Matthew F Bush

List of Publications by Year in Descending Order

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	High-Precision, Gas-Phase Hydrogen/Deuterium-Exchange Kinetics by Mass Spectrometry Enabled by Exchange Standards. *Analytical Chemistry*, **2020**, 92, 7725-7732	7.8	2
69	FBXL5 Regulates IRP2 Stability in Iron Homeostasis via an Oxygen-Responsive [2Fe2S] Cluster. *Molecular Cell*, **2020**, 78, 31-41.e5	17.6	41
68	Degronomics: Mapping the Interacting Peptidome of a Ubiquitin Ligase Using an Integrative Mass Spectrometry Strategy. *Analytical Chemistry*, **2019**, 91, 12775-12783	7.8	3
67	Collision-Induced Unfolding Is Sensitive to the Polarity of Proteins and Protein Complexes. *Journal of the American Society for Mass Spectrometry*, **2019**, 30, 2430-2437	3.5	3
66	Recommendations for reporting ion mobility Mass Spectrometry measurements. *Mass Spectrometry Reviews*, **2019**, 38, 291-320	11	191
65	Principles of Ion Selection, Alignment, and Focusing in Tandem Ion Mobility Implemented Using Structures for Lossless Ion Manipulations (SLIM). *Journal of the American Society for Mass Spectrometry*, **2019**, 30, 1115-1125	3.5	2
64	Determining Collision Cross-Sections of Aromatic Compounds in Crude Oil by Using Aromatic Compound Mixture as Calibration Standard. *Bulletin of the Korean Chemical Society*, **2019**, 40, 122-127	1.2	3
63	Structural characterization of small molecular ions by ion mobility mass spectrometry in nitrogen drift gas: improving the accuracy of trajectory method calculations. *Analyst, The*, **2018**, 143, 1786-1796	5	19
62	Ion Mobility of Proteins in Nitrogen Gas: Effects of Charge State, Charge Distribution, and Structure. *Journal of Physical Chemistry A*, **2018**, 122, 5625-5634	2.8	11
61	Recognition of the Diglycine C-End Degron by CRL2 Ubiquitin Ligase. *Molecular Cell*, **2018**, 72, 813-822.e4	17.6	30
60	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. *Journal of Physical Chemistry B*, **2018**, 122, 9947-9955	3.4	7
59	Effects of Drift Gas Selection on the Ambient-Temperature, Ion Mobility Mass Spectrometry Analysis of Amino Acids. *Analytical Chemistry*, **2017**, 89, 2017-2023	7.8	30
58	Native-Like and Denatured Cytochrome c Ions Yield Cation-to-Anion Proton Transfer Reaction Products with Similar Collision Cross-Sections. *Journal of the American Society for Mass Spectrometry*, **2017**, 28, 1382-1391	3.5	17
57	Effects of Solution Structure on the Folding of Lysozyme Ions in the Gas Phase. *Journal of Physical Chemistry B*, **2017**, 121, 2759-2766	3.4	10
56	Effects of Charge State, Charge Distribution, and Structure on the Ion Mobility of Protein Ions in Helium Gas: Results from Trajectory Method Calculations. *Journal of Physical Chemistry A*, **2017**, 121, 7768-7777	2.8	8
55	Collision cross sections and ion structures: development of a general calculation method via high-quality ion mobility measurements and theoretical modeling. *Analyst, The*, **2017**, 142, 4289-4298	5	26
54	Large-Scale Structural Characterization of Drug and Drug-Like Compounds by High-Throughput Ion Mobility-Mass Spectrometry. *Analytical Chemistry*, **2017**, 89, 9023-9030	7.8	63

53	Structural Dynamics of Native-Like Ions in the Gas Phase: Results from Tandem Ion Mobility of Cytochrome c. *Analytical Chemistry*, **2017**, 89, 7527-7534	7.8	22
52	Interpreting the Collision Cross Sections of Native-like Protein Ions: Insights from Cation-to-Anion Proton-Transfer Reactions. *Analytical Chemistry*, **2017**, 89, 7607-7614	7.8	14
51	Nonspecific aggregation in native electrokinetic nanoelectrospray ionization. *International Journal of Mass Spectrometry*, **2017**, 420, 35-42	1.9	35
50	Analysis of Native-Like Ions Using Structures for Lossless Ion Manipulations. *Analytical Chemistry*, **2016**, 88, 9118-26	7.8	16
49	Folding of Protein Ions in the Gas Phase after Cation-to-Anion Proton-Transfer Reactions. *Journal of the American Chemical Society*, **2016**, 138, 9581-8	16.4	54
48	Radio-Frequency (rf) Confinement in Ion Mobility Spectrometry: Apparent Mobilities and Effective Temperatures. *Journal of the American Society for Mass Spectrometry*, **2016**, 27, 2054-2063	3.5	24
47	Infrared Laser Activation of Soluble and Membrane Protein Assemblies in the Gas Phase. *Analytical Chemistry*, **2016**, 88, 7060-7	7.8	22
46	Ion mobility mass spectrometry of peptide, protein, and protein complex ions using a radio-frequency confining drift cell. *Analyst, The*, **2016**, 141, 884-91	5	73
45	Does Thermal Breathing Affect Collision Cross Sections of Gas-Phase Peptide Ions? An Ab Initio Molecular Dynamics Study. *Journal of Physical Chemistry Letters*, **2016**, 7, 2765-71	6.4	13
44	Toward a Rational Design of Highly Folded Peptide Cation Conformations. 3D Gas-Phase Ion Structures and Ion Mobility Characterization. *Journal of the American Society for Mass Spectrometry*, **2016**, 27, 1647-60	3.5	10
43	Electron transfer reduction of the diazirine ring in gas-phase peptide ions. On the peculiar loss of [NH4O] from photoleucine. *Journal of the American Society for Mass Spectrometry*, **2015**, 26, 415-31	3.5	7
42	Collision cross section calibrants for negative ion mode traveling wave ion mobility-mass spectrometry. *Analyst, The*, **2015**, 140, 6853-61	5	65
41	Analysis of Native-Like Proteins and Protein Complexes Using Cation to Anion Proton Transfer Reactions (CAPTR). *Journal of the American Society for Mass Spectrometry*, **2015**, 26, 2152-61	3.5	28
40	2014 ASMS Fall Workshop: Ion Mobility Mass Spectrometry. *Journal of the American Society for Mass Spectrometry*, **2015**, 26, 1051-4	3.5	2
39	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. *Journal of Physical Chemistry A*, **2014**, 118, 308-24	2.8	25
38	Electron transfer dissociation of photolabeled peptides. Backbone cleavages compete with diazirine ring rearrangements. *Journal of the American Society for Mass Spectrometry*, **2013**, 24, 1641-53	3.5	17
37	Hexamers of the type II secretion ATPase GspE from Vibrio cholerae with increased ATPase activity. *Structure*, **2013**, 21, 1707-17	5.2	51
36	Gas-phase structures of phosphopeptide ions: A difficult case. *International Journal of Mass Spectrometry*, **2013**, 354-355, 249-256	1.9	24

35	SCF(FBXL3) ubiquitin ligase targets cryptochromes at their cofactor pocket. *Nature*, **2013**, 496, 64-8	50.4	152
34	Effects of polarity on the structures and charge states of native-like proteins and protein complexes in the gas phase. *Analytical Chemistry*, **2013**, 85, 12055-61	7.8	68
33	Gas-phase protein assemblies: Unfolding landscapes and preserving native-like structures using noncovalent adducts. *Chemical Physics Letters*, **2012**, 524, 1-9	2.5	39
32	Ion mobility mass spectrometry of peptide ions: effects of drift gas and calibration strategies. *Analytical Chemistry*, **2012**, 84, 7124-30	7.8	244
31	Structural characterization of drug-like compounds by ion mobility mass spectrometry: comparison of theoretical and experimentally derived nitrogen collision cross sections. *Analytical Chemistry*, **2012**, 84, 1026-33	7.8	283
30	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. *Journal of Physical Chemistry B*, **2012**, 116, 3445-56	3.4	45
29	Charge-state dependent compaction and dissociation of protein complexes: insights from ion mobility and molecular dynamics. *Journal of the American Chemical Society*, **2012**, 134, 3429-38	16.4	193
28	Traveling-wave ion mobility mass spectrometry of protein complexes: accurate calibrated collision cross-sections of human insulin oligomers. *Rapid Communications in Mass Spectrometry*, **2012**, 26, 1181-93	2.2	124
27	Dissecting heterogeneous molecular chaperone complexes using a mass spectrum deconvolution approach. *Chemistry and Biology*, **2012**, 19, 599-607		61
26	Defining the mechanism of polymerization in the serpinopathies. *Proceedings of the National Academy of Sciences of the United States of America*, **2010**, 107, 17146-51	11.5	120
25	Collision cross sections of proteins and their complexes: a calibration framework and database for gas-phase structural biology. *Analytical Chemistry*, **2010**, 82, 9557-65	7.8	600
24	Sulfate ion patterns water at long distance. *Journal of the American Chemical Society*, **2010**, 132, 8248-9	16.4	121
23	Hydration of alkaline earth metal dications: effects of metal ion size determined using infrared action spectroscopy. *Journal of the American Chemical Society*, **2009**, 131, 13270-7	16.4	69
22	Proton affinity and zwitterion stability: new results from infrared spectroscopy and theory of cationized lysine and analogues in the gas phase. *Journal of Physical Chemistry A*, **2009**, 113, 431-8	2.8	51
21	Infrared action spectra of Ca2+(H2O)(11-69) exhibit spectral signatures for condensed-phase structures with increasing cluster size. *Journal of the American Chemical Society*, **2008**, 130, 15482-9	16.4	78
20	Reactivity and infrared spectroscopy of gaseous hydrated trivalent metal ions. *Journal of the American Chemical Society*, **2008**, 130, 9122-8	16.4	54
19	Alkali metal ion binding to glutamine and glutamine derivatives investigated by infrared action spectroscopy and theory. *Journal of Physical Chemistry A*, **2008**, 112, 8578-84	2.8	56
18	Absolute standard hydrogen electrode potential measured by reduction of aqueous nanodrops in the gas phase. *Journal of the American Chemical Society*, **2008**, 130, 3371-81	16.4	108

17	Effects of alkaline earth metal ion complexation on amino acid zwitterion stability: results from infrared action spectroscopy. *Journal of the American Chemical Society*, **2008**, 130, 6463-71	16.4	151
16	Internal energy deposition in electron capture dissociation measured using hydrated divalent metal ions as nanocalorimeters. *Journal of the American Chemical Society*, **2007**, 129, 4894-5	16.4	54
15	Evidence for water rings in the hexahydrated sulfate dianion from IR spectroscopy. *Journal of the American Chemical Society*, **2007**, 129, 2220-1	16.4	87
14	Reduction energy of 1 M aqueous ruthenium(III) hexaammine in the gas phase: a route toward establishing an absolute electrochemical scale. *Journal of the American Chemical Society*, **2007**, 129, 7716-7	16.4	26
13	Hydration of the calcium dication: direct evidence for second shell formation from infrared spectroscopy. *ChemPhysChem*, **2007**, 8, 2245-53	3.2	80
12	Nonergodicity in electron capture dissociation investigated using hydrated ion nanocalorimetry. *Journal of the American Society for Mass Spectrometry*, **2007**, 18, 1217-31	3.5	39
11	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. *Journal of Physical Chemistry A*, **2007** , 111, 7753-60	2.8	98
10	Infrared spectroscopy of cationized arginine in the gas phase: direct evidence for the transition from nonzwitterionic to zwitterionic structure. *Journal of the American Chemical Society*, **2007**, 129, 1612-22	16.4	181
9	One water molecule stabilizes the cationized arginine zwitterion. *Journal of the American Chemical Society*, **2007**, 129, 13544-53	16.4	106
8	Infrared spectroscopy of arginine cation complexes: direct observation of gas-phase zwitterions. *Journal of Physical Chemistry A*, **2007**, 111, 11759-70	2.8	162
7	Structures of lithiated lysine and structural analogues in the gas phase: effects of water and proton affinity on zwitterionic stability. *Journal of Physical Chemistry A*, **2006**, 110, 8433-42	2.8	48
6	Infrared spectroscopy of hydrated amino acids in the gas phase: protonated and lithiated valine. *Journal of the American Chemical Society*, **2006**, 128, 905-16	16.4	193
5	Binding energies of water to doubly hydrated cationized glutamine and structural analogues in the gas phase. *Journal of Physical Chemistry A*, **2006**, 110, 3662-9	2.8	27
4	Formation of hydrated triply charged metal ions from aqueous solutions using nanodrop mass spectrometry. *International Journal of Mass Spectrometry*, **2006**, 253, 256-262	1.9	52
3	Structures and hydration enthalpies of cationized glutamine and structural analogues in the gas phase. *Journal of the American Chemical Society*, **2005**, 127, 10276-86	16.4	54
2	Structures of cationized proline analogues: evidence for the zwitterionic form. *Journal of Physical Chemistry A*, **2005**, 109, 1903-10	2.8	74
1	Binding energies of water to sodiated valine and structural isomers in the gas phase: the effect of proton affinity on zwitterion stability. *Journal of the American Chemical Society*, **2003**, 125, 13576-84	16.4	90