

# Veronica M Bierbaum

## List of Publications by Year in descending order

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81  
papers

2,429  
citations

201674

27  
h-index

214800

47  
g-index

81  
all docs

81  
docs citations

81  
times ranked

1628  
citing authors

#	ARTICLE	IF	CITATIONS
1	Single Solvent Molecules Induce Dual Nucleophiles in Gas-Phase Ion-Molecule Nucleophilic Substitution Reactions. <i>Journal of Physical Chemistry Letters</i> , 2021, 12, 7134-7139.	4.6	8
2	Gas-Phase Reactions of Deprotonated Nucleobases with H, N, and O Atoms. <i>Journal of Physical Chemistry Letters</i> , 2019, 10, 4863-4867.	4.6	11
3	Elucidating the Reactivity of $O_2^-$ ( $^1O_2^-$ ): A Study with Amino Acid Anions and Related Sulfur and Oxygen Anionic Species. <i>Journal of Physical Chemistry A</i> , 2019, 123, 2586-2591.	2.5	1
4	The $HNO^-$ radical anion: A proposed intermediate in diazeniumdiolate synthesis using nitric oxide and alkoxides. <i>European Journal of Mass Spectrometry</i> , 2019, 25, 82-85.	1.0	2
5	Reactivity of amino acid anions with nitrogen and oxygen atoms. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 4990-4996.	2.8	10
6	Photoelectron spectroscopy and thermochemistry of o-, m-, and p-methylenephenoxy anions. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 25203-25216.	2.8	2
7	Focus on <i>Mass Spectrometry in Glycobiology and Related Fields</i> , Honoring Catherine E. Costello, Recipient of the 2017 ASMS Award for a Distinguished Contribution in Mass Spectrometry. <i>Journal of the American Society for Mass Spectrometry</i> , 2018, 29, 1061-1064.	2.8	0
8	Reactions of sulfur and oxygen containing anions with nitrogen and oxygen atoms: A comparative study. <i>International Journal of Mass Spectrometry</i> , 2018, 433, 1-6.	1.5	5
9	Experimental and Computational Studies of the Reactions of N and O Atoms with Small Heterocyclic Anions. <i>Journal of Physical Chemistry A</i> , 2017, 121, 3655-3661.	2.5	9
10	Reactions of Sulfur- and Oxygen-Containing Anions with Hydrogen Atoms: A Comparative Study. <i>Journal of Physical Chemistry Letters</i> , 2017, 8, 5725-5729.	4.6	3
11	Focus on Bio-Ion Chemistry: Interactions of Biological Ions with Ions, Molecules, Surfaces, Electrons, and Light, Honoring Scott A. McLuckey, Recipient of the 2016 ASMS Award for a Distinguished Contribution in Mass Spectrometry. <i>Journal of the American Society for Mass Spectrometry</i> , 2017, 28, 1250-1253.	2.8	0
12	Reactions of substituted benzene anions with N and O atoms: Chemistry in Titan's upper atmosphere and the interstellar medium. <i>Journal of Chemical Physics</i> , 2016, 144, 214304.	3.0	13
13	Focus on Mass Spectrometry as a Probe of Higher Order Protein Structure, Honoring Prof. Brian T. Chait, Recipient of the 2015 ASMS Award for a Distinguished Contribution in Mass Spectrometry. <i>Journal of the American Society for Mass Spectrometry</i> , 2016, 27, 949-951.	2.8	4
14	Experimental and Theoretical Studies of the Reactivity and Thermochemistry of Dicyanamide: $N(CN)_2^-$ . <i>Journal of Physical Chemistry A</i> , 2016, 120, 992-999.	2.5	30
15	GAS-PHASE CHEMISTRY OF THE CYANATE ION, $OCN^-$ . <i>Astrophysical Journal</i> , 2015, 812, 77.	4.5	8
16	Computational Studies of the Gas Phase Reactions of Ethers with Anions: Kinetic Barriers, Isotope Effects, Consecutive Eliminations and Site Selectivity. <i>European Journal of Mass Spectrometry</i> , 2015, 21, 141-147.	1.0	0
17	Gas-Phase Acidities of Nitrated Azoles as Determined by the Extended Kinetic Method and Computations. <i>Journal of Physical Chemistry A</i> , 2015, 119, 395-402.	2.5	6
18	Gas-Phase Reactions of $CF^+$ with Molecules of Interstellar Relevance. <i>Journal of Physical Chemistry A</i> , 2015, 119, 4329-4335.	2.5	1

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19	Deprotonated Purine Dissociation: Experiments, Computations, and Astrobiological Implications. <i>Journal of Physical Chemistry A</i> , 2015, 119, 334-343.	2.5	7
20	Go with the flow: Fifty years of innovation and ion chemistry using the flowing afterglow. <i>International Journal of Mass Spectrometry</i> , 2015, 377, 456-466.	1.5	26
21	Reactions of Azine Anions with Nitrogen and Oxygen Atoms: Implications for Titan's Upper Atmosphere and Interstellar Chemistry. <i>Journal of the American Chemical Society</i> , 2015, 137, 10700-10709.	13.7	23
22	GAS-PHASE REACTIONS OF POLYCYCLIC AROMATIC HYDROCARBON CATIONS AND THEIR NITROGEN-CONTAINING ANALOGS WITH H ATOMS. <i>Astrophysical Journal</i> , 2014, 784, 25.	4.5	20
23	The $\pm$ -Effect in Gas-Phase SN2 Reactions of Microsolvated Anions: Methanol as a Solvent. <i>Journal of Physical Chemistry A</i> , 2014, 118, 8060-8066.	2.5	23
24	Anionic derivatives of uracil: fragmentation and reactivity. <i>Physical Chemistry Chemical Physics</i> , 2014, 16, 17835-17844.	2.8	10
25	The $\pm$ -Effect and Competing Mechanisms: The Gas-Phase Reactions of Microsolvated Anions with Methyl Formate. <i>Journal of the American Society for Mass Spectrometry</i> , 2014, 25, 159-168.	2.8	18
26	Chemistry of HCNH <sup>+</sup> : mechanisms, structures, and relevance to Titan's atmosphere. <i>Structural Chemistry</i> , 2013, 24, 1957-1963.	2.0	11
27	Investigating the $\pm$ -Effect in Gas-Phase S <sub>N</sub> 2 Reactions of Microsolvated Anions. <i>Journal of the American Chemical Society</i> , 2013, 135, 15508-15514.	13.7	59
28	Gas-phase organic reactions of the atomic oxygen radical cation. <i>International Journal of Mass Spectrometry</i> , 2013, 353, 1-6.	1.5	7
29	Charles H. DePuy (1927-2013). <i>Journal of the American Society for Mass Spectrometry</i> , 2013, 24, 1817-1818.	2.8	1
30	C-H Bond Strengths and Acidities in Aromatic Systems: Effects of Nitrogen Incorporation in Mono-, Di-, and Triazines. <i>Journal of the American Chemical Society</i> , 2012, 134, 6584-6595.	13.7	29
31	EXPERIMENTAL AND THEORETICAL STUDIES OF REACTIONS BETWEEN H ATOMS AND NITROGEN-CONTAINING CARBANIONS. <i>Astrophysical Journal</i> , 2011, 739, 19.	4.5	33
32	Anions in Space and in the Laboratory. <i>Proceedings of the International Astronomical Union</i> , 2011, 7, 383-389.	0.0	7
33	EXPERIMENTAL AND THEORETICAL STUDIES OF REACTIONS BETWEEN H ATOMS AND CARBANIONS OF INTERSTELLAR RELEVANCE. <i>Astrophysical Journal</i> , 2010, 723, 1325-1330.	4.5	16
34	The Influence of Spin Effects on the Gas Phase Reactions of Carbanions with N and O Atoms. <i>Journal of the American Chemical Society</i> , 2010, 132, 5812-5819.	13.7	25
35	Survey of the Reactivity of O <sub>2</sub> (a <sup>1</sup> g <sup>-</sup> ) with Negative Ions. <i>Journal of Physical Chemistry A</i> , 2010, 114, 1270-1276.	2.5	16
36	Dissociative excitation transfer in the reaction of O <sub>2</sub> (a <sup>1</sup> g <sup>-</sup> ) with OH <sup>+</sup> (H <sub>T</sub> )	3.6	11

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37	Reactions of $\hat{\pm}$ -Nucleophiles with Alkyl Chlorides: Competition between $S_N2$ and E2 Mechanisms and the Gas-Phase $\hat{\pm}$ -Effect. <i>Journal of the American Chemical Society</i> , 2009, 131, 8227-8233.	13.7	79
38	Deuterium kinetic isotope effects in microsolvated gas-phase E2 reactions: Methanol and ethanol as solvents. <i>Journal of the American Society for Mass Spectrometry</i> , 2008, 19, 1296-1302.	2.8	7
39	Ion Chemistry in the Interstellar Medium. <i>Annual Review of Analytical Chemistry</i> , 2008, 1, 229-259.	5.4	166
40	Ion chemistry in the interstellar medium. <i>Proceedings of the International Astronomical Union</i> , 2008, 4, 139-140.	0.0	1
41	Reactions of H, N, and O Atoms with Carbon Chain Anions of Interstellar Interest: An Experimental Study. <i>Astrophysical Journal</i> , 2007, 667, 1283-1289.	4.5	94
42	Gas-Phase Study of Coronene Cation Reactivity of Interstellar Relevance. <i>Astrophysical Journal</i> , 2006, 651, L129-L131.	4.5	16
43	Thermochemistry and Electronic Structure of the Pyrrolyl Radical. <i>Journal of Physical Chemistry A</i> , 2004, 108, 10326-10335.	2.5	66
44	Use of a Flowing Afterglow SIFT Apparatus To Study the Reactions of Ions with Organic Radicals. <i>Journal of Physical Chemistry A</i> , 2004, 108, 9733-9741.	2.5	20
45	Ultrafast photodissociation of Br <sub>2</sub> : Laser-generated high-harmonic soft x-ray probing of the transient photoelectron spectra and ionization cross sections. <i>Journal of Chemical Physics</i> , 2002, 117, 6108-6116.	3.0	40
46	Formaldehyde in Human Cancer Cells: Detection by Preconcentration-Chemical Ionization Mass Spectrometry. <i>Analytical Chemistry</i> , 2001, 73, 2992-2997.	6.5	138
47	Reactions of $C_n^-$ and $C_nH^-$ with Atomic and Molecular Hydrogen. <i>Astrophysical Journal</i> , 2001, 547, L171-L174.	4.5	79
48	Gas phase reactions of NH <sub>2</sub> Cl with anionic nucleophiles: Nucleophilic substitution at neutral nitrogen. <i>Journal of the American Society for Mass Spectrometry</i> , 2001, 12, 139-143.	2.8	49
49	Rotational-state and velocity-subgroup dependence of the rotational alignment of N <sub>2</sub> <sup>+</sup> drifted in He. <i>Journal of Chemical Physics</i> , 2001, 114, 6654-6661.	3.0	9
50	Laser probing of rotational-state-dependent velocity distributions of N <sub>2</sub> <sup>+</sup> ( $\hat{1}/2^{\hat{3}}=0,J$ ) drifted in He. <i>Journal of Chemical Physics</i> , 2000, 112, 10269-10281.	3.0	14
51	Gas phase hydrogen/deuterium exchange reactions of fluorophenyl anions. <i>Journal of the American Society for Mass Spectrometry</i> , 1999, 10, 840-847.	2.8	26
52	Reactions of Cations Derived from Naphthalene with Molecules and Atoms of Interstellar Interest. <i>Journal of the American Chemical Society</i> , 1999, 121, 9435-9446.	13.7	46
53	The interstellar chemistry of PAH cations. <i>Nature</i> , 1998, 391, 259-260.	27.8	208
54	Photoelectron spectroscopy, gas phase acidity, and thermochemistry of tert-butyl hydroperoxide: Mechanisms for the rearrangement of peroxy radicals. <i>Journal of Chemical Physics</i> , 1998, 109, 10293-10310.	3.0	71

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55	Mobility and formation kinetics of $\text{NH}_4^+(\text{NH}_3)_n$ cluster ions ( $n=0\text{--}3$ ) in helium and helium/ammonia mixtures. <i>Journal of Chemical Physics</i> , 1997, 106, 530-538.	3.0	21
56	Laser probing of velocity-subgroup dependent rotational alignment of $\text{N}_2^+$ drifted in He. <i>Journal of Chemical Physics</i> , 1997, 106, 5413-5422.	3.0	31
57	Chemical Constraints on Organic Cations in the Interstellar Medium. <i>Journal of the American Chemical Society</i> , 1997, 119, 8373-8374.	13.7	72
58	The mobilities of $\text{NO}+(\text{CH}_3\text{CN})_n$ cluster ions ( $n=0\text{--}3$ ) drifting in helium and in helium/acetonitrile mixtures. <i>Journal of Chemical Physics</i> , 1996, 105, 10398-10409.	3.0	17
59	Vibrational enhancement of the charge transfer rate constant of $\text{N}^+(v=0\text{--}4)$ with Kr at thermal energies. <i>Journal of Chemical Physics</i> , 1996, 105, 5455-5466.	3.0	15
60	Gas phase reactions of the sulfur trioxide anion with $\text{CS}_2$ , $\text{OCS}$ , and $\text{H}_2\text{S}$ as a function of kinetic energy. <i>Journal of Chemical Physics</i> , 1994, 101, 9513-9518.	3.0	11
61	Kinetics and dynamics of vibrationally state resolved ion-molecule reactions: $14\text{N}^+(v=1 \text{ and } 2)$ and $15\text{N}^+(v=0, 1, \text{ and } 2)$ with $14\text{N}_2$ . <i>Journal of Chemical Physics</i> , 1994, 100, 6359-6367.	3.0	20
62	Direct observation of the simultaneous transfer of vibrational energy and charge in the $15\text{N}_2^+(v)+14\text{N}_2$ reaction. <i>Journal of Chemical Physics</i> , 1993, 98, 5993-5995.	3.0	14
63	A selected ion flow tube laser induced fluorescence instrument for vibrationally state-specific ion-molecule reactions. <i>Review of Scientific Instruments</i> , 1993, 64, 2808-2820.	1.3	33
64	Single frequency laser probing of velocity component correlations and transport properties of $\text{Ba}^+$ drifting in Ar. <i>Journal of Chemical Physics</i> , 1993, 98, 9496-9512.	3.0	21
65	Effect of enhanced collision energy on product vibrational excitation for the proton transfer reaction: $\text{O}^+(^2\Pi)+\text{HF}^+\rightarrow\text{F}^+(^2\Pi)+\text{OH}(v=0,1)$ . <i>Journal of Chemical Physics</i> , 1992, 96, 298-306.	3.0	11
66	Gas-phase reactions of $\text{C}_3\text{H}_n^+$ ions. <i>Organic Mass Spectrometry</i> , 1992, 27, 416-422.	1.3	14
67	Laser induced fluorescence measurements of rotationally resolved velocity distributions for $\text{CO}^+$ drifted in He. <i>Journal of Chemical Physics</i> , 1991, 94, 7810-7818.	3.0	25
68	Reactions of $\text{O}^+(^2\Pi)+\text{N}_2\text{O}$ at 300 K: The totally labeled experiments. <i>Journal of Chemical Physics</i> , 1990, 92, 3442-3447.	3.0	27
69	Laser induced fluorescence measurements of drift velocity distributions for $\text{Ba}^+$ in Ar: Moment analysis and a direct measure of skewness. <i>Journal of Chemical Physics</i> , 1990, 93, 5118-5127.	3.0	19
70	Laser probing of ion velocity distributions in drift fields: Parallel and perpendicular temperatures and mobility for $\text{Ba}^+$ in He. <i>Journal of Chemical Physics</i> , 1988, 89, 4707-4715.	3.0	49
71	Direct observation of $\text{Ba}^+$ velocity distributions in a drift tube using single frequency laser induced fluorescence. <i>Journal of Chemical Physics</i> , 1987, 87, 5578-5579.	3.0	29
72	Tandem flowing afterglow-selected ion flow tube and its application to the thermal energy reactions of $18\text{O}^-$ . <i>Journal of the American Chemical Society</i> , 1987, 109, 4412-4414.	13.7	46

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73	The tandem flowing afterglow-shift-drift. International Journal of Mass Spectrometry and Ion Processes, 1987, 81, 85-100.	1.8	162
74	Branching ratios for electronically excited oxygen atoms formed in the reaction of N+ with O2 at 300 K. Journal of Chemical Physics, 1986, 84, 2158-2166.	3.0	36
75	Product vibrational state distributions of thermal energy charge transfer reactions determined by laser-induced fluorescence in a flowing afterglow: Ar++CO+CO+(v=0)+Ar. Journal of Chemical Physics, 1985, 83, 2284-2292.	3.0	31
76	Flowing afterglow infrared chemiluminescence studies of vibrational energy disposal in the ion-molecule reactions F+HBr, DBr+HF, DF+Br. Journal of Chemical Physics, 1985, 83, 3913-3918.	3.0	12
77	Product vibrational state distributions of thermal energy charge transfer reactions determined by laser-induced fluorescence: N++CO+CO+(v=0)+N. Journal of Chemical Physics, 1985, 83, 601-610.	3.0	26
78	Flowing afterglow studies of the electron affinity of SO2. Journal of Chemical Physics, 1984, 80, 575-577.	3.0	13
79	Vibrational energy disposal in polyatomic ion-molecule reactions: SF6+H, D+SF5+HF(v), DF(v). Journal of Chemical Physics, 1984, 80, 1831-1838.	3.0	12
80	Laser-induced fluorescence studies of ion collisional excitation in a drift field: Rotational excitation of N2 in helium. Journal of Chemical Physics, 1983, 79, 5448-5456.	3.0	38
81	Vibrational product state distributions of ion-molecule reactions by infrared chemiluminescence: Cl+HBr, HI+HCl(v)+Br, I. Journal of Chemical Physics, 1980, 72, 5426-5436.	3.0	40