

Veronica M Bierbaum

List of Publications by Citations

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77
papers

2,160
citations

26
h-index

43
g-index

81
ext. papers

2,322
ext. citations

5.4
avg, IF

4.58
L-index

#	Paper	IF	Citations
77	The interstellar chemistry of PAH cations. <i>Nature</i> , 1998 , 391, 259-60	50.4	189
76	The tandem flowing afterglow-shift-drift. <i>International Journal of Mass Spectrometry and Ion Processes</i> , 1987 , 81, 85-100		156
75	Ion chemistry in the interstellar medium. <i>Annual Review of Analytical Chemistry</i> , 2008 , 1, 229-59	12.5	145
74	Formaldehyde in human cancer cells: detection by preconcentration-chemical ionization mass spectrometry. <i>Analytical Chemistry</i> , 2001 , 73, 2992-7	7.8	113
73	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	4.7	83
72	Reactions of [FORMULA][F][RM]C[/RM][SUP]-[/SUP][INF]n[/INF][F][FORMULA] and [FORMULA][F][RM]C[/RM][INF]n[/INF][RM]H[/RM][SUP]-[/SUP][F][FORMULA] with Atomic and Molecular Hydrogen. <i>Astrophysical Journal</i> , 2001 , 547, L171-L174	4.7	74
71	Chemical Constraints on Organic Cations in the Interstellar Medium. <i>Journal of the American Chemical Society</i> , 1997 , 119, 8373-8374	16.4	67
70	Reactions of alpha-nucleophiles with alkyl chlorides: competition between S(N)2 and E2 mechanisms and the gas-phase alpha-effect. <i>Journal of the American Chemical Society</i> , 2009 , 131, 8227-33	16.4	65
69	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	16.4	63
68	Thermochemistry and Electronic Structure of the Pyrrolyl Radical. <i>Journal of Physical Chemistry A</i> , 2004 , 108, 10326-10335	2.8	62
67	Investigating the effect in gas-phase S(N)2 reactions of microsolvated anions. <i>Journal of the American Chemical Society</i> , 2013 , 135, 15508-14	16.4	50
66	Laser probing of ion velocity distributions in drift fields: Parallel and perpendicular temperatures and mobility for Ba+ in He. <i>Journal of Chemical Physics</i> , 1988 , 89, 4707-4715	3.9	48
65	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	16.4	43
64	Gas phase reactions of NH2Cl with anionic nucleophiles: nucleophilic substitution at neutral nitrogen. <i>Journal of the American Society for Mass Spectrometry</i> , 2001 , 12, 139-43	3.5	42
63	Tandem flowing afterglow-selected ion flow tube and its application to the thermal energy reactions of 18O-. <i>Journal of the American Chemical Society</i> , 1987 , 109, 4412-4414	16.4	42
62	Ultrafast photodissociation of Br2: 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	3.9	38
61	Laser-induced fluorescence studies of ion collisional excitation in a drift field: Rotational excitation of N+2 in helium. <i>Journal of Chemical Physics</i> , 1983 , 79, 5448-5456	3.9	36

60	Branching ratios for electronically excited oxygen atoms formed in the reaction of N ⁺ with O ₂ at 300 K. <i>Journal of Chemical Physics</i> , 1986 , 84, 2158-2166	3.9	35
59	Vibrational product state distributions of ion-molecule reactions by infrared chemiluminescence: Cl ⁺ HBr, HI+HCl(v)+Br ⁺ <i>Journal of Chemical Physics</i> , 1980 , 72, 5426-5436	3.9	35
58	EXPERIMENTAL AND THEORETICAL STUDIES OF REACTIONS BETWEEN H ATOMS AND NITROGEN-CONTAINING CARBANIONS. <i>Astrophysical Journal</i> , 2011 , 739, 19	4.7	31
57	Product vibrational state distributions of thermal energy charge transfer reactions determined by laser-induced fluorescence in a flowing afterglow: Ar ⁺⁺ CO-6O+(v=0B)+Ar. <i>Journal of Chemical Physics</i> , 1985 , 83, 2284-2292	3.9	31
56	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	1.7	29
55	Laser probing of velocity-subgroup dependent rotational alignment of N ₂ ⁺ drifted in He. <i>Journal of Chemical Physics</i> , 1997 , 106, 5413-5422	3.9	28
54	Experimental and Theoretical Studies of the Reactivity and Thermochemistry of Dicyanamide: N(CN) ₂ (-). <i>Journal of Physical Chemistry A</i> , 2016 , 120, 992-9	2.8	26
53	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, 6584-95	16.4	26
52	Reactions of O ⁺ N ₂ O at 300 K: The totally labeled experiments. <i>Journal of Chemical Physics</i> , 1990 , 92, 3442-3447	3.9	26
51	Direct observation of Ba ⁺ velocity distributions in a drift tube using single-frequency laser-induced fluorescence. <i>Journal of Chemical Physics</i> , 1987 , 87, 5578-5579	3.9	26
50	Product vibrational state distributions of thermal energy charge transfer reactions determined by laser-induced fluorescence: N ⁺⁺ CO-6O+(v=0B)+N. <i>Journal of Chemical Physics</i> , 1985 , 83, 601-610	3.9	26
49	Gas phase hydrogen/deuterium exchange reactions of fluorophenyl anions. <i>Journal of the American Society for Mass Spectrometry</i> , 1999 , 10, 840-847	3.5	23
48	Laser-induced fluorescence measurements of rotationally resolved velocity distributions for CO ⁺ drifted in He. <i>Journal of Chemical Physics</i> , 1991 , 94, 7810-7818	3.9	22
47	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	1.9	21
46	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, 5812-9	16.4	21
45	Single frequency laser probing of velocity component correlations and transport properties of Ba ⁺ drifting in Ar. <i>Journal of Chemical Physics</i> , 1993 , 98, 9496-9512	3.9	20
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	2.8	19
43	The effect in gas-phase S _N 2 reactions of microsolvated anions: methanol as a solvent. <i>Journal of Physical Chemistry A</i> , 2014 , 118, 8060-6	2.8	18

42	GAS-PHASE REACTIONS OF POLYCYCLIC AROMATIC HYDROCARBON CATIONS AND THEIR NITROGEN-CONTAINING ANALOGS WITH H ATOMS. <i>Astrophysical Journal</i> , 2014 , 784, 25	4.7	18
41	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 14N_2 . <i>Journal of Chemical Physics</i> , 1994 , 100, 6359-6367	3.9	18
40	Laser-induced fluorescence measurements of drift-velocity distributions for Ba^+ in Ar: Moment analysis and a direct measure of skewness. <i>Journal of Chemical Physics</i> , 1990 , 93, 5118-5127	3.9	18
39	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, 10700-9	16.4	17
38	Mobility and formation kinetics of $\text{NH}_4^+(\text{NH}_3)_n$ cluster ions ($n=0-8$) in helium and helium/ammonia mixtures. <i>Journal of Chemical Physics</i> , 1997 , 106, 530-538	3.9	17
37	Gas-Phase Study of Coronene Cation Reactivity of Interstellar Relevance. <i>Astrophysical Journal</i> , 2006 , 651, L129-L131	4.7	16
36	Vibrational enhancement of the charge transfer rate constant of $\text{N}^+(v=0-8)$ with Kr at thermal energies. <i>Journal of Chemical Physics</i> , 1996 , 105, 5455-5466	3.9	15
35	EXPERIMENTAL AND THEORETICAL STUDIES OF REACTIONS BETWEEN H ATOMS AND CARBANIONS OF INTERSTELLAR RELEVANCE. <i>Astrophysical Journal</i> , 2010 , 723, 1325-1330	4.7	14
34	The mobilities of $\text{NO}^+(\text{CH}_3\text{CN})_n$ cluster ions ($n=0-8$) drifting in helium and in helium/acetonitrile mixtures. <i>Journal of Chemical Physics</i> , 1996 , 105, 10398-10409	3.9	14
33	The 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, 159-68	3.5	13
32	Survey of the reactivity of $\text{O}(^2\text{P})$ with negative ions. <i>Journal of Physical Chemistry A</i> , 2010 , 114, 1270-6	2.8	13
31	Direct observation of the simultaneous transfer of vibrational energy and charge in the $15\text{N}^+(v)+14\text{N}_2$ reaction. <i>Journal of Chemical Physics</i> , 1993 , 98, 5993-5995	3.9	13
30	Flowing afterglow studies of the electron affinity of SO_2 . <i>Journal of Chemical Physics</i> , 1984 , 80, 575-577	3.9	12
29	Vibrational energy disposal in polyatomic ion-molecule reactions: SF_6^++H , $\text{D}_2\text{SF}_6^++\text{HF}(v)$, $\text{DF}(v)$. <i>Journal of Chemical Physics</i> , 1984 , 80, 1831-1838	3.9	12
28	Flowing afterglow infrared chemiluminescence studies of vibrational energy disposal in the ion-molecule reactions F_2^++HBr , $\text{DBr}+\text{BF}_2$, $\text{DF}+\text{Br}_2$. <i>Journal of Chemical Physics</i> , 1985 , 83, 3913-3918	3.9	12
27	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	3.9	11
26	Chemistry of HCNH^+ : mechanisms, structures, and relevance to Titan's atmosphere. <i>Structural Chemistry</i> , 2013 , 24, 1957-1963	1.8	10
25	Dissociative excitation transfer in the reaction of $\text{O}_2(^1\Delta_g)$ with OH^- (H_2O)(1,2) clusters. <i>Journal of Chemical Physics</i> , 2009 , 131, 094303	3.9	10

24	Laser probing of rotational-state-dependent velocity distributions of N ₂ ⁺ (v=0,J) drifted in He. <i>Journal of Chemical Physics</i> , 2000 , 112, 10269-10281	3.9	10
23	Gas phase reactions of the sulfur-34 anion with CS ₂ , OCS, and H ₂ S as a function of kinetic energy. <i>Journal of Chemical Physics</i> , 1994 , 101, 9513-9518	3.9	10
22	Effect of enhanced collision energy on product vibrational excitation for the proton transfer reaction: O ₂ ⁻ HF- ⁻ OH(v=0,1). <i>Journal of Chemical Physics</i> , 1992 , 96, 298-306	3.9	10
21	Gas-phase reactions of C ₃ H _n ⁺ ions. <i>Organic Mass Spectrometry</i> , 1992 , 27, 416-422		10
20	Reactivity of amino acid anions with nitrogen and oxygen atoms. <i>Physical Chemistry Chemical Physics</i> , 2018 , 20, 4990-4996	3.6	9
19	Anionic derivatives of uracil: fragmentation and reactivity. <i>Physical Chemistry Chemical Physics</i> , 2014 , 16, 17835-44	3.6	9
18	Rotational-state and velocity-subgroup dependence of the rotational alignment of N ₂ ⁺ drifted in He. <i>Journal of Chemical Physics</i> , 2001 , 114, 6654-6661	3.9	8
17	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	2.8	6
16	Gas-Phase Reactions of Deprotonated Nucleobases with H, N, and O Atoms. <i>Journal of Physical Chemistry Letters</i> , 2019 , 10, 4863-4867	6.4	6
15	GAS-PHASE CHEMISTRY OF THE CYANATE ION, OCN ⁻ <i>Astrophysical Journal</i> , 2015 , 812, 77	4.7	6
14	Gas-phase organic reactions of the atomic oxygen radical cation. <i>International Journal of Mass Spectrometry</i> , 2013 , 353, 1-6	1.9	6
13	Deprotonated purine dissociation: experiments, computations, and astrobiological implications. <i>Journal of Physical Chemistry A</i> , 2015 , 119, 334-43	2.8	6
12	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	3.5	6
11	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	1.9	5
10	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	2.8	5
9	Anions in Space and in the Laboratory. <i>Proceedings of the International Astronomical Union</i> , 2011 , 7, 383-389		4
8	Reactions of Sulfur- and Oxygen-Containing Anions with Hydrogen Atoms: A Comparative Study. <i>Journal of Physical Chemistry Letters</i> , 2017 , 8, 5725-5729	6.4	3
7	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	1.1	2

6	Ion chemistry in the interstellar medium. <i>Proceedings of the International Astronomical Union</i> , 2008 , 4, 139-140	0.1	1
5	Photoelectron spectroscopy and thermochemistry of o-, m-, and p-methylenephenoxide anions. <i>Physical Chemistry Chemical Physics</i> , 2018 , 20, 25203-25216	3.6	1
4	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	6.4	1
3	Elucidating the Reactivity of O (a Π) A Study with Amino Acid Anions and Related Sulfur and Oxygen Anionic Species. <i>Journal of Physical Chemistry A</i> , 2019 , 123, 2586-2591	2.8	0
2	Gas-phase reactions of CF(+) with molecules of interstellar relevance. <i>Journal of Physical Chemistry A</i> , 2015 , 119, 4329-35	2.8	0
1	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, 141-7	1.1	