Stephen J Valentine

List of Publications by Year
in descending order

95	5,454	87888 38	82547 72
papers	citations	h-index	g-index

98	98	98	2833
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Three-Dimensional Ion Mobility/TOFMS Analysis of Electrosprayed Biomolecules. Analytical Chemistry, 1998, 70, 2236-2242.	6.5	330
2	Recommendations for reporting ion mobility Mass Spectrometry measurements. Mass Spectrometry Reviews, 2019, 38, 291-320.	5.4	315
3	An IMSâˆ’IMS Analogue of MSâˆ’MS. Analytical Chemistry, 2006, 78, 4161-4174.	6.5	251
4	Disulfide-Intact and -Reduced Lysozyme in the Gas Phase:Â Conformations and Pathways of Folding and Unfolding. Journal of Physical Chemistry B, 1997, 101, 3891-3900.	2.6	224
5	Conformer-dependent proton-transfer reactions of ubiquitin ions. Journal of the American Society for Mass Spectrometry, 1997, 8, 954-961.	2.8	219
6	ESI/Ion Trap/Ion Mobility/Time-of-Flight Mass Spectrometry for Rapid and Sensitive Analysis of Biomolecular Mixtures. Analytical Chemistry, 1999, 71, 291-301.	6.5	193
7	H/D Exchange Levels of Shape-Resolved Cytochrome c Conformers in the Gas Phase. Journal of the American Chemical Society, 1997, 119, 3558-3566.	13.7	192
8	A database of 660 peptide ion cross sections: Use of intrinsic size parameters for bona fide predictions of cross sections. Journal of the American Society for Mass Spectrometry, 1999, 10, 1188-1211.	2.8	191
9	IMSâˆ’IMS and IMSâˆ’IMSâˆ’IMS/MS for Separating Peptide and Protein Fragment Ions. Analytical Chemistry, 2006, 78, 2802-2809.	6.5	183
10	Mapping the human plasma proteome by SCX-LC-IMS-MS. Journal of the American Society for Mass Spectrometry, 2007, 18, 1249-1264.	2.8	171
11	Number of Solution States of Bradykinin from Ion Mobility and Mass Spectrometry Measurements. Journal of the American Chemical Society, 2011, 133, 13810-13813.	13.7	142
12	High-order structure and dissociation of gaseous peptide aggregates that are hidden in mass spectra. Journal of the American Society for Mass Spectrometry, 1998, 9, 743-759.	2.8	141
13	Toward Plasma Proteome Profiling with Ion Mobility-Mass Spectrometry. Journal of Proteome Research, 2006, 5, 2977-2984.	3.7	139
14	Multidimensional separations of complex peptide mixtures: a combined high-performance liquid chromatography/ion mobility/time-of-flight mass spectrometry approach. International Journal of Mass Spectrometry, 2001, 212, 97-109.	1.5	133
15	Coupling Desorption Electrospray Ionization with Ion Mobility/Mass Spectrometry for Analysis of Protein Structure:Â Evidence for Desorption of Folded and Denatured States. Journal of Physical Chemistry B, 2006, 110, 5045-5051.	2.6	116
16	An Ion Trap Interface for ESIâˆ’Ion Mobility Experiments. Analytical Chemistry, 1997, 69, 4156-4161.	6.5	112
17	Development of High-Sensitivity Ion Trap Ion Mobility Spectrometry Time-of-Flight Techniques:Â A High-Throughput Nano-LC-IMS-TOF Separation of Peptides Arising from aDrosophilaProtein Extract. Analytical Chemistry, 2003, 75, 5137-5145.	6.5	111
18	Gas-phase separations of protease digests. Journal of the American Society for Mass Spectrometry, 1998, 9, 1213-1216.	2.8	104

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19	Resolving Isomeric Peptide Mixtures:Â A Combined HPLC/Ion Mobility-TOFMS Analysis of a 4000-Component Combinatorial Library. Analytical Chemistry, 2002, 74, 26-36.	6.5	95
20	Conformation Types of Ubiquitin [M+8H]8+ Ions from Water:Methanol Solutions: Evidence for the N and A States in Aqueous Solution. Journal of Physical Chemistry B, 2012, 116, 3344-3352.	2.6	87
21	Evidence for a Quasi-Equilibrium Distribution of States for Bradykinin [M + 3H]³⁺ Ions in the Gas Phase. Journal of Physical Chemistry B, 2010, 114, 7777-7783.	2.6	84
22	Temperature-dependent H/D exchange of compact and elongated cytochrome c ions in the gas phase. Journal of the American Society for Mass Spectrometry, 2002, 13, 506-517.	2.8	79
23	An Ion Mobility/Ion Trap/Photodissociation Instrument for Characterization of Ion Structure. Journal of the American Society for Mass Spectrometry, 2011, 22, 1477-85.	2.8	72
24	Intrinsic Amino Acid Size Parameters from a Series of 113 Lysine-Terminated Tryptic Digest Peptide Ions. Journal of Physical Chemistry B, 1999, 103, 1203-1207.	2.6	70
25	Overtone mobility spectrometry: Part 1. Experimental observations. Journal of the American Society for Mass Spectrometry, 2009, 20, 729-737.	2.8	70
26	A Split-Field Drift Tube for Separation and Efficient Fragmentation of Biomolecular Ions. Analytical Chemistry, 2003, 75, 6202-6208.	6.5	67
27	Mapping the Proteome ofDrosophilamelanogaster:Â Analysis of Embryos and Adult Heads by LCâ^'IMSâ^'MS Methods. Journal of Proteome Research, 2005, 4, 1223-1237.	3.7	65
28	Mannose7 Glycan Isomer Characterization by IMS-MS/MS Analysis. Journal of the American Society for Mass Spectrometry, 2012, 23, 2158-2166.	2.8	63
29	Developing liquid chromatography ion mobility mass spectometry techniques. Expert Review of Proteomics, 2005, 2, 553-565.	3.0	61
30	Analyzing a mixture of disaccharides by IMS-VUVPD-MS. International Journal of Mass Spectrometry, 2012, 309, 161-167.	1.5	61
31	Using Ion Mobility Data to Improve Peptide Identification: Intrinsic Amino Acid Size Parameters. Journal of Proteome Research, 2011, 10, 2318-2329.	3.7	58
32	Acetylation within the First 17 Residues of Huntingtin Exon 1 Alters Aggregation and Lipid Binding. Biophysical Journal, 2016, 111, 349-362.	0.5	55
33	Peer Reviewed: Injected-Ion Mobility Analysis of Biomolecules. Analytical Chemistry, 1997, 69, 728A-735A.	6.5	45
34	Proteome Profiling for Assessing Diversity:Â Analysis of Individual Heads ofDrosophilamelanogasterUsing LCâ^'Ion Mobilityâ^'MS. Journal of Proteome Research, 2005, 4, 1238-1247.	3.7	45
35	Overtone mobility spectrometry: Part 2. Theoretical considerations of resolving power. Journal of the American Society for Mass Spectrometry, 2009, 20, 738-750.	2.8	44
36	Extracted fragment ion mobility distributions: A new method for complex mixture analysis. International Journal of Mass Spectrometry, 2012, 309, 154-160.	1.5	40

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37	Combining Ion Mobility Spectrometry with Hydrogen-Deuterium Exchange and Top-Down MS for Peptide Ion Structure Analysis. Journal of the American Society for Mass Spectrometry, 2014, 25, 2103-2115.	2.8	39
38	Nanoflow LC/IMS-MS and LC/IMS-CID/MS of protein mixtures. Journal of the American Society for Mass Spectrometry, 2004, 15, 1341-1353.	2.8	38
39	Towards a systems level analysis of health and nutrition. Current Opinion in Biotechnology, 2008, 19, 100-109.	6.6	38
40	A Scanning Frequency Mode for Ion Cyclotron Mobility Spectrometry. Analytical Chemistry, 2010, 82, 8266-8271.	6.5	38
41	Vibrating Sharpâ€edge Spray Ionization (VSSI) for voltageâ€free direct analysis of samples using mass spectrometry. Rapid Communications in Mass Spectrometry, 2021, 35, e8232.	1.5	37
42	Developing IMSâ€“IMSâ€“MS for rapid characterization of abundant proteins in human plasma. International Journal of Mass Spectrometry, 2009, 283, 149-160.	1.5	34
43	Capillary Vibrating Sharp-Edge Spray Ionization (cVSSI) for Voltage-Free Liquid Chromatography-Mass Spectrometry. Journal of the American Society for Mass Spectrometry, 2019, 30, 824-831.	2.8	33
44	Determination of Cross Sections by Overtone Mobility Spectrometry: Evidence for Loss of Unstable Structures at Higher Overtones. Journal of Physical Chemistry B, 2010, 114, 12406-12415.	2.6	32
45	A New Ion Mobilityâ€“Linear Ion Trap Instrument for Complex Mixture Analysis. Analytical Chemistry, 2014, 86, 8121-8128.	6.5	32
46	Gas-phase conformation-specific photofragmentation of proline-containing peptide ions. Journal of the American Society for Mass Spectrometry, 2010, 21, 1455-1465.	2.8	30
47	Controlled Formation of Peptide Bonds in the Gas Phase. Journal of the American Chemical Society, 2011, 133, 15834-15837.	13.7	30
48	Development of high-throughput liquid chromatography injected ion mobility quadrupole time-of-flight techniques for analysis of complex peptide mixtures. Journal of Chromatography B: Analytical Technologies in the Biomedical and Life Sciences, 2002, 782, 343-351.	2.3	29
49	Development of Field Modulation in a Split-Field Drift Tube for High-Throughput Multidimensional Separations. Journal of Proteome Research, 2005, 4, 25-35.	3.7	29
50	Huntingtin N-Terminal Monomeric and Multimeric Structures Destabilized by Covalent Modification of Heteroatomic Residues. Biochemistry, 2015, 54, 4285-4296.	2.5	28
51	Advances in ion mobility-mass spectrometry instrumentation and techniques for characterizing structural heterogeneity. Analyst, The, 2015, 140, 6782-6798.	3.5	27
52	Improving the Efficiency of IMSâ^'IMS by a Combing Technique. Analytical Chemistry, 2008, 80, 1918-1927.	6.5	26
53	Treatise on the Measurement of Molecular Masses with Ion Mobility Spectrometry. Analytical Chemistry, 2009, 81, 5876-5880.	6.5	26
54	Ion Mobility Spectrometry-Hydrogen Deuterium Exchange Mass Spectrometry of Anions: Part 1. Peptides to Proteins. Journal of the American Society for Mass Spectrometry, 2015, 26, 564-576.	2.8	24

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55	Facile Improvement of Negative Ion Mode Electrospray Ionization Using Capillary Vibrating Sharp-Edge Spray Ionization. Analytical Chemistry, 2020, 92, 2492-2502.	6.5	23
56	Comprehensive Peptide Ion Structure Studies Using Ion Mobility Techniques: Part 3. Relating Solution-Phase to Gas-Phase Structures. Journal of the American Society for Mass Spectrometry, 2018, 29, 1665-1677.	2.8	20
57	Overtone Mobility Spectrometry: Part 3. On the Origin of Peaks. Journal of the American Society for Mass Spectrometry, 2011, 22, 804-816.	2.8	19
58	A Database of Alkaline-Earth-Coordinated Peptide Cross Sections: Insight into General Aspects of Structure. Journal of the American Society for Mass Spectrometry, 2013, 24, 768-779.	2.8	19
59	Structural Assignments of Sulfur-Containing Compounds in Crude Oil Using Ion Mobility Spectrometry-Mass Spectrometry. Energy & Fuels, 2016, 30, 9150-9161.	5.1	18
60	Comprehensive Peptide Ion Structure Studies Using Ion Mobility Techniques: Part 1. An Advanced Protocol for Molecular Dynamics Simulations and Collision Cross-Section Calculation. Journal of the American Society for Mass Spectrometry, 2017, 28, 947-959.	2.8	18
61	Magnifying ion mobility spectrometryâ€“mass spectrometry measurements for biomolecular structure studies. Current Opinion in Chemical Biology, 2018, 42, 101-110.	6.1	18
62	Lysine residues in the N-terminal huntingtin amphipathicÎ±-helix play a key role in peptide aggregation. Journal of Mass Spectrometry, 2015, 50, 117-126.	1.6	17
63	Protons Are Fast and Smart; Proteins Are Slow and Dumb: On the Relationship of Electrospray Ionization Charge States and Conformations. Journal of the American Society for Mass Spectrometry, 2021, 32, 1553-1561.	2.8	17
64	Oscillations of Chiral Preference in Proline Clusters. Journal of Physical Chemistry A, 2013, 117, 1035-1041.	2.5	16
65	Gas-Phase Hydrogen-Deuterium Exchange Labeling of Select Peptide Ion Conformer Types: a Per-Residue Kinetics Analysis. Journal of the American Society for Mass Spectrometry, 2015, 26, 1115-1127.	2.8	16
66	Ion Mobility Spectrometry-Mass Spectrometry Coupled with Gas-Phase Hydrogen/Deuterium Exchange for Metabolomics Analyses. Journal of the American Society for Mass Spectrometry, 2018, 29, 230-241.	2.8	15
67	Lipid headgroups alter huntingtin aggregation on membranes. Biochimica Et Biophysica Acta - Biomembranes, 2021, 1863, 183497.	2.6	15
68	Nucleation Inhibition of Huntingtin Protein (htt) by Polyproline PPII Helices: A Potential Interaction with the N-Terminal Î±-Helical Region of Htt. Biochemistry, 2020, 59, 436-449.	2.5	14
69	Comparative plasma proteomic studies of pulmonary TiO2 nanoparticle exposure in rats using liquid chromatography tandem mass spectrometry. Journal of Proteomics, 2016, 130, 85-93.	2.4	13
70	Chirality and Packing in Small Proline Clusters. Journal of Physical Chemistry B, 2012, 116, 11442-11446.	2.6	12
71	Hydrogen Peroxide Modifies AÎ²â€“Membrane Interactions with Implications for AÎ²₄₀ Aggregation. Biochemistry, 2019, 58, 2893-2905.	2.5	12
72	Protein oligomers frozen in time. Nature Chemistry, 2009, 1, 257-258.	13.6	11

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73	Comprehensive Gas-Phase Peptide Ion Structure Studies Using Ion Mobility Techniques: Part 2. Gas-Phase Hydrogen/Deuterium Exchange for Ion Population Estimation. Journal of the American Society for Mass Spectrometry, 2017, 28, 960-970.	2.8	11
74	Rapid Solution-Phase Hydrogen/Deuterium Exchange for Metabolite Compound Identification. Journal of the American Society for Mass Spectrometry, 2019, 30, 1102-1114.	2.8	11
75	Acetylation of AÎ²₄₀ Alters Aggregation in the Presence and Absence of Lipid Membranes. ACS Chemical Neuroscience, 2020, 11, 146-161.	3.5	11
76	Combining Field-Enabled Capillary Vibrating Sharp-Edge Spray Ionization with Microflow Liquid Chromatography and Mass Spectrometry to Enhance â€˜Omics Analyses. Journal of the American Society for Mass Spectrometry, 2021, 32, 473-485.	2.8	11
77	Online Deuterium Hydrogen Exchange and Protein Digestion Coupled with Ion Mobility Spectrometry and Tandem Mass Spectrometry. Analytical Chemistry, 2015, 87, 5247-5254.	6.5	10
78	Ion Mobility Spectrometry-Hydrogen Deuterium Exchange Mass Spectrometry of Anions: Part 3. Estimating Surface Area Exposure by Deuterium Uptake. Journal of the American Society for Mass Spectrometry, 2016, 27, 462-473.	2.8	10
79	Ion Mobility Spectrometry-Hydrogen Deuterium Exchange Mass Spectrometry of Anions: Part 2. Assessing Charge Site Location and Isotope Scrambling. Journal of the American Society for Mass Spectrometry, 2016, 27, 451-461.	2.8	10
80	Investigating the interactions of the first 17 amino acid residues of Huntingtin with lipid vesicles using mass spectrometry and molecular dynamics. Journal of Mass Spectrometry, 2020, 55, e4470.	1.6	10
81	Split-Field Drift Tube/Mass Spectrometry and Isotopic Labeling Techniques for Determination of Single Amino Acid Polymorphisms. Journal of Proteome Research, 2006, 5, 1879-1887.	3.7	9
82	Overtone Mobility Spectrometry: Part 5. Simulations and Analytical Expressions Describing Overtone Limits. Journal of the American Society for Mass Spectrometry, 2013, 24, 615-621.	2.8	9
83	Ion Mobility, Hydrogen/Deuterium Exchange, and Isotope Scrambling: Tools to Aid Compound Identification in â€˜Omics Mixtures. Analytical Chemistry, 2017, 89, 6399-6407.	6.5	9
84	Comparison of Peptide Ion Conformers Arising from Non-Helical and Helical Peptides Using Ion Mobility Spectrometry and Gas-Phase Hydrogen/Deuterium Exchange. Journal of the American Society for Mass Spectrometry, 2018, 29, 2402-2412.	2.8	8
85	Characterizing Multidevice Capillary Vibrating Sharp-Edge Spray Ionization for In-Droplet Hydrogen/Deuterium Exchange to Enhance Compound Identification. ACS Omega, 2021, 6, 18370-18382.	3.5	8
86	Collisional Activation of [14Pro+2H]²⁺ Clusters: Chiral Dependence of Evaporation and Fission Processes. Journal of Physical Chemistry B, 2012, 116, 7644-7651.	2.6	7
87	Physicochemical Property Correlations with Ionization Efficiency in Capillary Vibrating Sharp-Edge Spray Ionization (cVSSI). Journal of the American Society for Mass Spectrometry, 2021, 32, 84-94.	2.8	7
88	Physicochemical Properties Altered by the Tail Group of Lipid Membranes Influence Huntingtin Aggregation and Lipid Binding. Journal of Physical Chemistry B, 2022, 126, 3067-3081.	2.6	6
89	Synthetic Small Molecule Characterization and Isomer Discrimination Using Gas-Phase Hydrogenâ€“Deuterium Exchange IMS-MS. Analytical Chemistry, 2019, 91, 6259-6265.	6.5	4
90	Development of cVSSI-APCI for the Improvement of Ion Suppression and Matrix Effects in Complex Mixtures. Analytical Chemistry, 0, , .	6.5	4

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91	Oxidation Promotes Distinct Huntingtin Aggregates in the Presence and Absence of Membranes. Biochemistry, 2022, 61, 1517-1530.	2.5	4
92	Integrated sample desalting, enrichment, and ionization on an omniphobic glass slide for direct mass spectrometry analysis. Rapid Communications in Mass Spectrometry, 2021, 35, e9179.	1.5	3
93	Rapid and flexible onâ€line desalting using Nafion coated melamine sponge for mass spectrometry analysis. Rapid Communications in Mass Spectrometry, 0, , .	1.5	1
94	Factors Modulating the Interaction of Huntingtin with Lipid Membranes: Implications for Huntington's Disease. Biophysical Journal, 2016, 110, 358a-359a.	0.5	0
95	Huntingtin Aggregation and Lipid Binding are Influenced by Physicochemical Properties of Membranes. Biophysical Journal, 2020, 118, 59a.	0.5	0