</i> , 2017, 5, 7444-7460.	2.9	21
211	“On the Spot”™ Digital Pathology of Breast Cancer Based on Single-Cell Mass Spectrometry Imaging. <i>Analytical Chemistry</i> , 2022, 94, 6180-6190.	3.2	21
212	Protein classification and distribution in osteoarthritic human synovial tissue by matrix-assisted laser desorption ionization mass spectrometry imaging. <i>Analytical and Bioanalytical Chemistry</i> , 2015, 407, 2213-2222.	1.9	20
213	Thermal activation of the chaperonins GroES and gp31 probed by mass spectrometry. <i>Rapid Communications in Mass Spectrometry</i> , 2008, 22, 3633-3641.	0.7	19
214	Electron capture dissociation of peptide hormone changes upon opening of the tocin ring and complexation with transition metal cations. <i>Rapid Communications in Mass Spectrometry</i> , 2009, 23, 31-38.	0.7	19
215	Radioactive Holmium Acetylacetonate Microspheres for Interstitial Microbrachytherapy: An In Vitro and In Vivo Stability Study. <i>Pharmaceutical Research</i> , 2012, 29, 827-836.	1.7	19
216	Absorption Mode FTICR Mass Spectrometry Imaging. <i>Analytical Chemistry</i> , 2013, 85, 11180-11184.	3.2	19

#	ARTICLE	IF	CITATIONS
217	An in-vacuum, pixelated detection system for mass spectrometric analysis and imaging of macromolecules. <i>International Journal of Mass Spectrometry</i> , 2013, 341-342, 34-44.	0.7	19
218	Strategies for managing multi-patient 3D mass spectrometry imaging data. <i>Journal of Proteomics</i> , 2019, 193, 184-191.	1.2	19
219	Glutamine deprivation counteracts hypoxia-induced chemoresistance. <i>Neoplasia</i> , 2020, 22, 22-32.	2.3	19
220	SIMION analysis of a high performance linear accumulation octopole with enhanced ejection capabilities. <i>International Journal of Mass Spectrometry</i> , 2005, 244, 135-143.	0.7	18
221	Distinguishing core from penumbra by lipid profiles using Mass Spectrometry Imaging in a transgenic mouse model of ischemic stroke. <i>Scientific Reports</i> , 2019, 9, 1090.	1.6	18
222	Mass spectrometry imaging of L-[ring-13C6]-labeled phenylalanine and tyrosine kinetics in non-small cell lung carcinoma. <i>Cancer &amp; Metabolism</i> , 2021, 9, 26.	2.4	18
223	An overview of image registration for aligning mass spectrometry imaging with clinically relevant imaging modalities. <i>Journal of Mass Spectrometry and Advances in the Clinical Lab</i> , 2022, 23, 26-38.	1.3	18
224	Proteome imaging: A closer look at life's organization. <i>Proteomics</i> , 2005, 5, 4316-4326.	1.3	17
225	Parallel processing of large datasets from NanoLC-FTICR-MS measurements. <i>Journal of the American Society for Mass Spectrometry</i> , 2007, 18, 152-161.	1.2	17
226	Identification and High-Resolution Imaging of $\alpha$ -Tocopherol from Human Cells to Whole Animals by TOF-SIMS Tandem Mass Spectrometry. <i>Journal of the American Society for Mass Spectrometry</i> , 2018, 29, 1571-1581.	1.2	17
227	Passivation Properties and Formation Mechanism of Amorphous Halide Perovskite Thin Films. <i>Advanced Functional Materials</i> , 2021, 31, 2010330.	7.8	17
228	Multimodal molecular imaging in drug discovery and development. <i>Drug Discovery Today</i> , 2022, 27, 2086-2099.	3.2	17
229	The molecular scanner in microscope mode. <i>Rapid Communications in Mass Spectrometry</i> , 2006, 20, 3435-3442.	0.7	16
230	Investigation of Polymerization Mechanisms of Poly( <i>n</i> -Butyl Acrylate)s Generated in Different Solvents by LC <sup>+</sup> ESI <sup>+</sup> MS <sup>2</sup> . <i>Macromolecules</i> , 2010, 43, 7082-7089.	2.2	16
231	Detailed molecular characterization of castor oil ethoxylates by liquid chromatography multistage mass spectrometry. <i>Journal of Chromatography A</i> , 2011, 1218, 7166-7172.	1.8	16
232	Characterization of Phosphatidylcholine Oxidation Products by MALDI MS <sup>+</sup> . <i>Analytical Chemistry</i> , 2013, 85, 11410-11419.	3.2	16
233	Mass Spectrometry Imaging of Drugs of Abuse in Hair. <i>Methods in Molecular Biology</i> , 2017, 1618, 137-147.	0.4	16
234	Oxygen-Dependent Lipid Profiles of Three-Dimensional Cultured Human Chondrocytes Revealed by MALDI-MSI. <i>Analytical Chemistry</i> , 2017, 89, 9438-9444.	3.2	16

#	ARTICLE	IF	CITATIONS
235	Quantitative Mass Spectrometry Imaging to Study Drug Distribution in the Intestine Following Oral Dosing. <i>Analytical Chemistry</i> , 2021, 93, 2144-2151.	3.2	16
236	Investigating sex determination through MALDI MS analysis of peptides and proteins in natural fingerprints through comprehensive statistical modelling. <i>Forensic Chemistry</i> , 2020, 20, 100271.	1.7	15
237	Identification of a distinct lipidomic profile in the osteoarthritic synovial membrane by mass spectrometry imaging. <i>Osteoarthritis and Cartilage</i> , 2021, 29, 750-761.	0.6	15
238	Isomer-Resolved Imaging of Prostate Cancer Tissues Reveals Specific Lipid Unsaturation Profiles Associated With Lymphocytes and Abnormal Prostate Epithelia. <i>Frontiers in Endocrinology</i> , 2021, 12, 689600.	1.5	15
239	Enhanced preferential sputtering of a hydrogenated barium surface. <i>Applied Physics Letters</i> , 1991, 59, 158-160.	1.5	14
240	Isomer separation of hyperbranched polyesteramides with gas-phase H/D exchange and a novel MSn approach: DoDIP. <i>Journal of Mass Spectrometry</i> , 2002, 37, 792-802.	0.7	14
241	Preparation Methods and Accessories for the Infrared Spectroscopic Analysis of Multi-Layer Paint Films. <i>Studies in Conservation</i> , 2004, 49, 193-210.	0.6	14
242	Does double electron capture lead to the formation of biradicals? An ECD-SORI-CID study on lacticin 481. <i>Journal of the American Society for Mass Spectrometry</i> , 2005, 16, 1595-1601.	1.2	14
243	Cluster secondary ion mass spectrometry microscope mode mass spectrometry imaging. <i>Rapid Communications in Mass Spectrometry</i> , 2013, 27, 2745-2750.	0.7	14
244	Secondary Ion Mass Spectrometry Imaging of Dictyostelium discoideum Aggregation Streams. <i>PLoS ONE</i> , 2014, 9, e99319.	1.1	14
245	Parallel imaging MS/MS TOF-SIMS instrument. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2016, 34, .	0.6	14
246	A patch-based super resolution algorithm for improving image resolution in clinical mass spectrometry. <i>Scientific Reports</i> , 2019, 9, 2915.	1.6	14
247	Sputtering of a hydrogenated barium surface in a negative ion surface conversion source. <i>Nuclear Instruments &amp; Methods in Physics Research B</i> , 1992, 69, 389-402.	0.6	13
248	Fragmentation at and above surfaces in SIMS: Effects of biomolecular yield enhancing surface modifications. <i>International Journal of Mass Spectrometry</i> , 2006, 253, 181-192.	0.7	13
249	The influence of the cholesterol microenvironment in tissue sections on molecular ionization efficiencies and distributions in ToF-SIMS. <i>Applied Surface Science</i> , 2006, 252, 6702-6705.	3.1	13
250	A novel workflow control system for Fourier transform ion cyclotron resonance mass spectrometry allows for unique on-the-fly data-dependent decisions. <i>Rapid Communications in Mass Spectrometry</i> , 2008, 22, 1245-1256.	0.7	13
251	A review of complementary separation methods and matrix assisted laser desorption ionization-mass spectrometry imaging: Lowering sample complexity. <i>Journal of Chromatography A</i> , 2013, 1319, 1-13.	1.8	13
252	Atheroma-Specific Lipids in LDL and ApoE Mice Using 2D and 3D Matrix-Assisted Laser Desorption/Ionization Mass Spectrometry Imaging. <i>Journal of the American Society for Mass Spectrometry</i> , 2020, 31, 1825-1832.	1.2	13

#	ARTICLE	IF	CITATIONS
253	An optimized MALDI MSI protocol for spatial detection of tryptic peptides in fresh frozen prostate tissue. <i>Proteomics</i> , 2022, 22, e2100223.	1.3	13
254	Quantitative Analysis of Copolymers: Influence of the Structure of the Monomer on the Ionization Efficiency in Electrospray Ionization FTMS. <i>Macromolecules</i> , 2002, 35, 4919-4928.	2.2	12
255	Gold Sputtered Fiducial Markers for Combined Secondary Ion Mass Spectrometry and MALDI Imaging of Tissue Samples. <i>Analytical Chemistry</i> , 2014, 86, 6781-6785.	3.2	12
256	Spatially resolved endogenous improved metabolite detection in human osteoarthritis cartilage by matrix assisted laser desorption ionization mass spectrometry imaging. <i>Analyst</i> , 2019, 144, 5953-5958.	1.7	12
257	Stromal vapors for real-time molecular guidance of breast-conserving surgery. <i>Scientific Reports</i> , 2020, 10, 20109.	1.6	12
258	Integrative Metabolic Pathway Analysis Reveals Novel Therapeutic Targets in Osteoarthritis. <i>Molecular and Cellular Proteomics</i> , 2020, 19, 574-588.	2.5	12
259	Mass spectrometry imaging of phosphatidylcholine metabolism in lungs administered with therapeutic surfactants and isotopic tracers. <i>Journal of Lipid Research</i> , 2021, 62, 100023.	2.0	12
260	Multilabel Per-Pixel Quantitation in Mass Spectrometry Imaging. <i>Analytical Chemistry</i> , 2021, 93, 1393-1400.	3.2	12
261	Machine learning for grading and prognosis of esophageal dysplasia using mass spectrometry and histological imaging. <i>Computers in Biology and Medicine</i> , 2021, 138, 104918.	3.9	12
262	Preparing ductal epithelial organoids for high-spatial-resolution molecular profiling using mass spectrometry imaging. <i>Nature Protocols</i> , 2022, 17, 962-979.	5.5	12
263	Specific peptides identified by mass spectrometry in placental tissue from pregnancies complicated by early onset preeclampsia attained by laser capture dissection. <i>Proteomics - Clinical Applications</i> , 2007, 1, 325-335.	0.8	11
264	End-Group Analysis of Methacrylic (Co)polymers by LC-ESI-MS. <i>Macromolecules</i> , 2011, 44, 1319-1326.	2.2	11
265	Electrospray Ionization Tandem Mass Spectrometry of Ammonium Cationized Polyethers. <i>Journal of the American Society for Mass Spectrometry</i> , 2011, 22, 837-844.	1.2	11
266	Protein identification with Liquid Chromatography and Matrix Enhanced Secondary Ion Mass Spectrometry (LC-ME-SIMS). <i>Journal of Proteomics</i> , 2011, 74, 993-1001.	1.2	11
267	Mass Spectrometric Imaging of Red Fluorescent Protein in Breast Tumor Xenografts. <i>Journal of the American Society for Mass Spectrometry</i> , 2013, 24, 711-717.	1.2	11
268	Combined MR, fluorescence and histology imaging strategy in a human breast tumor xenograft model. <i>NMR in Biomedicine</i> , 2013, 26, 285-298.	1.6	11
269	The Composition of Poly(Ethylene Terephthalate) (PET) Surface Precipitates Determined at High Resolving Power by Tandem Mass Spectrometry Imaging. <i>Microscopy and Microanalysis</i> , 2017, 23, 843-848.	0.2	11
270	Combining Time-of-Flight Secondary Ion Mass Spectrometry Imaging Mass Spectrometry and CARS Microspectroscopy Reveals Lipid Patterns Reminiscent of Gene Expression Patterns in the Wing Imaginal Disc of <i>Drosophila melanogaster</i> . <i>Analytical Chemistry</i> , 2017, 89, 9664-9670.	3.2	11



#	ARTICLE	IF	CITATIONS
271	Solvent effects on differentiation of mouse brain tissue using laser microdissection $\mu$ -cut and drop <sup>TM</sup> sampling with direct mass spectral analysis. <i>Rapid Communications in Mass Spectrometry</i> , 2018, 32, 414-422.	0.7	11
272	Morphometric Cell Classification for Single-Cell MALDI-Mass Spectrometry Imaging. <i>Angewandte Chemie</i> , 2020, 132, 17600-17603.	1.6	11
273	Mass Spectrometry-based Biomarkers for Knee Osteoarthritis: A Systematic Review. <i>Expert Review of Proteomics</i> , 2021, 18, 693-706.	1.3	11
274	Combined Quantitative (Phospho)proteomics and Mass Spectrometry Imaging Reveal Temporal and Spatial Protein Changes in Human Intestinal Ischemia-Reperfusion. <i>Journal of Proteome Research</i> , 2022, 21, 49-66.	1.8	11
275	Nitromatrix provides improved LC-MALDI signals and more protein identifications. <i>Proteomics</i> , 2009, 9, 1662-1671.	1.3	10
276	Experimental Investigation of the 2D Ion Beam Profile Generated by an ESI Octopole-QMS System. <i>Journal of the American Society for Mass Spectrometry</i> , 2014, 25, 1780-1787.	1.2	10
277	ToF-SIMS Parallel Imaging MS/MS of Lipid Species in Thin Tissue Sections. <i>Methods in Molecular Biology</i> , 2017, 1618, 165-173.	0.4	10
278	Maintenance of Deep Lung Architecture and Automated Airway Segmentation for 3D Mass Spectrometry Imaging. <i>Scientific Reports</i> , 2019, 9, 20160.	1.6	10
279	Ion Imaging of Native Protein Complexes Using Orthogonal Time-of-Flight Mass Spectrometry and a Timepix Detector. <i>Journal of the American Society for Mass Spectrometry</i> , 2021, 32, 569-580.	1.2	10
280	Isomeric lipid signatures reveal compartmentalized fatty acid metabolism in cancer. <i>Journal of Lipid Research</i> , 2022, 63, 100223.	2.0	10
281	Angular and energy distributions of surface produced H <sup>+</sup> and D <sup>+</sup> ions in a barium surface conversion source. <i>Journal of Applied Physics</i> , 1994, 75, 4340-4351.	1.1	9
282	Time-Resolved Imaging of the MALDI Linear-TOF Ion Cloud: Direct Visualization and Exploitation of Ion Optical Phenomena Using a Position- and Time-Sensitive Detector. <i>Journal of the American Society for Mass Spectrometry</i> , 2014, 25, 809-819.	1.2	9
283	Ion mobility spectrometry combined with multivariate statistical analysis: revealing the effects of a drug candidate for Alzheimer's disease on A $\beta$ 1-40 peptide early assembly. <i>Analytical and Bioanalytical Chemistry</i> , 2019, 411, 6353-6363.	1.9	9
284	Protection of the Ovine Fetal Gut against Ureaplasma-Induced Chorioamnionitis: A Potential Role for Plant Sterols. <i>Nutrients</i> , 2019, 11, 968.	1.7	9
285	Mass Spectrometry Imaging in Nanomedicine: Unraveling the Potential of MSI for the Detection of Nanoparticles in Neuroscience. <i>Current Pharmaceutical Design</i> , 2017, 23, 1974-1984.	0.9	9
286	Evaluation of the Sensitivity of Metabolic Profiling by Rapid Evaporative Ionization Mass Spectrometry: Toward More Radical Oral Cavity Cancer Resections. <i>Analytical Chemistry</i> , 2022, 94, 6939-6947.	3.2	9
287	Investigation of the Extracted H <sup>+</sup> Current in a Continuously Pulsed-Volume Negative-Ion Source. <i>Europhysics Letters</i> , 1992, 17, 503-508.	0.7	8
288	Facing challenges in Proteomics today and in the coming decade: Report of Roundtable Discussions at the 4th EuPA Scientific Meeting, Portugal, Estoril 2010. <i>Journal of Proteomics</i> , 2011, 75, 4-17.	1.2	8

#	ARTICLE	IF	CITATIONS
289	Direct Ion Imaging Approach for Investigation of Ion Dynamics in Multipole Ion Guides. <i>Analytical Chemistry</i> , 2015, 87, 3714-3720.	3.2	8
290	Ion mobility spectrometry reveals intermediate states in temperature-resolved DNA unfolding. <i>International Journal of Mass Spectrometry</i> , 2017, 419, 52-55.	0.7	8
291	Integrative Clustering in Mass Spectrometry Imaging for Enhanced Patient Stratification. <i>Proteomics - Clinical Applications</i> , 2019, 13, e1800137.	0.8	8
292	Distributed computing strategies for processing of FT-ICR MS imaging datasets for continuous mode data visualization. <i>Analytical and Bioanalytical Chemistry</i> , 2015, 407, 2321-2327.	1.9	7
293	A micropixelated ion-imaging detector for mass resolution enhancement of a QMS instrument. <i>Analytical and Bioanalytical Chemistry</i> , 2015, 407, 2055-2062.	1.9	7
294	Spatially resolved proteomics in osteoarthritis: State of the art and new perspectives. <i>Journal of Proteomics</i> , 2020, 215, 103637.	1.2	7
295	Real-time lipid patterns to classify viable and necrotic liver tumors. <i>Laboratory Investigation</i> , 2021, 101, 381-395.	1.7	7
296	Towards real-time intraoperative tissue interrogation for REIMS-guided glioma surgery. <i>Journal of Mass Spectrometry and Advances in the Clinical Lab</i> , 2022, 24, 80-89.	1.3	7
297	Formation of Low Charge State Ions of Synthetic Polymers Using Quaternary Ammonium Compounds. <i>Analytical Chemistry</i> , 2010, 82, 5735-5742.	3.2	6
298	Vacuum compatible sample positioning device for matrix assisted laser desorption/ionization Fourier transform ion cyclotron resonance mass spectrometry imaging. <i>Review of Scientific Instruments</i> , 2011, 82, 054102.	0.6	6
299	Active Learning for Convenient Annotation and Classification of Secondary Ion Mass Spectrometry Images. <i>Analytical Chemistry</i> , 2013, 85, 147-155.	3.2	6
300	Multiorder Correction Algorithms to Remove Image Distortions from Mass Spectrometry Imaging Data Sets. <i>Analytical Chemistry</i> , 2013, 85, 10249-10254.	3.2	6
301	Fast image charge calculations for multi-particle simulations in FT-ICR analyzer cells of arbitrary geometry. <i>International Journal of Mass Spectrometry</i> , 2015, 377, 432-439.	0.7	6
302	Evaluation of Thin-Layer Chromatography-Laser Desorption Ionization Fourier Transform Ion Cyclotron Resonance Mass Spectrometric Imaging for Visualization of Crude Oil Interactions. <i>Energy &amp; Fuels</i> , 2018, 32, 7347-7357.	2.5	6
303	The importance of clinical tissue imaging. <i>Clinical Mass Spectrometry</i> , 2019, 12, 47-49.	1.9	6
304	Real-time drug detection using a diathermic knife combined to rapid evaporative ionisation mass spectrometry. <i>Talanta</i> , 2021, 221, 121391.	2.9	6
305	Spatially Resolved Immunometabolism to Understand Infectious Disease Progression. <i>Frontiers in Microbiology</i> , 2021, 12, 709728.	1.5	6
306	Probing mass discriminations and mass shifts in the ITMS mass spectra of externally generated MALDI ions with synthetic polymers. <i>International Journal of Mass Spectrometry</i> , 2002, 221, 191-207.	0.7	5

#	ARTICLE	IF	CITATIONS
307	Imaging mass spectrometry imaging. International Journal of Mass Spectrometry, 2007, 260, 89.	0.7	5
308	Stigmatic imaging of secondary ions in MeV-SIMS spectrometry by linear Time-of-Flight mass spectrometer and the TimePix detector. Nuclear Instruments & Methods in Physics Research B, 2019, 452, 1-6.	0.6	5
309	Heterogeneity of Lipid and Protein Cartilage Profiles Associated with Human Osteoarthritis with or without Type 2 Diabetes Mellitus. Journal of Proteome Research, 2021, 20, 2973-2982.	1.8	5
310	A novel dual ionization modality source for infrared laser ablation post-ionization mass spectrometry imaging to study fungicide metabolism and transport. International Journal of Mass Spectrometry, 2021, 465, 116602.	0.7	5
311	Automated 3D Sampling and Imaging of Uneven Sample Surfaces with LA-REIMS. Journal of the American Society for Mass Spectrometry, 2022, 33, 111-122.	1.2	5
312	Energetic self-extracted H <sup>-</sup> ions in a Ba surface conversion source. Applied Surface Science, 1993, 70-71, 332-336.	3.1	4
313	Combined X-ray CT and mass spectrometry for biomedical imaging applications. Journal of Instrumentation, 2014, 9, C04029-C04029.	0.5	4
314	Imaging Isomers on a Biological Surface: A Review. Mass Spectrometry, 2019, 8, A0078-A0078.	0.2	4
315	INSPIRE: A European training network to foster research and training in cardiovascular safety pharmacology. Journal of Pharmacological and Toxicological Methods, 2020, 105, 106889.	0.3	4
316	Infrared Laser Desorption and Electrospray Ionisation of Non-covalent Protein Complexes: Generation of Intact, Multiply Charged Species. Analysis & Sensing, 2021, 1, 44-47.	1.1	4
317	Monitoring the three-dimensional distribution of endogenous species in the lungs by matrix-assisted laser desorption/ionization mass spectrometry imaging. Rapid Communications in Mass Spectrometry, 2021, 35, e8957.	0.7	4
318	Sox9 Determines Translational Capacity During Early Chondrogenic Differentiation of ATDC5 Cells by Regulating Expression of Ribosome Biogenesis Factors and Ribosomal Proteins. Frontiers in Cell and Developmental Biology, 2021, 9, 686096.	1.8	4
319	Clinical use of mass spectrometry (imaging) for hard tissue analysis in abnormal fracture healing. Clinical Chemistry and Laboratory Medicine, 2020, 58, 897-913.	1.4	4
320	Evaluating the VLAM-G toolkit on the DAS-2. Future Generation Computer Systems, 2003, 19, 815-824.	4.9	3
321	Discrimination between charge-catalyzed and charge-independent fragmentation processes of cationized poly( <i>n</i> -butyl acrylate). Rapid Communications in Mass Spectrometry, 2010, 24, 3214-3216.	0.7	3
322	Electrospray ionization mass spectrometry of the non-covalent complexes of ammonium ions with high molar mass polyethers. International Journal of Mass Spectrometry, 2011, 303, 63-68.	0.7	3
323	Sparse spectral techniques for emission imaging. International Journal of Mass Spectrometry, 2013, 351, 37-46.	0.7	3
324	Detection of Localized Hepatocellular Amino Acid Kinetics by using Mass Spectrometry Imaging of Stable Isotopes. Angewandte Chemie, 2017, 129, 7252-7256.	1.6	3

#	ARTICLE	IF	CITATIONS
325	Negative Ion Source Technology. , 1992, , 185-201.		3
326	Tissue Analysis with High-Resolution Imaging Mass Spectrometry. Methods in Molecular Biology, 2009, 492, 295-308.	0.4	3
327	Characterization of microchannel plate detector response for the detection of native multiply charged high mass single ions in orthogonal time-of-flight mass spectrometry using a Timepix detector. Journal of Mass Spectrometry, 2022, 57, e4820.	0.7	3
328	Comparative gas-phase activation of two similar non-covalent heptameric protein complexes: gp31 and GroES. International Journal of Mass Spectrometry, 2007, 265, 159-168.	0.7	2
329	An ambient detection system for visualization of charged particles generated with ionization methods at atmospheric pressure. Rapid Communications in Mass Spectrometry, 2016, 30, 352-358.	0.7	2
330	Cancer Detection in Mass Spectrometry Imaging Data by Recurrent Neural Networks. , 2019, , .		2
331	Dynamics of Molecules Observed at Crude-Oil-Gas Interfaces by Time-of-Flight Secondary Ion Mass Spectrometry Imaging. Journal of the American Society for Mass Spectrometry, 2020, 31, 2356-2361.	1.2	2
332	Molecular imaging of human hair with MeV-SIMS: A case study of cocaine detection and distribution in the hair of a cocaine user. PLoS ONE, 2022, 17, e0263338.	1.1	2
333	Hydrogen and deuterium depth profiles in a barium surface converter determined by LAMS and P-SNMS. Applied Surface Science, 1993, 68, 265-274.	3.1	1
334	Negative hydrogen production at a graphite surface. AIP Conference Proceedings, 1996, , .	0.3	1
335	Zooming in multi-spectral datacubes using PCA. Proceedings of SPIE, 2008, , .	0.8	1
336	Multivariate Watershed Segmentation of Compositional Data. Lecture Notes in Computer Science, 2009, , 180-192.	1.0	1
337	On-the-fly targeted selection of labeled peptides in liquid chromatography/mass spectrometry based quantitative proteomics. Rapid Communications in Mass Spectrometry, 2010, 24, 239-241.	0.7	1
338	A MASSive Laboratory Tour. An Interactive Mass Spectrometry Outreach Activity for Children. Journal of the American Society for Mass Spectrometry, 2013, 24, 979-982.	1.2	1
339	MALDI-MSI analysis revealed an increment of lipid candidate biomarkers in oa synovium. Osteoarthritis and Cartilage, 2018, 26, S41-S42.	0.6	1
340	Osteoarthritic mesenchymal stem cells undergoing chondrogenesis have altered the glucuronic acid synthesis pathway. Osteoarthritis and Cartilage, 2019, 27, S60-S61.	0.6	1
341	Examination of lipid profiles in abdominal fascial healing using MALDI-TOF to identify potential therapeutic targets. Journal of Mass Spectrometry and Advances in the Clinical Lab, 2021, 20, 35-41.	1.3	1
342	Recent Technological Developments in MALDI-MSI Based Hair Analysis. Advanced Sciences and Technologies for Security Applications, 2019, , 133-149.	0.4	1

#	ARTICLE	IF	CITATIONS
343	OP0240â€¦A MULTIMODAL MASS SPECTROMETRY APPROACH REVEALS SPECIFIC CARTILAGE MOLECULAR PROFILES ASSOCIATED TO TYPE 2 DIABETIC PATIENTS. <i>Annals of the Rheumatic Diseases</i> , 2020, 79, 151.2-152.	0.5	1
344	Lipid Analysis of Fracture Hematoma With MALDI-MSI: Specific Lipids are Associated to Bone Fracture Healing Over Time. <i>Frontiers in Chemistry</i> , 2021, 9, 780626.	1.8	1
345	Innovation in molecular imaging with mass spectrometry: running towards high resolution. <i>Osteoarthritis and Cartilage</i> , 2012, 20, S1-S2.	0.6	0
346	mTOR Inhibition remodels extracellular matrix components of human osteoarthritic cartilage. <i>Osteoarthritis and Cartilage</i> , 2016, 24, S457-S458.	0.6	0
347	MALDI Techniques in Mass Spectrometry Imaging. , 2017, , 711-718.		0
348	Specific metabolic association between osteoarthritis and type 2 diabetes revealed by mass spectrometry imaging. <i>Osteoarthritis and Cartilage</i> , 2018, 26, S166.	0.6	0
349	OP0078â€¦LINKING LIPID MARKERS TO SYNOVIAL HYPERPLASIA AND VASCULARIZATION IN OSTEOARTHRITIS BY MALDI-MSI. , 2019, , .		0
350	Nanomechanical sampling of material for nanoscale mass spectrometry chemical analysis. <i>Analytical and Bioanalytical Chemistry</i> , 2021, 413, 2747-2754.	1.9	0
351	Molecular cellophane. <i>Nature Methods</i> , 2021, 18, 242-243.	9.0	0
352	FTIR Imaging Spectroscopy for Organic Surface Analysis of Embedded Paint Cross-Sections. , 2000, , 179-182.		0
353	Abstract 5272: Combined magnetic resonance spectroscopic imaging and MALDI mass spectrometric imaging to characterize breast cancer lipid metabolism. , 2011, , .		0
354	Biological Tissue Imaging at Different Levels: MALDI and SIMS Imaging Combined. , 2014, , 99-139.		0
355	Summary of the Workshop on Fundamentals and Applications in Fourier Transform Ion Cyclotron Resonance Mass Spectrometry. , 1999, , 445-458.		0