Veronica M Bierbaum

List of Publications by Year
in descending order

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	The interstellar chemistry of PAH cations. Nature, 1998, 391, 259-260.	27.8	208
2	Ion Chemistry in the Interstellar Medium. Annual Review of Analytical Chemistry, 2008, 1, 229-259.	5.4	166
3	The tandem flowing afterglow-shift-drift. International Journal of Mass Spectrometry and Ion Processes, 1987, 81, 85-100.	1.8	162
4	Formaldehyde in Human Cancer Cells:Â Detection by Preconcentration-Chemical Ionization Mass Spectrometry. Analytical Chemistry, 2001, 73, 2992-2997.	6.5	138
5	Reactions of H, N, and O Atoms with Carbon Chain Anions of Interstellar Interest: An Experimental Study. Astrophysical Journal, 2007, 667, 1283-1289.	4.5	94
6	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. Astrophysical Journal, 2001, 547, L171-L174.	4.5	79
7	Reactions of Î±-Nucleophiles with Alkyl Chlorides: Competition between S_N2 and E2 Mechanisms and the Gas-Phase Î±-Effect. Journal of the American Chemical Society, 2009, 131, 8227-8233.	13.7	79
8	Chemical Constraints on Organic Cations in the Interstellar Mediumâ€¡. Journal of the American Chemical Society, 1997, 119, 8373-8374.	13.7	72
9	Photoelectron spectroscopy, gas phase acidity, and thermochemistry of tert-butyl hydroperoxide: Mechanisms for the rearrangement of peroxyl radicals. Journal of Chemical Physics, 1998, 109, 10293-10310.	3.0	71
10	Thermochemistry and Electronic Structure of the Pyrrolyl Radical. Journal of Physical Chemistry A, 2004, 108, 10326-10335.	2.5	66
11	Investigating the Î±-Effect in Gas-Phase S_N2 Reactions of Microsolvated Anions. Journal of the American Chemical Society, 2013, 135, 15508-15514.	13.7	59
12	Laser probing of ion velocity distributions in drift fields: Parallel and perpendicular temperatures and mobility for Ba+ in He. Journal of Chemical Physics, 1988, 89, 4707-4715.	3.0	49
13	Gas phase reactions of NH2Cl with anionic nucleophiles: Nucleophilic substitution at neutral nitrogen. Journal of the American Society for Mass Spectrometry, 2001, 12, 139-143.	2.8	49
14	Tandem flowing afterglow-selected ion flow tube and its application to the thermal energy reactions of 18O-. Journal of the American Chemical Society, 1987, 109, 4412-4414.	13.7	46
15	Reactions of Cations Derived from Naphthalene with Molecules and Atoms of Interstellar Interest. Journal of the American Chemical Society, 1999, 121, 9435-9446.	13.7	46
16	Vibrational product state distributions of ionâ€“molecule reactions by infrared chemiluminescence: Clâ¯+HBr,Hlât'HCl(v)+Brâ¯,lâ¯. Journal of Chemical Physics, 1980, 72, 5426-5436.	3.0	40
17	Ultrafast photodissociation of Br2: Laser-generated high-harmonic soft x-ray probing of the transient photoelectron spectra and ionization cross sections. Journal of Chemical Physics, 2002, 117, 6108-6116.	3.0	40
18	Laserâ€induced fluorescence studies of ion collisional excitation in a drift field: Rotational excitation of N+2 in helium. Journal of Chemical Physics, 1983, 79, 5448-5456.	3.0	38

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19	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
20	A selected ion flow tubeâ€laser induced fluorescence instrument for vibrationally stateâ€specific ionâ€molecule reactions. Review of Scientific Instruments, 1993, 64, 2808-2820.	1.3	33
21	EXPERIMENTAL AND THEORETICAL STUDIES OF REACTIONS BETWEEN H ATOMS AND NITROGEN-CONTAINING CARBANIONS. Astrophysical Journal, 2011, 739, 19.	4.5	33
22	Product vibrational state distributions of thermal energy charge transfer reactions determined by laserâ€induced fluorescence in a flowing afterglow: Ar++COâ†'CO+(v=0â€“6)+Ar. Journal of Chemical Physics, 1985, 83, 2284-2292.	3.0	31
23	Laser probing of velocity-subgroup dependent rotational alignment of N2+ drifted in He. Journal of Chemical Physics, 1997, 106, 5413-5422.	3.0	31
24	Experimental and Theoretical Studies of the Reactivity and Thermochemistry of Dicyanamide: N(CN)₂^{â€“}. Journal of Physical Chemistry A, 2016, 120, 992-999.	2.5	30
25	Direct observation of Ba+ velocity distributions in a drift tube using singleâ€frequency laserâ€induced fluorescence. Journal of Chemical Physics, 1987, 87, 5578-5579.	3.0	29
26	Câ€“H Bond Strengths and Acidities in Aromatic Systems: Effects of Nitrogen Incorporation in Mono-, Di-, and Triazines. Journal of the American Chemical Society, 2012, 134, 6584-6595.	13.7	29
27	Reactions of Oâ¯+ N2O at 300 K: The totally labeled experiments. Journal of Chemical Physics, 1990, 92, 3442-3447.	3.0	27
28	Product vibrational state distributions of thermal energy charge transfer reactions determined by laserâ€induced fluorescence: N++COâ†'CO+(v=0â€“2)+N. Journal of Chemical Physics, 1985, 83, 601-610.	3.0	26
29	Gas phase hydrogen/deuterium exchange reactions of fluorophenyl anions. Journal of the American Society for Mass Spectrometry, 1999, 10, 840-847.	2.8	26
30	Go with the flow: Fifty years of innovation and ion chemistry using the flowing afterglow. International Journal of Mass Spectrometry, 2015, 377, 456-466.	1.5	26
31	Laserâ€induced fluorescence measurements of rotationally resolved velocity distributions for CO+ drifted in He. Journal of Chemical Physics, 1991, 94, 7810-7818.	3.0	25
32	The Influence of Spin Effects on the Gas Phase Reactions of Carbanions with N and O Atoms. Journal of the American Chemical Society, 2010, 132, 5812-5819.	13.7	25
33	The Î±-Effect in Gas-Phase SN2 Reactions of Microsolvated Anions: Methanol as a Solvent. Journal of Physical Chemistry A, 2014, 118, 8060-8066.	2.5	23
34	Reactions of Azine Anions with Nitrogen and Oxygen Atoms: Implications for Titanâ€™s Upper Atmosphere and Interstellar Chemistry. Journal of the American Chemical Society, 2015, 137, 10700-10709.	13.7	23
35	Single frequency laser probing of velocity component correlations and transport properties of Ba+ drifting in Ar. Journal of Chemical Physics, 1993, 98, 9496-9512.	3.0	21
36	Mobility and formation kinetics of NH4+(NH3)n cluster ions (n=0â€“3) in helium and helium/ammonia mixtures. Journal of Chemical Physics, 1997, 106, 530-538.	3.0	21

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37	Kinetics and dynamics of vibrationally state resolved ionâ€“molecule reactions: 14N+2(v=1 and 2) and 15N+2(v=0, 1, and 2) with 14N2. Journal of Chemical Physics, 1994, 100, 6359-6367.	3.0	20
38	Use of a Flowing Afterglow SIFT Apparatus To Study the Reactions of Ions with Organic Radicalsâ€. Journal of Physical Chemistry A, 2004, 108, 9733-9741.	2.5	20
39	GAS-PHASE REACTIONS OF POLYCYCLIC AROMATIC HYDROCARBON CATIONS AND THEIR NITROGEN-CONTAINING ANALOGS WITH H ATOMS. Astrophysical Journal, 2014, 784, 25.	4.5	20
40	Laserâ€induced fluorescence measurements of driftâ€velocity distributions for Ba+ in Ar: Moment analysis and a direct measure of skewness. Journal of Chemical Physics, 1990, 93, 5118-5127.	3.0	19
41	The Î±-Effect and Competing Mechanisms: The Gas-Phase Reactions of Microsolvated Anions with Methyl Formate. Journal of the American Society for Mass Spectrometry, 2014, 25, 159-168.	2.8	18
42	The mobilities of NO+(CH3CN)n cluster ions (n=0â€“3) drifting in helium and in heliumâ€“acetonitrile mixtures. Journal of Chemical Physics, 1996, 105, 10398-10409.	3.0	17
43	Gas-Phase Study of Coronene Cation Reactivity of Interstellar Relevance. Astrophysical Journal, 2006, 651, L129-L131.	4.5	16
44	EXPERIMENTAL AND THEORETICAL STUDIES OF REACTIONS BETWEEN H ATOMS AND CARBANIONS OF INTERSTELLAR RELEVANCE. Astrophysical Journal, 2010, 723, 1325-1330.	4.5	16
45	Survey of the Reactivity of O₂(a ¹Î”_g) with Negative Ions. Journal of Physical Chemistry A, 2010, 114, 1270-1276.	2.5	16
46	Vibrational enhancement of the charge transfer rate constant of N+2(v=0â€“4) with Kr at thermal energies. Journal of Chemical Physics, 1996, 105, 5455-5466.	3.0	15
47	Gas-phase reactions of C3Hn+ ions. Organic Mass Spectrometry, 1992, 27, 416-422.	1.3	14
48	Direct observation of the simultaneous transfer of vibrational energy and charge in the 15N2+(v)+14N2 reaction. Journal of Chemical Physics, 1993, 98, 5993-5995.	3.0	14
49	Laser probing of rotational-state-dependent velocity distributions of N2+â€Š(Î½â€³=0,J) drifted in He. Journal of Chemical Physics, 2000, 112, 10269-10281.	3.0	14
50	Flowing afterglow studies of the electron affinity of SO2. Journal of Chemical Physics, 1984, 80, 575-577.	3.0	13
51	Reactions of substituted benzene anions with N and O atoms: Chemistry in Titanâ€™s upper atmosphere and the interstellar medium. Journal of Chemical Physics, 2016, 144, 214304.	3.0	13
52	Vibrational energy disposal in polyatomic ionâ€“molecule reactions: SFâ¯6+H, Dâ†’SFâ¯5+HF(v), DF(v). Journal of Chemical Physics, 1984, 80, 1831-1838.	3.0	12
53	Flowing afterglow infrared chemiluminescence studies of vibrational energy disposal in the ionâ€“molecule reactions Fâ¯+HBr,DBrâ†’HF,DF+Brâ¯. Journal of Chemical Physics, 1985, 83, 3913-3918.	3.0	12
54	Effect of enhanced collision energy on product vibrational excitation for the proton transfer reaction: Oâ¯+HFâ†’Fâ¯+OH(v=0,1). Journal of Chemical Physics, 1992, 96, 298-306.	3.0	11

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55	Gas phase reactions of the sulfurâ€34 anion with CS2, OCS, and H2S as a function of kinetic energy. Journal of Chemical Physics, 1994, 101, 9513-9518.	3.0	11
56	Dissociative excitation transfer in the reaction of O[sub 2](a[sup 1]Î”[sub g]) with OH[sup â^’](H[sub) Tj ETQq0 0 0 rgBT /Overlock 10 T	3.0	11
57	Chemistry of HCNH+: mechanisms, structures, and relevance to Titanâ€™s atmosphere. Structural Chemistry, 2013, 24, 1957-1963.	2.0	11
58	Gas-Phase Reactions of Deprotonated Nucleobases with H, N, and O Atoms. Journal of Physical Chemistry Letters, 2019, 10, 4863-4867.	4.6	11
59	Anionic derivatives of uracil: fragmentation and reactivity. Physical Chemistry Chemical Physics, 2014, 16, 17835-17844.	2.8	10
60	Reactivity of amino acid anions with nitrogen and oxygen atoms. Physical Chemistry Chemical Physics, 2018, 20, 4990-4996.	2.8	10
61	Rotational-state and velocity-subgroup dependence of the rotational alignment of N2+ drifted in He. Journal of Chemical Physics, 2001, 114, 6654-6661.	3.0	9
62	Experimental and Computational Studies of the Reactions of N and O Atoms with Small Heterocyclic Anions. Journal of Physical Chemistry A, 2017, 121, 3655-3661.	2.5	9
63	GAS-PHASE CHEMISTRY OF THE CYANATE ION, OCNâ^’. Astrophysical Journal, 2015, 812, 77.	4.5	8
64	Single Solvent Molecules Induce Dual Nucleophiles in Gas-Phase Ionâ€“Molecule Nucleophilic Substitution Reactions. Journal of Physical Chemistry Letters, 2021, 12, 7134-7139.	4.6	8
65	Deuterium kinetic isotope effects in microsolvated gas-phase E2 reactions: Methanol and ethanol as solvents. Journal of the American Society for Mass Spectrometry, 2008, 19, 1296-1302.	2.8	7
66	Anions in Space and in the Laboratory. Proceedings of the International Astronomical Union, 2011, 7, 383-389.	0.0	7
67	Gas-phase organic reactions of the atomic oxygen radical cation. International Journal of Mass Spectrometry, 2013, 353, 1-6.	1.5	7
68	Deprotonated Purine Dissociation: Experiments, Computations, and Astrobiological Implications. Journal of Physical Chemistry A, 2015, 119, 334-343.	2.5	7
69	Gas-Phase Acidities of Nitrated Azoles as Determined by the Extended Kinetic Method and Computations. Journal of Physical Chemistry A, 2015, 119, 395-402.	2.5	6
70	Reactions of sulfur and oxygen containing anions with nitrogen and oxygen atoms: A comparative study. International Journal of Mass Spectrometry, 2018, 433, 1-6.	1.5	5
71	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. Journal of the American Society for Mass Spectrometry, 2016, 27, 949-951.	2.8	4
72	Reactions of Sulfur- and Oxygen-Containing Anions with Hydrogen Atoms: A Comparative Study. Journal of Physical Chemistry Letters, 2017, 8, 5725-5729.	4.6	3

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73	Photoelectron spectroscopy and thermochemistry of o-, m-, and p-methylenephenoxide anions. Physical Chemistry Chemical Physics, 2018, 20, 25203-25216.	2.8	2
74	The HNO^{â˙'} radical anion: A proposed intermediate in diazeniumdiolate synthesis using nitric oxide and alkoxides. European Journal of Mass Spectrometry, 2019, 25, 82-85.	1.0	2
75	Ion chemistry in the interstellar medium. Proceedings of the International Astronomical Union, 2008, 4, 139-140.	0.0	1
76	Charles H. DePuy (1927â€“2013). Journal of the American Society for Mass Spectrometry, 2013, 24, 1817-1818.	2.8	1
77	Gas-Phase Reactions of CF⁺ with Molecules of Interstellar Relevance. Journal of Physical Chemistry A, 2015, 119, 4329-4335.	2.5	1
78	Elucidating the Reactivity of O₂ (a ¹Î”_g): A Study with Amino Acid Anions and Related Sulfur and Oxygen Anionic Species. Journal of Physical Chemistry A, 2019, 123, 2586-2591.	2.5	1
79	Computational Studies of the Gas Phase Reactions of Ethers with Anions: Kinetic Barriers, Isotope Effects, Consecutive Eliminations and Site Selectivity. European Journal of Mass Spectrometry, 2015, 21, 141-147.	1.0	0
80	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. Journal of the American Society for Mass Spectrometry, 2017, 28, 1250-1253.	2.8	0
81	Focus on Mass Spectrometry in Glycobiology and Related Fields, Honoring Catherine E. Costello, Recipient of the 2017 ASMS Award for a Distinguished Contribution in Mass Spectrometry. Journal of the American Society for Mass Spectrometry, 2018, 29, 1061-1064.	2.8	0