

Liam A Mcdonnell

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/7466149/publications.pdf>

Version: 2024-02-01

102
papers

6,334
citations

66343

42
h-index

69250

77
g-index

104
all docs

104
docs citations

104
times ranked

5998
citing authors

#	ARTICLE	IF	CITATIONS
1	Isolation and Proteomic Analysis of Mouse Serum Small Extracellular Vesicles for Individual Subject Analysis. <i>Methods in Molecular Biology</i> , 2022, 2504, 41-54.	0.9	0
2	Mass Spectrometry Imaging as a Tool to Investigate Region Specific Lipid Alterations in Symptomatic Human Carotid Atherosclerotic Plaques. <i>Metabolites</i> , 2021, 11, 250.	2.9	16
3	Spatial epi-proteomics enabled by histone post-translational modification analysis from low-abundance clinical samples. <i>Clinical Epigenetics</i> , 2021, 13, 145.	4.1	15
4	Longitudinal Bottom-Up Proteomics of Serum, Serum Extracellular Vesicles, and Cerebrospinal Fluid Reveals Candidate Biomarkers for Early Detection of Glioblastoma in a Murine Model. <i>Molecules</i> , 2021, 26, 5992.	3.8	8
5	Proteomics analysis of serum small extracellular vesicles for the longitudinal study of a glioblastoma multiforme mouse model. <i>Scientific Reports</i> , 2020, 10, 20498.	3.3	13
6	Synaptic Vesicles Dynamics in Neocortical Epilepsy. <i>Frontiers in Cellular Neuroscience</i> , 2020, 14, 606142.	3.7	7
7	rMSIproc: an R package for mass spectrometry imaging data processing. <i>Bioinformatics</i> , 2020, 36, 3618-3619.	4.1	21
8	Molecular signatures of tumor progression in myxoid liposarcoma identified by N-glycan mass spectrometry imaging. <i>Laboratory Investigation</i> , 2020, 100, 1252-1261.	3.7	20
9	Quantitative Microproteomics Based Characterization of the Central and Peripheral Nervous System of a Mouse Model of Krabbe Disease. <i>Molecular and Cellular Proteomics</i> , 2019, 18, 1227-1241.	3.8	25
10	Ultra-high resolution MALDI-FTICR-MSI analysis of intact proteins in mouse and human pancreas tissue. <i>International Journal of Mass Spectrometry</i> , 2019, 437, 10-16.	1.5	24
11	Interactive Visual Exploration of 3D Mass Spectrometry Imaging Data Using Hierarchical Stochastic Neighbor Embedding Reveals Spatiomolecular Structures at Full Data Resolution. <i>Journal of Proteome Research</i> , 2018, 17, 1054-1064.	3.7	37
12	Mass Spectrometry Imaging of Metabolites. <i>Methods in Molecular Biology</i> , 2018, 1730, 345-357.	0.9	14
13	Assessing the potential of sputtered gold nanolayers in mass spectrometry imaging for metabolomics applications. <i>PLoS ONE</i> , 2018, 13, e0208908.	2.5	25
14	Ultraviolet Photodissociation of ESI- and MALDI-Generated Protein Ions on a Q-Exactive Mass Spectrometer. <i>Journal of Proteome Research</i> , 2018, 18, 557-564.	3.7	9
15	Mass spectrometry imaging: How will it affect clinical research in the future?. <i>Expert Review of Proteomics</i> , 2018, 15, 709-716.	3.0	13
16	Round robin study of formalin-fixed paraffin-embedded tissues in mass spectrometry imaging. <i>Analytical and Bioanalytical Chemistry</i> , 2018, 410, 5969-5980.	3.7	39
17	Characterization of Degraded Proteins in Paintings Using Bottom-Up Proteomic Approaches: New Strategies for Protein Digestion and Analysis of Data. <i>Analytical Chemistry</i> , 2018, 90, 6403-6408.	6.5	23
18	Ultra-High Mass Resolution MALDI Imaging Mass Spectrometry of Proteins and Metabolites in a Mouse Model of Glioblastoma. <i>Scientific Reports</i> , 2017, 7, 603.	3.3	134

#	ARTICLE	IF	CITATIONS
19	Mass spectrometry imaging shows major derangements in neurogranin and in purine metabolism in the triple-knockout 3A-Tg Alzheimer mouse model. <i>Biochimica Et Biophysica Acta - Proteins and Proteomics</i> , 2017, 1865, 747-754.	2.3	31
20	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.	6.5	65
21	Human Plasma N-glycosylation as Analyzed by Matrix-Assisted Laser Desorption/Ionization-Fourier Transform Ion Cyclotron Resonance-MS Associates with Markers of Inflammation and Metabolic Health. <i>Molecular and Cellular Proteomics</i> , 2017, 16, 228-242.	3.8	58
22	Mass Spectrometry Imaging, Laser Capture Microdissection, and LC-MS/MS of the Same Tissue Section. <i>Journal of Proteome Research</i> , 2017, 16, 2993-3001.	3.7	58
23	An experimental guideline for the analysis of histologically heterogeneous tumors by MALDI-TOF mass spectrometry imaging. <i>Biochimica Et Biophysica Acta - Proteins and Proteomics</i> , 2017, 1865, 957-966.	2.3	11
24	Prognostic Metabolite Biomarkers for Soft Tissue Sarcomas Discovered by Mass Spectrometry Imaging. <i>Journal of the American Society for Mass Spectrometry</i> , 2017, 28, 376-383.	2.8	37
25	Hybrid Imaging Labels: Providing the Link Between Mass Spectrometry-Based Molecular Pathology and Theranostics. <i>Theranostics</i> , 2017, 7, 624-633.	10.0	12
26	High-grade sarcoma diagnosis and prognosis: Biomarker discovery by mass spectrometry imaging. <i>Proteomics</i> , 2016, 16, 1802-1813.	2.2	31
27	Multimodal Mass Spectrometry Imaging of N-Glycans and Proteins from the Same Tissue Section. <i>Analytical Chemistry</i> , 2016, 88, 7745-7753.	6.5	86
28	Linkage-Specific <i>In Situ</i> Sialic Acid Derivatization for N-Glycan Mass Spectrometry Imaging of Formalin-Fixed Paraffin-Embedded Tissues. <i>Analytical Chemistry</i> , 2016, 88, 5904-5913.	6.5	158
29	Freezing versus heat stabilization for the visualization of metabolites by mass spectrometry imaging in a mouse stroke model. <i>Proteomics</i> , 2016, 16, 1652-1659.	2.2	22
30	Spatial Autocorrelation in Mass Spectrometry Imaging. <i>Analytical Chemistry</i> , 2016, 88, 5871-5878.	6.5	29
31	High-mass-resolution MALDI mass spectrometry imaging of metabolites from formalin-fixed paraffin-embedded tissue. <i>Nature Protocols</i> , 2016, 11, 1428-1443.	12.0	190
32	High nuclear expression of proteasome activator complex subunit 1 predicts poor survival in soft tissue leiomyosarcomas. <i>Clinical Sarcoma Research</i> , 2016, 6, 17.	2.3	4
33	Set of Novel Automated Quantitative Microproteomics Protocols for Small Sample Amounts and Its Application to Kidney Tissue Substructures. <i>Journal of Proteome Research</i> , 2016, 15, 4722-4730.	3.7	38
34	In-Source Decay and Pseudo-MS ³ of Peptide and Protein Ions Using Liquid AP-MALDI. <i>Journal of the American Society for Mass Spectrometry</i> , 2016, 27, 2075-2079.	2.8	13
35	Data-driven identification of prognostic tumor subpopulations using spatially mapped t-SNE of mass spectrometry imaging data. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, 12244-12249.	7.1	154
36	Mass spectrometry imaging of amino neurotransmitters: a comparison of derivatization methods and application in mouse brain tissue. <i>Metabolomics</i> , 2016, 12, 30.	3.0	80

#	ARTICLE	IF	CITATIONS
37	Molecular histology of arteries: mass spectrometry imaging as a novel <i>ex vivo</i> tool to investigate atherosclerosis. Expert Review of Proteomics, 2016, 13, 69-81.	3.0	14
38	Brain Region-Specific Dynamics of On-Tissue Protein Digestion Using MALDI Mass Spectrometry Imaging. Journal of Proteome Research, 2015, 14, 5348-5354.	3.7	22
39	Pro-inflammatory pattern of IgG1 Fc glycosylation in multiple sclerosis cerebrospinal fluid. Journal of Neuroinflammation, 2015, 12, 235.	7.2	86
40	Comprehensive Analysis of the Mouse Brain Proteome Sampled in Mass Spectrometry Imaging. Analytical Chemistry, 2015, 87, 1867-1875.	6.5	44
41	<i>De novo</i> discovery of phenotypic intratumour heterogeneity using imaging mass spectrometry. Journal of Pathology, 2015, 235, 3-13.	4.5	116
42	Molecular anatomy of ascending aorta in atherosclerosis by MS Imaging: Specific lipid and protein patterns reflect pathology. Journal of Proteomics, 2015, 126, 245-251.	2.4	27
43	Precise Anatomic Localization of Accumulated Lipids in <i>Mfp2</i> Deficient Murine Brains Through Automated Registration of SIMS Images to the Allen Brain Atlas. Journal of the American Society for Mass Spectrometry, 2015, 26, 948-957.	2.8	23
44	Large-Scale Mass Spectrometry Imaging Investigation of Consequences of Cortical Spreading Depression in a Transgenic Mouse Model of Migraine. Journal of the American Society for Mass Spectrometry, 2015, 26, 853-861.	2.8	27
45	Current State and Future Challenges of Mass Spectrometry Imaging for Clinical Research. Analytical Chemistry, 2015, 87, 6426-6433.	6.5	98
46	Histology-Guided High-Resolution Matrix-Assisted Laser Desorption Ionization Mass Spectrometry Imaging. Analytical Chemistry, 2015, 87, 11978-11983.	6.5	29
47	Lipid and protein maps defining arterial layers in atherosclerotic aorta. Data in Brief, 2015, 4, 328-331.	1.0	13
48	Discussion point: reporting guidelines for mass spectrometry imaging. Analytical and Bioanalytical Chemistry, 2015, 407, 2035-2045.	3.7	51
49	Towards imaging metabolic pathways in tissues. Analytical and Bioanalytical Chemistry, 2015, 407, 2167-2176.	3.7	29
50	Mass Spectrometry Imaging in Proteomics and Metabolomics. Comprehensive Analytical Chemistry, 2014, 63, 159-185.	1.3	2
51	Automatic registration of imaging mass spectrometry data to the Allen Brain Atlas transcriptome. , 2014, , .		2
52	Multicenter Matrix-Assisted Laser Desorption/Ionization Mass Spectrometry Imaging (MALDI MSI) Identifies Proteomic Differences in Breast-Cancer-Associated Stroma. Journal of Proteome Research, 2014, 13, 4730-4738.	3.7	72
53	MSiMass List: A Public Database of Identifications for Protein MALDI MS Imaging. Journal of Proteome Research, 2014, 13, 1138-1142.	3.7	40
54	30 μ m spatial resolution protein MALDI MSI: In-depth comparison of five sample preparation protocols applied to human healthy and atherosclerotic arteries. Journal of Proteomics, 2014, 108, 465-468.	2.4	29

#	ARTICLE	IF	CITATIONS
55	Automatic Generic Registration of Mass Spectrometry Imaging Data to Histology Using Nonlinear Stochastic Embedding. <i>Analytical Chemistry</i> , 2014, 86, 9204-9211.	6.5	62
56	Automatic Registration of Mass Spectrometry Imaging Data Sets to the Allen Brain Atlas. <i>Analytical Chemistry</i> , 2014, 86, 3947-3954.	6.5	58
57	Imaging Mass Spectrometry-based Molecular Histology Differentiates Microscopically Identical and Heterogeneous Tumors. <i>Journal of Proteome Research</i> , 2013, 12, 1847-1855.	3.7	24
58	N-glycosylation of Colorectal Cancer Tissues. <i>Molecular and Cellular Proteomics</i> , 2012, 11, 571-585.	3.8	144
59	A novel peptidomics approach to detect markers of Alzheimer's disease in cerebrospinal fluid. <i>Methods</i> , 2012, 56, 500-507.	3.8	46
60	Going forward: Increasing the accessibility of imaging mass spectrometry. <i>Journal of Proteomics</i> , 2012, 75, 5113-5121.	2.4	24
61	Imaging mass spectrometry statistical analysis. <i>Journal of Proteomics</i> , 2012, 75, 4962-4989.	2.4	117
62	Imaging mass spectrometry to visualize biomolecule distributions in mouse brain tissue following hemispheric cortical spreading depression. <i>Journal of Proteomics</i> , 2012, 75, 5027-5035.	2.4	35
63	Preface. <i>Journal of Proteomics</i> , 2012, 75, 4881-4882.	2.4	2
64	MALDI-TOF-MS analysis of sialylated glycans and glycopeptides using 4-chloro-2-cyanocinnamic acid matrix. <i>Proteomics</i> , 2012, 12, 1337-1348.	2.2	52
65	High Speed Data Processing for Imaging MS-Based Molecular Histology Using Graphical Processing Units. <i>Journal of the American Society for Mass Spectrometry</i> , 2012, 23, 745-752.	2.8	14
66	Multiple Statistical Analysis Techniques Corroborate Intratumor Heterogeneity in Imaging Mass Spectrometry Datasets of Myxofibrosarcoma. <i>PLoS ONE</i> , 2011, 6, e24913.	2.5	89
67	An External Matrix-Assisted Laser Desorption Ionization Source for Flexible FT-ICR Mass Spectrometry Imaging with Internal Calibration on Adjacent Samples. <i>Journal of the American Society for Mass Spectrometry</i> , 2011, 22, 130-137.	2.8	25
68	MALDI imaging and profiling MS of higher mass proteins from tissue. <i>Journal of the American Society for Mass Spectrometry</i> , 2010, 21, 1922-1929.	2.8	110
69	Imaging mass spectrometry data reduction: Automated feature identification and extraction. <i>Journal of the American Society for Mass Spectrometry</i> , 2010, 21, 1969-1978.	2.8	76
70	Automated imaging MS: Toward high throughput imaging mass spectrometry. <i>Journal of Proteomics</i> , 2010, 73, 1279-1282.	2.4	32
71	Peptide and protein imaging mass spectrometry in cancer research. <i>Journal of Proteomics</i> , 2010, 73, 1921-1944.	2.4	143
72	Imaging mass spectrometry of myxoid sarcomas identifies proteins and lipids specific to tumour type and grade, and reveals biochemical intratumour heterogeneity. <i>Journal of Pathology</i> , 2010, 222, 400-409.	4.5	96

#	ARTICLE	IF	CITATIONS
73	Immunoglobulin G Glycopeptide Profiling by Matrix-Assisted Laser Desorption Ionization Fourier Transform Ion Cyclotron Resonance Mass Spectrometry. <i>Analytical Chemistry</i> , 2010, 82, 1073-1081.	6.5	106
74	Nitromatrix provides improved LC-MALDI signals and more protein identifications. <i>Proteomics</i> , 2009, 9, 1662-1671.	2.2	10
75	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.	1.5	37
76	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.	2.8	34
77	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.	6.1	44
78	Mass Spectrometry Image Correlation: Quantifying Colocalization. <i>Journal of Proteome Research</i> , 2008, 7, 3619-3627.	3.7	79
79	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.	1.3	29
80	Imaging mass spectrometry. <i>Mass Spectrometry Reviews</i> , 2007, 26, 606-643.	5.4	980
81	Imaging mass spectrometry at cellular length scales. <i>Nature Protocols</i> , 2007, 2, 1185-1196.	12.0	108
82	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.	1.5	107
83	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.	2.8	144
84	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.	1.5	24
85	Mass spectrometry in demonstrating the site-specific nitration of hen egg white lysozyme by an improved electrochemical method. <i>Analytical Biochemistry</i> , 2006, 356, 171-181.	2.4	15
86	Why don't biologists use SIMS?. <i>Applied Surface Science</i> , 2006, 252, 6827-6835.	6.1	104
87	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.	2.8	67
88	SIMION analysis of a high performance linear accumulation octopole with enhanced ejection capabilities. <i>International Journal of Mass Spectrometry</i> , 2005, 244, 135-143.	1.5	18
89	Subcellular imaging mass spectrometry of brain tissue. <i>Journal of Mass Spectrometry</i> , 2005, 40, 160-168.	1.6	173
90	Infrared Mass Spectrometric Imaging below the Diffraction Limit. <i>Journal of Proteome Research</i> , 2005, 4, 671-673.	3.7	37

#	ARTICLE	IF	CITATIONS
91	A mini-review of mass spectrometry using high-performance FTICR-MS methods. <i>Analytical and Bioanalytical Chemistry</i> , 2004, 378, 1048-1058.	3.7	49
92	Design and performance of a new FT-ICR cell operating at a temperature range of 77–438 K. <i>International Journal of Mass Spectrometry</i> , 2004, 231, 37-45.	1.5	26
93	Electron capture dissociation at low temperatures reveals selective dissociations. <i>Journal of the American Society for Mass Spectrometry</i> , 2004, 15, 1869-1873.	2.8	58
94	High-Spatial Resolution Mass Spectrometric Imaging of Peptide and Protein Distributions on a Surface. <i>Analytical Chemistry</i> , 2004, 76, 5339-5344.	6.5	246
95	Determination of the Nature of Naphthenic Acids Present in Crude Oils Using Nanospray Fourier Transform Ion Cyclotron Resonance Mass Spectrometry: The Continued Battle Against Corrosion. <i>Analytical Chemistry</i> , 2003, 75, 860-866.	6.5	159
96	Using Matrix Peaks To Map Topography: Increased Mass Resolution and Enhanced Sensitivity in Chemical Imaging. <i>Analytical Chemistry</i> , 2003, 75, 4373-4381.	6.5	33
97	Effect of Local Matrix Crystal Variations in Matrix-Assisted Ionization Techniques for Mass Spectrometry. <i>Analytical Chemistry</i> , 2003, 75, 2333-2341.	6.5	121
98	Sustained Off-Resonance Irradiation Collision-Induced Dissociation of Linear, Substituted and Cyclic Polyesters Using a 9.4 T Fourier Transform Ion Cyclotron Resonance Mass Spectrometer. <i>European Journal of Mass Spectrometry</i> , 2003, 9, 117-128.	1.0	11
99	A Theoretical Investigation of the Kinetic Energy of Ions Trapped in a Radio-Frequency Hexapole Ion Trap. <i>European Journal of Mass Spectrometry</i> , 2002, 8, 181-189.	1.0	14
100	5-methylthiopentose: a new substituent on lipoarabinomannan in <i>Mycobacterium tuberculosis</i> . <i>Journal of Molecular Biology</i> , 2002, 316, 89-100.	4.2	74
101	An experimental study of the gas-phase reactions of the NO ₃ radical with pent-1-ene, hex-1-ene and hept-1-ene. <i>Physical Chemistry Chemical Physics</i> , 1999, 1, 2681-2685.	2.8	23
102	Gas-phase reaction dynamics studied by ion imaging. , 1998, 33, 415-428.		6