

# John S Fletcher

## List of Publications by Year in descending order

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82  
papers

3,541  
citations

117625

34  
h-index

138484

58  
g-index

84  
all docs

84  
docs citations

84  
times ranked

2688  
citing authors

#	ARTICLE	IF	CITATIONS
1	TOF-SIMS 3D Biomolecular Imaging of <i>Xenopus laevis</i> Oocytes Using Buckminsterfullerene (C <sub>60</sub> ) Primary Ions. <i>Analytical Chemistry</i> , 2007, 79, 2199-2206.	6.5	284
2	A New Dynamic in Mass Spectral Imaging of Single Biological Cells. <i>Analytical Chemistry</i> , 2008, 80, 9058-9064.	6.5	254
3	TOF-SIMS with Argon Gas Cluster Ion Beams: A Comparison with C <sub>60</sub> <sup>+</sup> . <i>Analytical Chemistry</i> , 2011, 83, 3793-3800.	6.5	188
4	Developments in molecular SIMS depth profiling and 3D imaging of biological systems using polyatomic primary ions. <i>Mass Spectrometry Reviews</i> , 2011, 30, 142-174.	5.4	133
5	Secondary Ion Mass Spectrometry: Characterizing Complex Samples in Two and Three Dimensions. <i>Analytical Chemistry</i> , 2013, 85, 610-639.	6.5	126
6	The inherent problem of transflection-mode infrared spectroscopic microscopy and the ramifications for biomedical single point and imaging applications. <i>Analyst, The</i> , 2013, 138, 144-157.	3.5	119
7	Mass Spectrometry Imaging and Integration with Other Imaging Modalities for Greater Molecular Understanding of Biological Tissues. <i>Molecular Imaging and Biology</i> , 2018, 20, 888-901.	2.6	113
8	Three-dimensional mass spectral imaging of <i>HeLa</i> cells – sample preparation, data interpretation and visualisation. <i>Rapid Communications in Mass Spectrometry</i> , 2011, 25, 925-932.	1.5	112
9	Cellular imaging with secondary ion mass spectrometry. <i>Analyst, The</i> , 2009, 134, 2204.	3.5	94
10	A new SIMS paradigm for 2D and 3D molecular imaging of bio-systems. <i>Analytical and Bioanalytical Chemistry</i> , 2010, 396, 85-104.	3.7	94
11	Enhancing Secondary Ion Yields in Time of Flight-Secondary Ion Mass Spectrometry Using Water Cluster Primary Beams. <i>Analytical Chemistry</i> , 2013, 85, 5654-5658.	6.5	92
12	TOF-SIMS Analysis Using C <sub>60</sub> . Effect of Impact Energy on Yield and Damage. <i>Analytical Chemistry</i> , 2006, 78, 1827-1831.	6.5	82
13	Label free biochemical 2D and 3D imaging using secondary ion mass spectrometry. <i>Current Opinion in Chemical Biology</i> , 2011, 15, 733-740.	6.1	79
14	High energy gas cluster ions for organic and biological analysis by time-of-flight secondary ion mass spectrometry. <i>International Journal of Mass Spectrometry</i> , 2015, 377, 591-598.	1.5	78
15	A new time-of-flight SIMS instrument for 3D imaging and analysis. <i>Surface and Interface Analysis</i> , 2011, 43, 506-509.	1.8	70
16	Latest applications of 3D ToF-SIMS bio-imaging. <i>Biointerphases</i> , 2015, 10, 018902.	1.6	64
17	Lipid Heterogeneity Resulting from Fatty Acid Processing in the Human Breast Cancer Microenvironment Identified by GCIB-ToF-SIMS Imaging. <i>Analytical Chemistry</i> , 2016, 88, 11946-11954.	6.5	62
18	Subsurface Biomolecular Imaging of <i>Streptomyces coelicolor</i> Using Secondary Ion Mass Spectrometry. <i>Analytical Chemistry</i> , 2008, 80, 1942-1951.	6.5	61

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19	Peptide Fragmentation and Surface Structural Analysis by Means of ToF-SIMS Using Large Cluster Ion Sources. <i>Analytical Chemistry</i> , 2016, 88, 3592-3597.	6.5	59
20	A comparison of PCA and MAF for ToF-SIMS image interpretation. <i>Surface and Interface Analysis</i> , 2009, 41, 666-674.	1.8	56
21	Improved Molecular Imaging in Rodent Brain with Time-of-Flight-Secondary Ion Mass Spectrometry Using Gas Cluster Ion Beams and Reactive Vapor Exposure. <i>Analytical Chemistry</i> , 2015, 87, 4305-4313.	6.5	56
22	Measuring Compositions in Organic Depth Profiling: Results from a VAMAS Interlaboratory Study. <i>Journal of Physical Chemistry B</i> , 2015, 119, 10784-10797.	2.6	56
23	Brain region-specific amyloid plaque-associated myelin lipid loss, APOE deposition and disruption of the myelin sheath in familial Alzheimer's disease mice. <i>Journal of Neurochemistry</i> , 2020, 154, 84-98.	3.9	50
24	On-Tissue Chemical Derivatization of Catecholamines Using 4-( <i>N</i> -Methyl)pyridinium Boronic Acid for ToF-SIMS and LDI-ToF Mass Spectrometry Imaging. <i>Analytical Chemistry</i> , 2018, 90, 13580-13590.	6.5	47
25	Molecular depth profiling of organic and biological materials. <i>Applied Surface Science</i> , 2006, 252, 6513-6516.	6.1	46
26	ToF-SIMS analysis of bio-systems: Are polyatomic primary ions the solution?. <i>Applied Surface Science</i> , 2006, 252, 6844-6854.	6.1	44
27	Intact lipid imaging of mouse brain samples: MALDI, nanoparticle-laser desorption ionization, and 40 keV argon cluster secondary ion mass spectrometry. <i>Analytical and Bioanalytical Chemistry</i> , 2016, 408, 6857-6868.	3.7	44
28	C60, Buckminsterfullerene: its impact on biological ToF-SIMS analysis. <i>Surface and Interface Analysis</i> , 2006, 38, 1393-1400.	1.8	42
29	Cholesterol Alters the Dynamics of Release in Protein Independent Cell Models for Exocytosis. <i>Scientific Reports</i> , 2016, 6, 33702.	3.3	42
30	MS/MS analysis and imaging of lipids across <i>Drosophila</i> brain using secondary ion mass spectrometry. <i>Analytical and Bioanalytical Chemistry</i> , 2017, 409, 3923-3932.	3.7	42
31	Effects of Cryogenic Sample Analysis on Molecular Depth Profiles with TOF-Secondary Ion Mass Spectrometry. <i>Analytical Chemistry</i> , 2010, 82, 8291-8299.	6.5	39
32	Spatial Lipidomics Reveals Region and Long Chain Base Specific Accumulations of Monosialogangliosides in Amyloid Plaques in Familial Alzheimer's Disease Mice (5xFAD) Brain. <i>ACS Chemical Neuroscience</i> , 2020, 11, 14-24.	3.5	37
33	Lipid Structural Effects of Oral Administration of Methylphenidate in <i>Drosophila</i> Brain by Secondary Ion Mass Spectrometry Imaging. <i>Analytical Chemistry</i> , 2015, 87, 4063-4071.	6.5	36
34	Properties of C84 and C24H12 Molecular Ion Sources for Routine TOF-SIMS Analysis. <i>Analytical Chemistry</i> , 2007, 79, 7259-7266.	6.5	35
35	Time of Flight Mass Spectrometry Imaging of Samples Fractured In Situ with a Spring-Loaded Trap System. <i>Analytical Chemistry</i> , 2010, 82, 6652-6659.	6.5	35
36	Spatiotemporal lipid profiling during early embryo development of <i>Xenopus laevis</i> using dynamic ToF-SIMS imaging. <i>Journal of Lipid Research</i> , 2014, 55, 1970-1980.	4.2	35

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37	Mass Spectrometry Imaging Shows Cocaine and Methylphenidate Have Opposite Effects on Major Lipids in <i>Drosophila</i> Brain. <i>ACS Chemical Neuroscience</i> , 2018, 9, 1462-1468.	3.5	31
38	Lipid Diversity in Cells and Tissue Using Imaging SIMS. <i>Annual Review of Analytical Chemistry</i> , 2020, 13, 249-271.	5.4	31
39	Uncovering new challenges in bio-analysis with ToF-SIMS. <i>Applied Surface Science</i> , 2008, 255, 1264-1270.	6.1	30
40	Time-of-Flight Secondary Ion Mass Spectrometry Based Molecular Histology of Human Spinal Cord Tissue and Motor Neurons. <i>Analytical Chemistry</i> , 2013, 85, 8741-8748.	6.5	30
41	Multimodal MALDI Imaging Mass Spectrometry Reveals Spatially Correlated Lipid and Protein Changes in Mouse Heart with Acute Myocardial Infarction. <i>Journal of the American Society for Mass Spectrometry</i> , 2020, 31, 2133-2142.	2.8	30
42	Rapid discrimination of the causal agents of urinary tract infection using ToF-SIMS with chemometric cluster analysis. <i>Applied Surface Science</i> , 2006, 252, 6869-6874.	6.1	26
43	Evaluating the challenges associated with time-of-flight secondary ion mass spectrometry for metabolomics using pure and mixed metabolites. <i>Metabolomics</i> , 2013, 9, 535-544.	3.0	26
44	Localised lipid accumulation detected in infarcted mouse heart tissue using ToF-SIMS. <i>International Journal of Mass Spectrometry</i> , 2019, 437, 77-86.	1.5	26
45	Peptide structural analysis using continuous Ar cluster and C60 ion beams. <i>Analytical and Bioanalytical Chemistry</i> , 2013, 405, 6621-6628.	3.7	25
46	Molecular SIMS imaging; spatial resolution and molecular sensitivity: have we reached the end of the road? Is there light at the end of the tunnel?. <i>Surface and Interface Analysis</i> , 2011, 43, 253-256.	1.8	24
47	ToF-SIMS imaging of lipids and lipid related compounds in <i>Drosophila</i> brain. <i>Surface and Interface Analysis</i> , 2014, 46, 123-126.	1.8	24
48	Optimizing sample preparation for anatomical determination in the hippocampus of rodent brain by ToF-SIMS analysis. <i>Biointerphases</i> , 2016, 11, 02A319.	1.6	24
49	ToF-SIMS as a tool for metabolic profiling small biomolecules in cancer systems. <i>Surface and Interface Analysis</i> , 2013, 45, 277-281.	1.8	22
50	Comparison of C <sub>60</sub> and GCIB primary ion beams for the analysis of cancer cells and tumour sections. <i>Surface and Interface Analysis</i> , 2013, 45, 273-276.	1.8	20
51	Maximising the potential for bacterial phenotyping using time-of-flight secondary ion mass spectrometry with multivariate analysis and Tandem Mass Spectrometry. <i>Surface and Interface Analysis</i> , 2014, 46, 173-176.	1.8	19
52	TOF-SIMS imaging reveals tumor heterogeneity and inflammatory response markers in the microenvironment of basal cell carcinoma. <i>Biointerphases</i> , 2020, 15, 041012.	1.6	19
53	First detection of molecular hydrate complexes in sulfuric acid aerosols. <i>Physical Chemistry Chemical Physics</i> , 2003, 5, 4108.	2.8	14
54	A Comparative Study of Secondary Ion Emission from Water Ice under Ion Bombardment by Au <sup>+</sup> , Au <sub>3</sub> <sup>+</sup> , and C <sub>60</sub> <sup>+</sup> . <i>Journal of Physical Chemistry C</i> , 2010, 114, 5468-5479.	3.1	14

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55	3D Imaging of TiO <sub>2</sub> nanoparticle accumulation in <i>Tetrahymena pyriformis</i> . Surface and Interface Analysis, 2014, 46, 198-203.	1.8	14
56	Multimodal Imaging of Chemically Fixed Cells in Preparation for NanoSIMS. Analytical Chemistry, 2016, 88, 8841-8848.	6.5	13
57	Investigating the Role of the Stringent Response in Lipid Modifications during the Stationary Phase in <i>E. coli</i> by Direct Analysis with Time-of-Flight-Secondary Ion Mass Spectrometry. Analytical Chemistry, 2016, 88, 8680-8688.	6.5	13
58	TOF-SIMS investigation of <i>Streptomyces coelicolor</i> , a mycelial bacterium. Applied Surface Science, 2008, 255, 922-925.	6.1	12
59	Chemical imaging of aggressive basal cell carcinoma using time-of-flight secondary ion mass spectrometry. Biointerphases, 2018, 13, 03B402.	1.6	12
60	Compositional characterisation of metallurgical grade silicon and porous silicon nanosponge particles. RSC Advances, 2013, 3, 19393.	3.6	11
61	Chemical Changes On, and Through, The Bacterial Envelope in <i>Escherichia coli</i> Mutants Exhibiting Impaired Plasmid Transfer Identified Using Time-of-Flight Secondary Ion Mass Spectrometry. Analytical Chemistry, 2019, 91, 11355-11361.	6.5	11
62	Explanatory multivariate analysis of ToF-SIMS spectra for the discrimination of bacterial isolates. Analyst, The, 2009, 134, 2352.	3.5	10
63	(CO <sub>2</sub> ) <sub>n</sub> <sup>+</sup> , (H <sub>2</sub> O) <sub>n</sub> <sup>+</sup> , and (H <sub>2</sub> O) <sub>n</sub> <sup>+</sup> (CO <sub>2</sub> ) gas cluster ion beam secondary ion mass spectrometry: analysis of lipid extracts, cells, and Alzheimer's model mouse brain tissue. Analytical and Bioanalytical Chemistry, 2021, 413, 4181-4194.	3.7	10
64	Time-of-flight SIMS as a novel approach to unlocking the hypoxic properties of cancer. Surface and Interface Analysis, 2013, 45, 282-285.	1.8	9
65	Exploratory analysis of TOF-SIMS data from biological surfaces. Applied Surface Science, 2008, 255, 1599-1602.	6.1	8
66	Correlated fluorescence microscopy and multi-ion beam secondary ion mass spectrometry imaging reveals phosphatidylethanolamine increases in the membrane of cancer cells over-expressing the molecular chaperone subunit CCT $\gamma$ . Analytical and Bioanalytical Chemistry, 2021, 413, 445-453.	3.7	8
67	ToF-SIMS Studies of Sulfuric Acid Hydrate Films. Journal of Physical Chemistry B, 2004, 108, 5960-5966.	2.6	7
68	Examination of fragment ions of polystyrene in TOF-SIMS spectra using MS/MS. Surface and Interface Analysis, 2014, 46, 92-95.	1.8	7
69	Gold and silver nanoparticle-assisted laser desorption ionization mass spectrometry compatible with secondary ion mass spectrometry for lipid analysis. Surface and Interface Analysis, 2014, 46, 379-382.	1.8	7
70	Interplay between Cocaine, Drug Removal, and Methylphenidate Reversal on Phospholipid Alterations in <i>Drosophila</i> Brain Determined by Imaging Mass Spectrometry. ACS Chemical Neuroscience, 2020, 11, 806-813.	3.5	7
71	Identification of Surface Molecular Hydrates on Solid Sulfuric Acid Films. Journal of the American Chemical Society, 2003, 125, 13038-13039.	13.7	6
72	Substrate effects on the analysis of biomolecular layers using Au <sup>+</sup> , Au <sup>3+</sup> and C <sub>60</sub> <sup>+</sup> bombardments. Applied Surface Science, 2008, 255, 890-892.	6.1	6

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73	Evaluation of biomolecular distributions in rat brain tissues by means of ToF-SIMS using a continuous beam of Ar clusters. <i>Biointerphases</i> , 2016, 11, 02A307.	1.6	5
74	Benefits of NaCl addition for time-of-flight secondary ion mass spectrometry analysis including the discrimination of diacylglyceride and triacylglyceride ions. <i>Rapid Communications in Mass Spectrometry</i> , 2018, 32, 1473-1480.	1.5	5
75	Significant Enhancement of Negative Secondary Ion Yields by Cluster Ion Bombardment Combined with Cesium Flooding. <i>Analytical Chemistry</i> , 2015, 87, 10025-10032.	6.5	4
76	The role of surface molecular hydrates in the heterogeneous interaction of NH <sub>3</sub> with sulfuric acid monohydrate. <i>Physical Chemistry Chemical Physics</i> , 2003, 5, 5101.	2.8	3
77	Analysis of liposome model systems by time-of-flight secondary ion mass spectrometry. <i>Surface and Interface Analysis</i> , 2014, 46, 74-78.	1.8	3
78	3D imaging of biological specimen using MS. <i>Bioanalysis</i> , 2015, 7, 2657-2666.	1.5	3
79	Top-down approach to studying biological components using ToF-SIMS. <i>Surface and Interface Analysis</i> , 2011, 43, 265-268.	1.8	2
80	Peak picking as a pre-processing technique for imaging time of flight secondary ion mass spectrometry. <i>Surface and Interface Analysis</i> , 2013, 45, 461-465.	1.8	2
81	Interrogation of chemical changes on, and through, the bacterial envelope of <i>Escherichia coli</i> FabF mutant using time-of-flight secondary ion mass spectrometry. <i>Surface and Interface Analysis</i> , 2021, 53, 1006-1012.	1.8	1
82	2 and 3D TOF-SIMS Imaging for Biological Analysis. NATO Science for Peace and Security Series A: Chemistry and Biology, 2011, , 285-299.	0.5	0