

Raymond Bemish

List of Publications by Year in descending order

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56
papers

1,328
citations

279798

23
h-index

377865

34
g-index

61
all docs

61
docs citations

61
times ranked

807
citing authors

#	ARTICLE	IF	CITATIONS
1	The Ar ⁺ C ₂ H ₂ intermolecular potential from high resolution spectroscopy and ab initio theory: A case for multicenter interactions. <i>Journal of Chemical Physics</i> , 1993, 99, 8585-8598.	3.0	92
2	Photodissociation of molecules oriented by dc electric fields: Determining photofragment angular distributions. <i>Journal of Chemical Physics</i> , 1994, 101, 9447-9456.	3.0	71
3	Electron Impact Ionization in Helium Nanodroplets: Controlling Fragmentation by Active Cooling of Molecular Ions. <i>Journal of the American Chemical Society</i> , 2004, 126, 11283-11292.	13.7	65
4	Probing Charge-Transfer Processes in Helium Nanodroplets by Optically Selected Mass Spectrometry (OSMS): Charge Steering by Long-Range Interactions. <i>Journal of the American Chemical Society</i> , 2005, 127, 7235-7242.	13.7	65
5	Photofragment vibrational, rotational, and translational distributions for N ₂ ⁺ HF (v=1). <i>Journal of Chemical Physics</i> , 1994, 101, 9457-9468.	3.0	61
6	The C(3P) + NO(X ² Î) → O(3P) + CN(X ² Î ⁺), N(2D)/N(4S) + CO(X ¹ Î ⁺) reaction: Rates, branching ratios, and final states from 15 K to 20 000 K. <i>Journal of Chemical Physics</i> , 2018, 149, 094305.	3.0	43
7	Infrared spectroscopy and ab initio potential energy surface for Ne ⁺ C ₂ H ₂ and Ne ⁺ C ₂ HD complexes. <i>Journal of Chemical Physics</i> , 1998, 109, 8968-8979.	3.0	41
8	Aqueous phosphoric acid as a mild reagent for deprotection of the t-butoxycarbonyl group. <i>Tetrahedron Letters</i> , 2003, 44, 8113-8115.	1.4	41
9	Adsorption of Acridine Orange at a C ₈ ,18/Water/Acetonitrile Interface. <i>Journal of Physical Chemistry B</i> , 2007, 111, 10208-10216.	2.6	41
10	Solvent structures of mixed water/acetonitrile mixtures at chromatographic interfaces from computer simulations. <i>Physical Chemistry Chemical Physics</i> , 2008, 10, 4765.	2.8	40
11	Molecular control using dc electric fields: quenching of the tunneling in HF dimer. <i>Chemical Physics Letters</i> , 1996, 251, 182-188.	2.6	38
12	The N ₂ H ⁺ He intermolecular potential energy surface: A vibrational adiabatic correction. <i>Journal of Chemical Physics</i> , 1997, 106, 8672-8680.	3.0	36
13	Exhaustive state-to-state cross sections for reactive molecular collisions from importance sampling simulation and a neural network representation. <i>Journal of Chemical Physics</i> , 2019, 150, 211101.	3.0	35
14	Computational study of collisions between O(3P) and NO(2Î) at temperatures relevant to the hypersonic flight regime. <i>Journal of Chemical Physics</i> , 2014, 141, 164319.	3.0	34
15	Ab initio and scaled potential energy surfaces for Ar ⁺ C ₂ H ₂ : Comparison with scattering and spectroscopic experiments. <i>Journal of Chemical Physics</i> , 1996, 105, 10462-10471.	3.0	32
16	Molecular Dynamics Simulations of 1-Ethyl-3-methylimidazolium Bis[(trifluoromethyl)sulfonyl]imide Clusters and Nanodrops. <i>Journal of Physical Chemistry A</i> , 2015, 119, 352-368.	2.5	32
17	The N(⁴ S) + O ₂ (X ³ Î ^g) → O(³ P) + NO(X ² Î) reaction: thermal and vibrational relaxation rates for the ² Σ ⁺ , ⁴ Σ ⁺ and ² Σ ⁺ states. <i>Physical Chemistry Chemical Physics</i> , 2020, 22, 3927-3939.	2.8	30
18	Probing the dynamics of weakly bound complexes using high-resolution laser spectroscopy. <i>Faraday Discussions</i> , 1994, 97, 57.	3.2	29

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19	Reactive collisions for $\text{NO}(\text{v}^2) + \text{N}(\text{v}^4\text{S})$ at temperatures relevant to the hypersonic flight regime. <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 2392-2401.	2.8	29
20	Collision-induced dissociation of positive and negative copper oxide cluster ions generated by direct laser desorption/ionization of copper oxide. <i>International Journal of Mass Spectrometry and Ion Processes</i> , 1990, 102, 115-132.	1.8	27
21	Near-infrared laser spectroscopy of the $\text{Ar}^+\text{C}_2\text{HD}$ complex. <i>Chemical Physics Letters</i> , 1997, 281, 272-280.	2.6	26
22	Fragmentation of HCN in optically selected mass spectrometry: Nonthermal ion cooling in helium nanodroplets. <i>Journal of Chemical Physics</i> , 2005, 123, 141103.	3.0	26
23	Electrospray of an Energetic Ionic Liquid Monopropellant for Multi-Mode Micropropulsion Applications. , 2015, , .		26
24	Molecular Mechanisms Underlying Solute Retention at Heterogeneous Interfaces. <i>Journal of Physical Chemistry Letters</i> , 2017, 8, 4600-4607.	4.6	26
25	Krypton charge exchange cross sections for Hall effect thruster models. <i>Journal of Applied Physics</i> , 2013, 113, 163301.	2.5	25
26	Electrospray of 1-Butyl-3-Methylimidazolium Dicyanamide Under Variable Flow Rate Operations. <i>Journal of Propulsion and Power</i> , 2014, 30, 1701-1710.	2.2	25
27	Accurate reproducing kernel-based potential energy surfaces for the triplet ground states of N_2O and dynamics for the $\text{N} + \text{NO} \rightarrow \text{O} + \text{N}_2$ and $\text{N}_2 + \text{O} \rightarrow 2\text{N} + \text{O}$ reactions. <i>Physical Chemistry Chemical Physics</i> , 2020, 22, 18488-18498.	2.8	24
28	High resolution infrared molecular beam spectroscopy of cyanoacetylene clusters. <i>Journal of Chemical Physics</i> , 1995, 103, 8828-8839.	3.0	23
29	Communication: Equilibrium rate coefficients from atomistic simulations: The $\text{O}(3\text{P}) + \text{NO}(2\text{I}) \rightarrow \text{O}_2(\text{X}^3\Sigma_g^-) + \text{N}(4\text{S})$ reaction at temperatures relevant to the hypersonic flight regime. <i>Journal of Chemical Physics</i> , 2015, 142, 091104.	3.0	22
30	The ethylene-carbon dioxide complex: A double internal rotor. <i>Journal of Chemical Physics</i> , 1995, 103, 7788-7795.	3.0	18
31	Electron-Catalyzed Mutual Neutralization of Various Anions with Ar^+ : Evidence of a New Plasma Process. <i>Physical Review Letters</i> , 2011, 106, 018302.	7.8	18
32	Collision-induced rotational excitation in $\text{N}_2(2\text{I}^+_g, \text{v}=) + \text{Ar}$: Comparison of computations and experiment. <i>Journal of Chemical Physics</i> , 2016, 144, 224307.	3.0	16
33	From in silica to in silico: retention thermodynamics at solid-liquid interfaces. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 18610-18622.	2.8	15
34	The structure and intermolecular dynamics of the nitrous oxide-ethylene complex: Experiment and ab initio theory. <i>Journal of Chemical Physics</i> , 1996, 104, 4411-4418.	3.0	13
35	Dynamics on Multiple Potential Energy Surfaces: Quantitative Studies of Elementary Processes Relevant to Hypersonics. <i>Journal of Physical Chemistry A</i> , 2020, 124, 6255-6269.	2.5	13
36	Machine Learning for Observables: Reactant to Product State Distributions for Atom-Diatom Collisions. <i>Journal of Physical Chemistry A</i> , 2020, 124, 7177-7190.	2.5	12

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37	Emission-Excitation Cross Sections Relevant to Krypton-Propelled Electric Thrusters. <i>Journal of Propulsion and Power</i> , 2015, 31, 725-736.	2.2	11
38	Capillary ionic liquid electrospray: beam compositional analysis by orthogonal time-of-flight mass spectrometry. <i>Journal of Fluid Mechanics</i> , 2021, 928, .	3.4	11
39	The argon ⁺ diacetylene complex: An example of distributed interactions and transferable potentials. <i>Journal of Chemical Physics</i> , 1996, 105, 10171-10177.	3.0	10
40	Mass Spectrometry of Selected Ionic Liquids in Capillary Electrospray at Nanoliter Volumetric Flow Rates. , 2016, , .		10
41	The C ³⁺ P + O ₂ (³ Σ _g ⁻) → CO ₂ + CO ⁺ CO ₂ reaction: thermal and vibrational relaxation rates from 15 K to 20000 K. <i>Physical Chemistry Chemical Physics</i> , 2021, 23, 11251-11263.	2.8	10
42	Machine learning product state distributions from initial reactant states for a reactive atom ⁺ diatom collision system. <i>Journal of Chemical Physics</i> , 2022, 156, 034301.	3.0	10
43	Oxidation of carbamate-protected alkylhydrazines to the corresponding hydrazones under Swern conditions. <i>Tetrahedron Letters</i> , 2001, 42, 1453-1454.	1.4	8
44	Formation of cold ion-neutral clusters using superfluid helium nanodroplets. <i>Review of Scientific Instruments</i> , 2010, 81, 054101.	1.3	8
45	Orthogonal time-of-flight mass spectrometry of an ion beam with a broad kinetic energy profile. <i>Review of Scientific Instruments</i> , 2017, 88, 105111.	1.3	7
46	Communication: Vibrational relaxation of CO(1Σ) in collision with Ar(1S) at temperatures relevant to the hypersonic flight regime. <i>Journal of Chemical Physics</i> , 2017, 146, 111102.	3.0	6
47	A Combined Experimental and Theoretical Treatment of Ionic Liquid Thermal Dissociation. , 2017, , .		6
48	Mesospheric implications for the reaction of Si ⁺ with O ₂ (¹ Σ _g ⁻). <i>Geophysical Research Letters</i> , 2010, 37, .	4.0	5
49	A new technique to study plasma chemistry kinetics. <i>Journal of Physics: Conference Series</i> , 2011, 300, 012007.	0.4	4
50	Application of a First Generation Collisional Radiative Model for Iodine to Optical Emissions from the Plume of an Iodine Hall Effect Thruster. , 2017, , .		4
51	A guided-ion beam study of the collisions and reactions of I ⁺ and I ₂ ⁺ with I ₂ . <i>Journal of Chemical Physics</i> , 2015, 142, 074301.	3.0	3
52	Integral cross section measurements and product recoil velocity distributions of Xe ₂ ⁺ + N ₂ hyperthermal charge-transfer collisions. <i>Journal of Chemical Physics</i> , 2016, 145, 044309.	3.0	2
53	Quantum and quasiclassical trajectory studies of rotational relaxation in Ar ⁺ N ₂ ⁺ collisions. <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 27945-27951.	2.8	2
54	Solvated Ion Cluster Dissociation Rates for Ionic Liquid Electrospray Propellants. , 2019, , .		1

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55	Aqueous Phosphoric Acid as a Mild Reagent for Deprotection of the t-Butoxycarbonyl Group.. ChemInform, 2004, 35, no.	0.0	0
56	Photoemission resulting from collisions of I ₂ with 5–100 eV electrons. Journal of Physics B: Atomic, Molecular and Optical Physics, 2020, 53, 215201.	1.5	0