

# Livia S Eberlin

## List of Publications by Year in descending order

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85  
papers

6,941  
citations

47006

47  
h-index

60623

81  
g-index

90  
all docs

90  
docs citations

90  
times ranked

5733  
citing authors

#	ARTICLE	IF	CITATIONS
1	Mass spectrometry imaging under ambient conditions. <i>Mass Spectrometry Reviews</i> , 2013, 32, 218-243.	5.4	406
2	Ambient Ionization Mass Spectrometry: Recent Developments and Applications. <i>Analytical Chemistry</i> , 2019, 91, 4266-4290.	6.5	313
3	Nondestructive tissue analysis for ex vivo and in vivo cancer diagnosis using a handheld mass spectrometry system. <i>Science Translational Medicine</i> , 2017, 9, .	12.4	286
4	Classifying Human Brain Tumors by Lipid Imaging with Mass Spectrometry. <i>Cancer Research</i> , 2012, 72, 645-654.	0.9	273
5	Ambient mass spectrometry for the intraoperative molecular diagnosis of human brain tumors. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013, 110, 1611-1616.	7.1	251
6	Intraoperative mass spectrometry mapping of an onco-metabolite to guide brain tumor surgery. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014, 111, 11121-11126.	7.1	230
7	MYC oncogene overexpression drives renal cell carcinoma in a mouse model through glutamine metabolism. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, 6539-6544.	7.1	211
8	Desorption electrospray ionization mass spectrometry for lipid characterization and biological tissue imaging. <i>Biochimica Et Biophysica Acta - Molecular and Cell Biology of Lipids</i> , 2011, 1811, 946-960.	2.4	210
9	<i>Cardinal</i> : an R package for statistical analysis of mass spectrometry-based imaging experiments. <i>Bioinformatics</i> , 2015, 31, 2418-2420.	4.1	203
10	Molecular assessment of surgical-resection margins of gastric cancer by mass-spectrometric imaging. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014, 111, 2436-2441.	7.1	185
11	Three-dimensional Visualization of Mouse Brain by Lipid Analysis Using Ambient Ionization Mass Spectrometry. <i>Angewandte Chemie - International Edition</i> , 2010, 49, 873-876.	13.8	170
12	Cholesterol Sulfate Imaging in Human Prostate Cancer Tissue by Desorption Electrospray Ionization Mass Spectrometry. <i>Analytical Chemistry</i> , 2010, 82, 3430-3434.	6.5	170
13	FABP4 as a key determinant of metastatic potential of ovarian cancer. <i>Nature Communications</i> , 2018, 9, 2923.	12.8	151
14	Ambient Ionization Mass Spectrometry for Cancer Diagnosis and Surgical Margin Evaluation. <i>Clinical Chemistry</i> , 2016, 62, 111-123.	3.2	143
15	Desorption Electrospray Ionization then MALDI Mass Spectrometry Imaging of Lipid and Protein Distributions in Single Tissue Sections. <i>Analytical Chemistry</i> , 2011, 83, 8366-8371.	6.5	142
16	Multivariate statistical differentiation of renal cell carcinomas based on lipidomic analysis by ambient ionization imaging mass spectrometry. <i>Analytical and Bioanalytical Chemistry</i> , 2010, 398, 2969-2978.	3.7	137
17	Improved spatial resolution in the imaging of biological tissue using desorption electrospray ionization. <i>Analytical and Bioanalytical Chemistry</i> , 2012, 404, 389-398.	3.7	126
18	Nondestructive, Histologically Compatible Tissue Imaging by Desorption Electrospray Ionization Mass Spectrometry. <i>ChemBioChem</i> , 2011, 12, 2129-2132.	2.6	125

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19	Alteration of the lipid profile in lymphomas induced by MYC overexpression. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 10450-10455.	7.1	118
20	Discrimination of Human Astrocytoma Subtypes by Lipid Analysis Using Desorption Electrospray Ionization Imaging Mass Spectrometry. Angewandte Chemie - International Edition, 2010, 49, 5953-5956.	13.8	116
21	New ionization methods and miniature mass spectrometers for biomedicine: DESI imaging for cancer diagnostics and paper spray ionization for therapeutic drug monitoring. Faraday Discussions, 2011, 149, 247-267.	3.2	110
22	Oncogene KRAS activates fatty acid synthase, resulting in specific ERK and lipid signatures associated with lung adenocarcinoma. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 4300-4305.	7.1	110
23	Chemical Aspects of the Extractive Methods of Ambient Ionization Mass Spectrometry. Annual Review of Physical Chemistry, 2013, 64, 481-505.	10.8	107
24	Metabolic Markers and Statistical Prediction of Serous Ovarian Cancer Aggressiveness by Ambient Ionization Mass Spectrometry Imaging. Cancer Research, 2017, 77, 2903-2913.	0.9	106
25	Desorption Electrospray Ionization Mass Spectrometry Imaging of Proteins Directly from Biological Tissue Sections. Analytical Chemistry, 2018, 90, 7785-7789.	6.5	104
26	Multivariate Statistical Identification of Human Bladder Carcinomas Using Ambient Ionization Imaging Mass Spectrometry. Chemistry - A European Journal, 2011, 17, 2897-2902.	3.3	99
27	Ambient Ionization and FAIMS Mass Spectrometry for Enhanced Imaging of Multiply Charged Molecular Ions in Biological Tissues. Analytical Chemistry, 2016, 88, 11533-11541.	6.5	93
28	Mass spectrometry imaging as a tool for surgical decision-making. Journal of Mass Spectrometry, 2013, 48, 1178-1187.	1.6	85
29	Advances in mass spectrometry imaging coupled to ion mobility spectrometry for enhanced imaging of biological tissues. Current Opinion in Chemical Biology, 2018, 42, 138-146.	6.1	85
30	Instantaneous chemical profiles of banknotes by ambient mass spectrometry. Analyst, The, 2010, 135, 2533.	3.5	84
31	Desorption Electrospray Ionization Coupled with Ultraviolet Photodissociation for Characterization of Phospholipid Isomers in Tissue Sections. Analytical Chemistry, 2018, 90, 10100-10104.	6.5	79
32	Pancreatic Cancer Surgical Resection Margins: Molecular Assessment by Mass Spectrometry Imaging. PLoS Medicine, 2016, 13, e1002108.	8.4	79
33	Performance of the MasSpec Pen for Rapid Diagnosis of Ovarian Cancer. Clinical Chemistry, 2019, 65, 674-683.	3.2	77
34	Forensic Chemistry and Ambient Mass Spectrometry: A Perfect Couple Destined for a Happy Marriage?. Analytical Chemistry, 2016, 88, 2515-2526.	6.5	74
35	Desorption Electrospray Ionization Mass Spectrometry Reveals Lipid Metabolism of Individual Oocytes and Embryos. PLoS ONE, 2013, 8, e74981.	2.5	70
36	Multicenter Study Using Desorption-Electrospray-Ionization-Mass-Spectrometry Imaging for Breast-Cancer Diagnosis. Analytical Chemistry, 2018, 90, 11324-11332.	6.5	70

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37	Analysis of biodiesel and biodiesel-petrodiesel blends by high performance thin layer chromatography combined with easy ambient sonic-spray ionization mass spectrometry. <i>Analyst, The</i> , 2009, 134, 1652.	3.5	67
38	Organic Reactions of Ionic Intermediates Promoted by Atmospheric Pressure Thermal Activation. <i>Angewandte Chemie - International Edition</i> , 2008, 47, 3422-3425.	13.8	64
39	Perspectives in imaging using mass spectrometry. <i>Chemical Communications</i> , 2011, 47, 2741-2746.	4.1	63
40	Cardiolipins Are Biomarkers of Mitochondria-Rich Thyroid Oncocytic Tumors. <i>Cancer Research</i> , 2016, 76, 6588-6597.	0.9	63
41	Real-Time Electrochemical Detection of <i>Pseudomonas aeruginosa</i> Phenazine Metabolites Using Transparent Carbon Ultramicroelectrode Arrays. <i>ACS Sensors</i> , 2019, 4, 170-179.	7.8	61
42	Developmental phases of individual mouse preimplantation embryos characterized by lipid signatures using desorption electrospray ionization mass spectrometry. <i>Analytical and Bioanalytical Chemistry</i> , 2012, 404, 2915-2926.	3.7	54
43	Probabilistic Segmentation of Mass Spectrometry (MS) Images Helps Select Important Ions and Characterize Confidence in the Resulting Segments. <i>Molecular and Cellular Proteomics</i> , 2016, 15, 1761-1772.	3.8	54
44	Interactive hyperspectral approach for exploring and interpreting DESI-MS images of cancerous and normal tissue sections. <i>Analyst, The</i> , 2012, 137, 2374.	3.5	53
45	Neutral Fragment Mass Spectra via Ambient Thermal Dissociation of Peptide and Protein Ions. <i>Journal of the American Chemical Society</i> , 2007, 129, 5880-5886.	13.7	52
46	Single-Shot Biodiesel Analysis: Nearly Instantaneous Typification and Quality Control Solely by Ambient Mass Spectrometry. <i>Analytical Chemistry</i> , 2008, 80, 7882-7886.	6.5	52
47	Data quality in tissue analysis using desorption electrospray ionization. <i>Analytical and Bioanalytical Chemistry</i> , 2011, 401, 1949-1961.	3.7	52
48	Distinctive Glycerophospholipid Profiles of Human Seminoma and Adjacent Normal Tissues by Desorption Electrospray Ionization Imaging Mass Spectrometry. <i>Journal of the American Society for Mass Spectrometry</i> , 2011, 22, 1326-1333.	2.8	49
49	Detection of Metastatic Breast and Thyroid Cancer in Lymph Nodes by Desorption Electrospray Ionization Mass Spectrometry Imaging. <i>Journal of the American Society for Mass Spectrometry</i> , 2017, 28, 1166-1174.	2.8	49
50	Tissue imprint imaging by desorption electrospray ionization mass spectrometry. <i>Analytical Methods</i> , 2011, 3, 1910.	2.7	48
51	Integrating the MasSpec Pen to the da Vinci Surgical System for <i>In Vivo</i> Tissue Analysis during a Robotic Assisted Porcine Surgery. <i>Analytical Chemistry</i> , 2020, 92, 11535-11542.	6.5	47
52	Data Processing for 3D Mass Spectrometry Imaging. <i>Journal of the American Society for Mass Spectrometry</i> , 2012, 23, 1147-1156.	2.8	44
53	Double Bond Characterization of Free Fatty Acids Directly from Biological Tissues by Ultraviolet Photodissociation. <i>Analytical Chemistry</i> , 2020, 92, 8386-8395.	6.5	38
54	Mass Spectrometry Imaging Enables Discrimination of Renal Oncocytoma from Renal Cell Cancer Subtypes and Normal Kidney Tissues. <i>Cancer Research</i> , 2020, 80, 689-698.	0.9	37

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55	Electrochemical monitoring of the impact of polymicrobial infections on <i>Pseudomonas aeruginosa</i> and growth dependent medium. <i>Biosensors and Bioelectronics</i> , 2019, 142, 111538.	10.1	36
56	Preoperative metabolic classification of thyroid nodules using mass spectrometry imaging of fine-needle aspiration biopsies. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 21401-21408.	7.1	35
57	DESI-MSI and METASPACE indicates lipid abnormalities and altered mitochondrial membrane components in diabetic renal proximal tubules. <i>Metabolomics</i> , 2020, 16, 11.	3.0	34
58	Ambient Eberlin reactions via desorption electrospray ionization mass spectrometry. <i>Journal of Mass Spectrometry</i> , 2006, 41, 1242-1246.	1.6	33
59	Rapid diagnosis and tumor margin assessment during pancreatic cancer surgery with the MasSpec Pen technology. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	7.1	33
60	DESI-MS Imaging of Lipids and Metabolites from Biological Samples. <i>Methods in Molecular Biology</i> , 2014, 1198, 299-311.	0.9	32
61	Visualizing Dermal Permeation of Sodium Channel Modulators by Mass Spectrometric Imaging. <i>Journal of the American Chemical Society</i> , 2014, 136, 6401-6405.	13.7	31
62	Hybrid 193 nm Ultraviolet Photodissociation Mass Spectrometry Localizes Cardiolipin Unsaturation. <i>Analytical Chemistry</i> , 2019, 91, 12509-12516.	6.5	27
63	MASS SPECTROMETRY TECHNOLOGIES TO ADVANCE CARE FOR CANCER PATIENTS IN CLINICAL AND INTRAOPERATIVE USE. <i>Mass Spectrometry Reviews</i> , 2021, 40, 692-720.	5.4	25
64	Metabolites and Lipids Associated with Fetal Swine Anatomy via Desorption Electrospray Ionization “Mass Spectrometry Imaging. <i>Scientific Reports</i> , 2019, 9, 7247.	3.3	24
65	The Role of <i>Abcb5</i> Alleles in Susceptibility to Haloperidol-Induced Toxicity in Mice and Humans. <i>PLoS Medicine</i> , 2015, 12, e1001782.	8.4	23
66	Molecular Imaging of Endometriosis Tissues using Desorption Electrospray Ionization Mass Spectrometry. <i>Scientific Reports</i> , 2019, 9, 15690.	3.3	20
67	Imaging of whole zebra fish ( <i>Danio rerio</i> ) by desorption electrospray ionization mass spectrometry. <i>Rapid Communications in Mass Spectrometry</i> , 2014, 28, 2084-2088.	1.5	19
68	Will Ambient Ionization Mass Spectrometry Become an Integral Technology in the Operating Room of the Future?. <i>Clinical Chemistry</i> , 2016, 62, 1172-1174.	3.2	19
69	Distinguishing Non-Small Cell Lung Cancer Subtypes in Fine Needle Aspiration Biopsies by Desorption Electrospray Ionization Mass Spectrometry Imaging. <i>Clinical Chemistry</i> , 2020, 66, 1424-1433.	3.2	19
70	Multiplatform Investigation of Plasma and Tissue Lipid Signatures of Breast Cancer Using Mass Spectrometry Tools. <i>International Journal of Molecular Sciences</i> , 2020, 21, 3611.	4.1	16
71	Mammalian ovarian lipid distributions by desorption electrospray ionization “mass spectrometry (DESI-MS) imaging. <i>Analytical and Bioanalytical Chemistry</i> , 2020, 412, 1251-1262.	3.7	16
72	Rapid Analysis and Authentication of Meat Using the MasSpec Pen Technology. <i>Journal of Agricultural and Food Chemistry</i> , 2021, 69, 3527-3536.	5.2	15

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73	Relative Quantitation of Unsaturated Phosphatidylcholines Using 193 nm Ultraviolet Photodissociation Parallel Reaction Monitoring Mass Spectrometry. <i>Journal of the American Chemical Society</i> , 2021, 143, 14622-14634.	13.7	15
74	Atmospheric pressure thermal dissociation of phospho- and sulfopeptides. <i>Journal of the American Society for Mass Spectrometry</i> , 2008, 19, 1897-1905.	2.8	14
75	Protein Analysis by Ambient Ionization Mass Spectrometry Using Trypsin-Immobilized Organosiloxane Polymer Surfaces. <i>Analytical Chemistry</i> , 2015, 87, 12324-12330.	6.5	12
76	Rapid Screening of COVID-19 Directly from Clinical Nasopharyngeal Swabs Using the MasSpec Pen. <i>Analytical Chemistry</i> , 2021, 93, 12582-12593.	6.5	12
77	A Statistical Modeling Approach for Tumor-Type Identification in Surgical Neuropathology Using Tissue Mass Spectrometry Imaging. <i>IEEE Journal of Biomedical and Health Informatics</i> , 2013, 17, 734-744.	6.3	11
78	Clinical Translation and Evaluation of a Handheld and Biocompatible Mass Spectrometry Probe for Surgical Use. <i>Clinical Chemistry</i> , 2021, 67, 1271-1280.	3.2	10
79	DESI Spray Stability in the Negative Ion Mode Is Dependent on Relative Humidity. <i>Journal of the American Society for Mass Spectrometry</i> , 2019, 30, 376-380.	2.8	8
80	Metabotype analysis of Mthfd1l-null mouse embryos using desorption electrospray ionization mass spectrometry imaging. <i>Analytical and Bioanalytical Chemistry</i> , 2021, 413, 3573-3582.	3.7	7
81	Reduced Hemoglobin Signal and Improved Detection of Endogenous Proteins in Blood-Rich Tissues for MALDI Mass Spectrometry Imaging. <i>Journal of the American Society for Mass Spectrometry</i> , 2022, 33, 296-303.	2.8	7
82	The importance of clinical tissue imaging. <i>Clinical Mass Spectrometry</i> , 2019, 12, 47-49.	1.9	6
83	Integrating the MasSpec Pen with Sub-Atmospheric Pressure Chemical Ionization for Rapid Chemical Analysis and Forensic Applications. <i>Analytical Chemistry</i> , 2021, 93, 7549-7556.	6.5	6
84	Spatially Controlled Molecular Analysis of Biological Samples Using Nanodroplet Arrays and Direct Droplet Aspiration. <i>Journal of the American Society for Mass Spectrometry</i> , 2020, 31, 418-428.	2.8	5
85	Recognition of Cyclic, Acyclic, Exocyclic, and Spiro Acetals via Structurally Diagnostic Ion/Molecule Reactions with the (CH <sub>3</sub> ) <sub>2</sub> N-C <sup>+</sup> ≡O Acylium Ion. <i>Journal of Organic Chemistry</i> , 2008, 73, 5549-5557.	3.2	2