

Matthew F Bush

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

70
papers

4,956
citations

39
h-index

70
g-index

71
ext. papers

5,456
ext. citations

8.2
avg, IF

5.63
L-index

#	Paper	IF	Citations
70	Collision cross sections of proteins and their complexes: a calibration framework and database for gas-phase structural biology. <i>Analytical Chemistry</i> , 2010 , 82, 9557-65	7.8	600
69	Structural characterization of drug-like compounds by ion mobility mass spectrometry: comparison of theoretical and experimentally derived nitrogen collision cross sections. <i>Analytical Chemistry</i> , 2012 , 84, 1026-33	7.8	283
68	Ion mobility mass spectrometry of peptide ions: effects of drift gas and calibration strategies. <i>Analytical Chemistry</i> , 2012 , 84, 7124-30	7.8	244
67	Charge-state dependent compaction and dissociation of protein complexes: insights from ion mobility and molecular dynamics. <i>Journal of the American Chemical Society</i> , 2012 , 134, 3429-38	16.4	193
66	Infrared spectroscopy of hydrated amino acids in the gas phase: protonated and lithiated valine. <i>Journal of the American Chemical Society</i> , 2006 , 128, 905-16	16.4	193
65	Recommendations for reporting ion mobility Mass Spectrometry measurements. <i>Mass Spectrometry Reviews</i> , 2019 , 38, 291-320	11	191
64	Infrared spectroscopy of cationized arginine in the gas phase: direct evidence for the transition from nonzwitterionic to zwitterionic structure. <i>Journal of the American Chemical Society</i> , 2007 , 129, 1612-22	16.4	181
63	Infrared spectroscopy of arginine cation complexes: direct observation of gas-phase zwitterions. <i>Journal of Physical Chemistry A</i> , 2007 , 111, 11759-70	2.8	162
62	SCF(FBXL3) ubiquitin ligase targets cryptochromes at their cofactor pocket. <i>Nature</i> , 2013 , 496, 64-8	50.4	152
61	Effects of alkaline earth metal ion complexation on amino acid zwitterion stability: results from infrared action spectroscopy. <i>Journal of the American Chemical Society</i> , 2008 , 130, 6463-71	16.4	151
60	Traveling-wave ion mobility mass spectrometry of protein complexes: accurate calibrated collision cross-sections of human insulin oligomers. <i>Rapid Communications in Mass Spectrometry</i> , 2012 , 26, 1181-93 ²	93.2	124
59	Sulfate ion patterns water at long distance. <i>Journal of the American Chemical Society</i> , 2010 , 132, 8248-9	16.4	121
58	Defining the mechanism of polymerization in the serpinopathies. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010 , 107, 17146-51	11.5	120
57	Absolute standard hydrogen electrode potential measured by reduction of aqueous nanodrops in the gas phase. <i>Journal of the American Chemical Society</i> , 2008 , 130, 3371-81	16.4	108
56	One water molecule stabilizes the cationized arginine zwitterion. <i>Journal of the American Chemical Society</i> , 2007 , 129, 13544-53	16.4	106
55	Infrared spectroscopy of cationized lysine and epsilon-N-methyllysine in the gas phase: effects of alkali-metal ion size and proton affinity on zwitterion stability. <i>Journal of Physical Chemistry A</i> , 2007 , 111, 7753-60	2.8	98
54	Binding energies of water to sodiated valine and structural isomers in the gas phase: the effect of proton affinity on zwitterion stability. <i>Journal of the American Chemical Society</i> , 2003 , 125, 13576-84	16.4	90

53	Evidence for water rings in the hexahydrated sulfate dianion from IR spectroscopy. <i>Journal of the American Chemical Society</i> , 2007 , 129, 2220-1	16.4	87
52	Hydration of the calcium dication: direct evidence for second shell formation from infrared spectroscopy. <i>ChemPhysChem</i> , 2007 , 8, 2245-53	3.2	80
51	Infrared action spectra of Ca ²⁺ (H ₂ O) ₍₁₁₋₆₉₎ exhibit spectral signatures for condensed-phase structures with increasing cluster size. <i>Journal of the American Chemical Society</i> , 2008 , 130, 15482-9	16.4	78
50	Structures of cationized proline analogues: evidence for the zwitterionic form. <i>Journal of Physical Chemistry A</i> , 2005 , 109, 1903-10	2.8	74
49	Ion mobility mass spectrometry of peptide, protein, and protein complex ions using a radio-frequency confining drift cell. <i>Analyst, The</i> , 2016 , 141, 884-91	5	73
48	Hydration of alkaline earth metal dications: effects of metal ion size determined using infrared action spectroscopy. <i>Journal of the American Chemical Society</i> , 2009 , 131, 13270-7	16.4	69
47	Effects of polarity on the structures and charge states of native-like proteins and protein complexes in the gas phase. <i>Analytical Chemistry</i> , 2013 , 85, 12055-61	7.8	68
46	Collision cross section calibrants for negative ion mode traveling wave ion mobility-mass spectrometry. <i>Analyst, The</i> , 2015 , 140, 6853-61	5	65
45	Large-Scale Structural Characterization of Drug and Drug-Like Compounds by High-Throughput Ion Mobility-Mass Spectrometry. <i>Analytical Chemistry</i> , 2017 , 89, 9023-9030	7.8	63
44	Dissecting heterogeneous molecular chaperone complexes using a mass spectrum deconvolution approach. <i>Chemistry and Biology</i> , 2012 , 19, 599-607		61
43	Alkali metal ion binding to glutamine and glutamine derivatives investigated by infrared action spectroscopy and theory. <i>Journal of Physical Chemistry A</i> , 2008 , 112, 8578-84	2.8	56
42	Folding of Protein Ions in the Gas Phase after Cation-to-Anion Proton-Transfer Reactions. <i>Journal of the American Chemical Society</i> , 2016 , 138, 9581-8	16.4	54
41	Reactivity and infrared spectroscopy of gaseous hydrated trivalent metal ions. <i>Journal of the American Chemical Society</i> , 2008 , 130, 9122-8	16.4	54
40	Internal energy deposition in electron capture dissociation measured using hydrated divalent metal ions as nanocalorimeters. <i>Journal of the American Chemical Society</i> , 2007 , 129, 4894-5	16.4	54
39	Structures and hydration enthalpies of cationized glutamine and structural analogues in the gas phase. <i>Journal of the American Chemical Society</i> , 2005 , 127, 10276-86	16.4	54
38	Formation of hydrated triply charged metal ions from aqueous solutions using nanodrop mass spectrometry. <i>International Journal of Mass Spectrometry</i> , 2006 , 253, 256-262	1.9	52
37	Hexamers of the type II secretion ATPase GspE from <i>Vibrio cholerae</i> with increased ATPase activity. <i>Structure</i> , 2013 , 21, 1707-17	5.2	51
36	Proton affinity and zwitterion stability: new results from infrared spectroscopy and theory of cationized lysine and analogues in the gas phase. <i>Journal of Physical Chemistry A</i> , 2009 , 113, 431-8	2.8	51

35	Structures of lithiated lysine and structural analogues in the gas phase: effects of water and proton affinity on zwitterionic stability. <i>Journal of Physical Chemistry A</i> , 2006 , 110, 8433-42	2.8	48
34	Assigning structures to gas-phase peptide cations and cation-radicals. An infrared multiphoton dissociation, ion mobility, electron transfer, and computational study of a histidine peptide ion. <i>Journal of Physical Chemistry B</i> , 2012 , 116, 3445-56	3.4	45
33	FBXL5 Regulates IRP2 Stability in Iron Homeostasis via an Oxygen-Responsive [2Fe2S] Cluster. <i>Molecular Cell</i> , 2020 , 78, 31-41.e5	17.6	41
32	Gas-phase protein assemblies: Unfolding landscapes and preserving native-like structures using noncovalent adducts. <i>Chemical Physics Letters</i> , 2012 , 524, 1-9	2.5	39
31	Nonergodicity in electron capture dissociation investigated using hydrated ion nanocalorimetry. <i>Journal of the American Society for Mass Spectrometry</i> , 2007 , 18, 1217-31	3.5	39
30	Nonspecific aggregation in native electrokinetic nanoelectrospray ionization. <i>International Journal of Mass Spectrometry</i> , 2017 , 420, 35-42	1.9	35
29	Effects of Drift Gas Selection on the Ambient-Temperature, Ion Mobility Mass Spectrometry Analysis of Amino Acids. <i>Analytical Chemistry</i> , 2017 , 89, 2017-2023	7.8	30
28	Recognition of the Diglycine C-End Degron by CRL2 Ubiquitin Ligase. <i>Molecular Cell</i> , 2018 , 72, 813-822.e47.6	47.6	30
27	Analysis of Native-Like Proteins and Protein Complexes Using Cation to Anion Proton Transfer Reactions (CAPTR). <i>Journal of the American Society for Mass Spectrometry</i> , 2015 , 26, 2152-61	3.5	28
26	Binding energies of water to doubly hydrated cationized glutamine and structural analogues in the gas phase. <i>Journal of Physical Chemistry A</i> , 2006 , 110, 3662-9	2.8	27
25	Collision cross sections and ion structures: development of a general calculation method via high-quality ion mobility measurements and theoretical modeling. <i>Analyst, The</i> , 2017 , 142, 4289-4298	5	26
24	Reduction energy of 1 M aqueous ruthenium(III) hexaammine in the gas phase: a route toward establishing an absolute electrochemical scale. <i>Journal of the American Chemical Society</i> , 2007 , 129, 7716-7	16.4	26
23	Comprehensive analysis of Gly-Leu-Gly-Gly-Lys peptide dication structures and cation-radical dissociations following electron transfer: from electron attachment to backbone cleavage, ion-molecule complexes, and fragment separation. <i>Journal of Physical Chemistry A</i> , 2014 , 118, 308-24	2.8	25
22	Radio-Frequency (rf) Confinement in Ion Mobility Spectrometry: Apparent Mobilities and Effective Temperatures. <i>Journal of the American Society for Mass Spectrometry</i> , 2016 , 27, 2054-2063	3.5	24
21	Gas-phase structures of phosphopeptide ions: A difficult case. <i>International Journal of Mass Spectrometry</i> , 2013 , 354-355, 249-256	1.9	24
20	Infrared Laser Activation of Soluble and Membrane Protein Assemblies in the Gas Phase. <i>Analytical Chemistry</i> , 2016 , 88, 7060-7	7.8	22
19	Structural Dynamics of Native-Like Ions in the Gas Phase: Results from Tandem Ion Mobility of Cytochrome c. <i>Analytical Chemistry</i> , 2017 , 89, 7527-7534	7.8	22
18	Structural characterization of small molecular ions by ion mobility mass spectrometry in nitrogen drift gas: improving the accuracy of trajectory method calculations. <i>Analyst, The</i> , 2018 , 143, 1786-1796	5	19

17	Native-Like and Denatured Cytochrome c Ions Yield Cation-to-Anion Proton Transfer Reaction Products with Similar Collision Cross-Sections. <i>Journal of the American Society for Mass Spectrometry</i> , 2017 , 28, 1382-1391	3.5	17
16	Electron transfer dissociation of photolabeled peptides. Backbone cleavages compete with diazirine ring rearrangements. <i>Journal of the American Society for Mass Spectrometry</i> , 2013 , 24, 1641-53	3.5	17
15	Analysis of Native-Like Ions Using Structures for Lossless Ion Manipulations. <i>Analytical Chemistry</i> , 2016 , 88, 9118-26	7.8	16
14	Interpreting the Collision Cross Sections of Native-like Protein Ions: Insights from Cation-to-Anion Proton-Transfer Reactions. <i>Analytical Chemistry</i> , 2017 , 89, 7607-7614	7.8	14
13	Does Thermal Breathing Affect Collision Cross Sections of Gas-Phase Peptide Ions? An Ab Initio Molecular Dynamics Study. <i>Journal of Physical Chemistry Letters</i> , 2016 , 7, 2765-71	6.4	13
12	Ion Mobility of Proteins in Nitrogen Gas: Effects of Charge State, Charge Distribution, and Structure. <i>Journal of Physical Chemistry A</i> , 2018 , 122, 5625-5634	2.8	11
11	Effects of Solution Structure on the Folding of Lysozyme Ions in the Gas Phase. <i>Journal of Physical Chemistry B</i> , 2017 , 121, 2759-2766	3.4	10
10	Toward a Rational Design of Highly Folded Peptide Cation Conformations. 3D Gas-Phase Ion Structures and Ion Mobility Characterization. <i>Journal of the American Society for Mass Spectrometry</i> , 2016 , 27, 1647-60	3.5	10
9	Effects of Charge State, Charge Distribution, and Structure on the Ion Mobility of Protein Ions in Helium Gas: Results from Trajectory Method Calculations. <i>Journal of Physical Chemistry A</i> , 2017 , 121, 7768-7777	2.8	8
8	Electron transfer reduction of the diazirine ring in gas-phase peptide ions. On the peculiar loss of [NH ₄ O] from photoleucine. <i>Journal of the American Society for Mass Spectrometry</i> , 2015 , 26, 415-31	3.5	7
7	Effects of Charge State on the Structures of Serum Albumin Ions in the Gas Phase: Insights from Cation-to-Anion Proton-Transfer Reactions, Ion Mobility, and Mass Spectrometry. <i>Journal of Physical Chemistry B</i> , 2018 , 122, 9947-9955	3.4	7
6	Degronomics: Mapping the Interacting Peptidome of a Ubiquitin Ligase Using an Integrative Mass Spectrometry Strategy. <i>Analytical Chemistry</i> , 2019 , 91, 12775-12783	7.8	3
5	Collision-Induced Unfolding Is Sensitive to the Polarity of Proteins and Protein Complexes. <i>Journal of the American Society for Mass Spectrometry</i> , 2019 , 30, 2430-2437	3.5	3
4	Determining Collision Cross-Sections of Aromatic Compounds in Crude Oil by Using Aromatic Compound Mixture as Calibration Standard. <i>Bulletin of the Korean Chemical Society</i> , 2019 , 40, 122-127	1.2	3
3	Principles of Ion Selection, Alignment, and Focusing in Tandem Ion Mobility Implemented Using Structures for Lossless Ion Manipulations (SLIM). <i>Journal of the American Society for Mass Spectrometry</i> , 2019 , 30, 1115-1125	3.5	2
2	High-Precision, Gas-Phase Hydrogen/Deuterium-Exchange Kinetics by Mass Spectrometry Enabled by Exchange Standards. <i>Analytical Chemistry</i> , 2020 , 92, 7725-7732	7.8	2
1	2014 ASMS Fall Workshop: Ion Mobility Mass Spectrometry. <i>Journal of the American Society for Mass Spectrometry</i> , 2015 , 26, 1051-4	3.5	2