

Piergiorgio Casavecchia

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

149
papers

6,159
citations

50
h-index

69
g-index

159
ext. papers

6,489
ext. citations

4.9
avg, IF

5.28
L-index

#	Paper	IF	Citations
149	The Reaction N(D) + CHCCH (Methylacetylene): A Combined Crossed Molecular Beams and Theoretical Investigation and Implications for the Atmosphere of Titan. <i>Journal of Physical Chemistry A</i> , 2021 , 125, 8846-8859	2.8	3
148	A Computational Study on the Attack of Nitrogen and Oxygen Atoms to Toluene. <i>Lecture Notes in Computer Science</i> , 2021 , 620-631	0.9	3
147	Crossed-Beam and Theoretical Studies of the O(P, D) + Benzene Reactions: Primary Products, Branching Fractions, and Role of Intersystem Crossing. <i>Journal of Physical Chemistry A</i> , 2021 , 125, 8434-8453	2.8	4
146	A crossed molecular beam investigation of the N(2D) _{v=1} +pyridine reaction and implications for prebiotic chemistry. <i>Chemical Physics Letters</i> , 2021 , 779, 138852	2.5	3
145	Oxidation and nitridation of vitreous carbon at high temperatures. <i>Carbon</i> , 2020 , 167, 388-402	10.4	12
144	A Computational Study on the Insertion of N(2D) into a C-H or C-C Bond: The Reactions of N(2D) with Benzene and Toluene and Their Implications on the Chemistry of Titan. <i>Lecture Notes in Computer Science</i> , 2020 , 744-755	0.9	5
143	Rate rules for the reactions of oxygen atoms with terminal alkenes. <i>Fuel</i> , 2020 , 263, 116536	7.1	5
142	Theoretical Study of the Extent of Intersystem Crossing in the O(P) + CH Reaction with Experimental Validation. <i>Journal of Physical Chemistry Letters</i> , 2020 , 11, 9621-9628	6.4	9
141	Molecular beam studies of elementary reactions relevant in plasma/combustion chemistry: O(3P) + unsaturated hydrocarbons. <i>Rendiconti Lincei</i> , 2019 , 30, 549-561	1.7	2
140	A Computational Study of the Reaction N(2D) + C ₆ H ₆ Leading to Pyridine and Phenylnitrene. <i>Lecture Notes in Computer Science</i> , 2019 , 316-324	0.9	6
139	Combined Experimental and Theoretical Studies of the O(P) + 1-Butene Reaction Dynamics: Primary Products, Branching Fractions, and Role of Intersystem Crossing. <i>Journal of Physical Chemistry A</i> , 2019 , 123, 9934-9956	2.8	13
138	Crossed molecular beams and theoretical studies of the O(3P)+ 1,2-butadiene reaction: Dominant formation of propene+CO and ethylidene+ketene molecular channels. <i>Chinese Journal of Chemical Physics</i> , 2019 , 32, 113-122	0.9	6
137	Combined Experimental-Theoretical Study of the OH + CO -H + CO Reaction Dynamics. <i>Journal of Physical Chemistry Letters</i> , 2018 , 9, 1229-1236	6.4	10
136	Direct observation of forward-scattering oscillations in the H+HD-H+D reaction. <i>Nature Chemistry</i> , 2018 , 10, 653-658	17.6	38
135	A Theoretical Investigation of the Reaction N(2D) + C ₆ H ₆ and Implications for the Upper Atmosphere of Titan. <i>Lecture Notes in Computer Science</i> , 2018 , 763-772	0.9	8
134	Formation of Nitrogen-Bearing Organic Molecules in the Reaction NH + C ₂ H ₅ : A Theoretical Investigation and Main Implications for Prebiotic Chemistry in Space. <i>Lecture Notes in Computer Science</i> , 2018 , 773-782	0.9	3
133	Observation of H displacement and H ₂ elimination channels in the reaction of O(3P) with 1-butene from crossed beams and theoretical studies. <i>Chemical Physics Letters</i> , 2017 , 683, 105-111	2.5	11

132	The astrochemical observatory: Computational and theoretical focus on molecular chirality changing torsions around O σ and S σ bonds 2017 ,		6
131	Crossed beam polyatomic reaction dynamics: recent advances and new insights. <i>Chemical Society Reviews</i> , 2017 , 46, 7517-7547	58.5	52
130	The Astrochemical Observatory: Experimental and Computational Focus on the Chiral Molecule Propylene Oxide as a Case Study. <i>Lecture Notes in Computer Science</i> , 2017 , 267-280	0.9	12
129	Reaction Dynamics of O(3 P) + Propyne: II. Primary Products, Branching Ratios, and Role of Intersystem Crossing from Ab Initio Coupled Triplet/Singlet Potential Energy Surfaces and Statistical Calculations. <i>Journal of Physical Chemistry A</i> , 2016 , 120, 4619-33	2.8	21
128	Isomer-Specific Chemistry in the Propyne and Allene Reactions with Oxygen Atoms: CH ₃ CH + CO versus CH ₂ CH ₂ + CO Products. <i>Journal of Physical Chemistry Letters</i> , 2016 , 7, 1010-5	6.4	17
127	Reaction Dynamics of O(3 P) + Propyne: I. Primary Products, Branching Ratios, and Role of Intersystem Crossing from Crossed Molecular Beam Experiments. <i>Journal of Physical Chemistry A</i> , 2016 , 120, 4603-18	2.8	17
126	Reaction dynamics of oxygen atoms with unsaturated hydrocarbons from crossed molecular beam studies: primary products, branching ratios and role of intersystem crossing. <i>International Reviews in Physical Chemistry</i> , 2015 , 34, 161-204	7	35
125	Crossed Molecular Beams and Quasiclassical Trajectory Surface Hopping Studies of the Multichannel Nonadiabatic O(3 P) + Ethylene Reaction at High Collision Energy. <i>Journal of Physical Chemistry A</i> , 2015 , 119, 12498-511	2.8	42
124	Experimental and Theoretical Studies on the Dynamics of the O(3 P) + Propene Reaction: Primary Products, Branching Ratios, and Role of Intersystem Crossing. <i>Journal of Physical Chemistry C</i> , 2015 , 119, 14632-14652	3.8	52
123	A combined crossed molecular beam and quasiclassical trajectory study of the Titan-relevant N(2 D) + D ₂ O reaction. <i>Molecular Physics</i> , 2015 , 113, 2296-2301	1.7	8
122	A combined crossed molecular beams and theoretical study of the reaction CN + C ₂ H ₄ . <i>Chemical Physics</i> , 2015 , 449, 34-42	2.3	11
121	Relevance of the Channel Leading to Formaldehyde + Triplet Ethylidene in the O(3 P) + Propene Reaction under Combustion Conditions. <i>Journal of Physical Chemistry Letters</i> , 2014 , 5, 4213-8	6.4	43
120	Dynamics of the O(3 P) + C ₂ H ₂ reaction from crossed molecular beam experiments with soft electron ionization detection. <i>Physical Chemistry Chemical Physics</i> , 2014 , 16, 10008-22	3.6	27
119	Quasiclassical Trajectory Calculations of the N(2 D) + H ₂ O Reaction Elucidating the Formation Mechanism of HNO and HON Seen in Molecular Beam Experiments. <i>Journal of Physical Chemistry Letters</i> , 2014 , 5, 3508-13	6.4	16
118	Reaction dynamics and relative yields of the H- and CH ₃ -displacement channels in the O + CH ₃ CCH reaction. <i>Chemical Physics Letters</i> , 2014 , 602, 58-62	2.5	15
117	A Theoretical Study of Formation Routes and Dimerization of Methanimine and Implications for the Aerosols Formation in the Upper Atmosphere of Titan. <i>Lecture Notes in Computer Science</i> , 2013 , 47-56	0.9	14
116	CRITICAL REVIEW OF N, N + , N + 2 , N ++ , And N ++ 2 MAIN PRODUCTION PROCESSES AND REACTIONS OF RELEVANCE TO TITAN'S ATMOSPHERE. <i>Astrophysical Journal, Supplement Series</i> , 2013 , 204, 20	8	89
115	Chemistry. Uncloaking the quantum nature of inelastic molecular collisions. <i>Science</i> , 2013 , 341, 1076-7	33.3	11

114	Combined crossed beam and theoretical studies of the C(1D) + CH ₄ reaction. <i>Journal of Chemical Physics</i> , 2013 , 138, 024311	3.9	36
113	Primary Products and Branching Ratios for Combustion Multi-Channel Bimolecular Reactions from Crossed Molecular Beam Studies. <i>Green Energy and Technology</i> , 2013 , 577-606	0.6	3
112	A crossed beam study of the reaction CN + C ₂ H ₄ at a high collision energy: The opening of a new reaction channel. <i>Chemical Physics Letters</i> , 2012 , 553, 1-5	2.5	16
111	Experimental and theoretical studies of the O(3P) + C ₂ H ₄ reaction dynamics: collision energy dependence of branching ratios and extent of intersystem crossing. <i>Journal of Chemical Physics</i> , 2012 , 137, 22A532	3.9	46
110	Combined crossed beam and theoretical studies of the N(2D) + C ₂ H ₄ reaction and implications for atmospheric models of Titan. <i>Journal of Physical Chemistry A</i> , 2012 , 116, 10467-79	2.8	42
109	Crossed Molecular Beam Dynamics Studies of the O(3P) + Allene Reaction: Primary Products, Branching Ratios, and Dominant Role of Intersystem Crossing. <i>Journal of Physical Chemistry Letters</i> , 2012 , 3, 75-80	6.4	41
108	Intersystem crossing and dynamics in O(3P) + C ₂ H ₄ multichannel reaction: experiment validates theory. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012 , 109, 9733-8	11.5	86
107	Crossed molecular beam studies of bimolecular reactions of relevance in combustion. <i>Energy</i> , 2012 , 43, 47-54	7.9	25
106	The last mile of molecular reaction dynamics virtual experiments: the case of the OH(N = 1-10) + CO(j = 0-3) reaction. <i>Faraday Discussions</i> , 2012 , 157, 415-36; discussion 475-500	3.6	23
105	Theoretical Study of Reactions Relevant for Atmospheric Models of Titan: Interaction of Excited Nitrogen Atoms with Small Hydrocarbons. <i>Lecture Notes in Computer Science</i> , 2012 , 331-344	0.9	19
104	Crossed molecular beam studies of astronomically relevant bimolecular reactions. <i>Rendiconti Lincei</i> , 2011 , 22, 173-181	1.7	3
103	Crossed-beam dynamics studies of the radical-radical combustion reaction O((3)P) + CH ₃ (methyl). <i>Physical Chemistry Chemical Physics</i> , 2011 , 13, 8322-30	3.6	17
102	Low temperature kinetics, crossed beam dynamics and theoretical studies of the reaction S((1)D) + CH ₄ and low temperature kinetics of S((1)D) + C ₂ H ₂ . <i>Physical Chemistry Chemical Physics</i> , 2011 , 13, 8485-501	3.6	25
101	An Extension of the Molecular Simulator GEMS to Calculate the Signal of Crossed Beam Experiments. <i>Lecture Notes in Computer Science</i> , 2011 , 453-465	0.9	13
100	Crossed-beam universal-detection reactive scattering of radical beams characterized by laser-induced-fluorescence: the case of C ₂ and CN. <i>Molecular Physics</i> , 2010 , 108, 1097-1113	1.7	34
99	Formation of nitriles and imines in the atmosphere of Titan: combined crossed-beam and theoretical studies on the reaction dynamics of excited nitrogen atoms N(2D) with ethane. <i>Faraday Discussions</i> , 2010 , 147, 189-216; discussion 251-82	3.6	64
98	Dynamics of the C(1D)+H ₂ reaction: A comparison of crossed molecular beam experiments with quantum mechanical and quasiclassical trajectory calculations on the first two singlet (11A? and 11A?) potential energy surfaces. <i>Molecular Physics</i> , 2010 , 108, 373-380	1.7	28
97	Combined crossed molecular beam and theoretical studies of the N(2D) + CH ₄ reaction and implications for atmospheric models of Titan. <i>Journal of Physical Chemistry A</i> , 2009 , 113, 11138-52	2.8	76

96	Probing the dynamics of polyatomic multichannel elementary reactions by crossed molecular beam experiments with soft electron-ionization mass spectrometric detection. <i>Physical Chemistry Chemical Physics</i> , 2009 , 11, 46-65	3.6	86
95	Observation of organosulfur products (thiovinoyl, thioketene and thioformyl) in crossed-beam experiments and low temperature rate coefficients for the reaction S(1D) + C ₂ H ₄ . <i>Physical Chemistry Chemical Physics</i> , 2009 , 11, 4701-6	3.6	31
94	Crossed-beam dynamics, low-temperature kinetics, and theoretical studies of the reaction S(1D) + C ₂ H ₄ . <i>Journal of Physical Chemistry A</i> , 2009 , 113, 15328-45	2.8	34
93	Crossed-beam and theoretical studies of the S(1D) + C ₂ H ₂ reaction. <i>Journal of Physical Chemistry A</i> , 2009 , 113, 4330-9	2.8	27
92	His arrows and his targets: a tribute to Vincenzo Aquilanti. <i>Journal of Physical Chemistry A</i> , 2009 , 113, 14181-3	2.8	2
91	Beyond the Lennard-Jones model: a simple and accurate potential function probed by high resolution scattering data useful for molecular dynamics simulations. <i>Physical Chemistry Chemical Physics</i> , 2008 , 10, 5489-503	3.6	211
90	Unraveling the dynamics of the C(3P,1D) + C ₂ H ₂ reactions by the crossed molecular beam scattering technique. <i>Journal of Physical Chemistry A</i> , 2008 , 112, 1363-79	2.8	51
89	The extent of non-Born-Oppenheimer coupling in the reaction of Cl(2P) with para-H ₂ . <i>Science</i> , 2008 , 322, 573-6	33.3	88
88	Crossed molecular beam studies of C(3P,1D) and C ₂ (X ¹ g _g ,a ³ u) reactions with acetylene. <i>Physica Scripta</i> , 2008 , 78, 058117	2.6	8
87	Crossed molecular beam study of gas phase reactions relevant to the chemistry of planetary atmospheres: The case of C ₂ +C ₂ H ₂ . <i>Planetary and Space Science</i> , 2008 , 56, 1658-1673	2	28
86	Crossed beam studies of radical-radical reactions: O(3P) + C ₃ H ₅ (allyl). <i>Physical Chemistry Chemical Physics</i> , 2007 , 9, 1307-11	3.6	31
85	Gas-phase reactions in extraterrestrial environments: laboratory investigations by crossed molecular beams. <i>Origins of Life and Evolution of Biospheres</i> , 2006 , 36, 443-50	1.5	6
84	Crossed molecular beam reactive scattering: from simple triatomic to multichannel polyatomic reactions. <i>International Reviews in Physical Chemistry</i> , 2006 , 25, 109-163	7	89
83	Experimental and theoretical differential cross sections for the N(2D) + H ₂ reaction. <i>Journal of Physical Chemistry A</i> , 2006 , 110, 817-29	2.8	91
82	Crossed-beam studies on the dynamics of the C + C ₂ H ₂ interstellar reaction leading to linear and cyclic C ₃ H + H and C ₃ + H ₂ . <i>Faraday Discussions</i> , 2006 , 133, 157-76; discussion 191-230, 449-52	3.6	34
81	Neutral-Neutral Gas-Phase Reactions In Extraterrestrial Environments: Laboratory Investigations By Crossed Molecular Beams. <i>AIP Conference Proceedings</i> , 2006 ,	0	5
80	Dynamics of the O(3P) + C ₂ H ₄ reaction: identification of five primary product channels (vinoyl, acetyl, methyl, methylene, and ketene) and branching ratios by the crossed molecular beam technique with soft electron ionization. <i>Journal of Physical Chemistry A</i> , 2005 , 109, 3527-30	2.8	72
79	Dynamics of the C(1D)+D ₂ reaction: a comparison of crossed molecular-beam experiments with quasiclassical trajectory and accurate statistical calculations. <i>Journal of Chemical Physics</i> , 2005 , 122, 2343-09	3.9	64

78	Dynamics of the O(1D) D2 reaction: A comparison between crossed molecular beam experiments and quasiclassical trajectory calculations on the lowest three potential energy surfaces. <i>Molecular Physics</i> , 2005 , 103, 1703-1714	1.7	24
77	Crossed beam studies of the reactions of atomic oxygen in the ground 3P and first electronically excited 1D states with hydrogen sulfide. <i>Journal of Chemical Physics</i> , 2004 , 120, 9571-82	3.9	30
76	Dynamics of the insertion reaction C(1D) + H2: A comparison of crossed molecular beam experiments with quasiclassical trajectory and quantum mechanical scattering calculations. <i>Physical Chemistry Chemical Physics</i> , 2004 , 6, 4957-4967	3.6	69
75	Soft electron impact ionization in crossed molecular beam reactive scattering: the dynamics of the O((3)P)+C(2)H(2) reaction. <i>Journal of Chemical Physics</i> , 2004 , 120, 4557-60	3.9	62
74	Onsager Heat of Transport Measured at the n-Heptanol Liquid/Vapor Interface. <i>Journal of Physical Chemistry B</i> , 2004 , 108, 2681-2685	3.4	14
73	The dynamics of the prototype abstraction reaction Cl(2P3/2,1/2) + H2: A comparison of crossed molecular beam experiments with exact quantum scattering calculations on coupled ab initio potential energy surfaces. <i>Physical Chemistry Chemical Physics</i> , 2004 , 6, 5007	3.6	36
72	CROSSED MOLECULAR BEAM REACTIVE SCATTERING: TOWARDS UNIVERSAL PRODUCT DETECTION BY SOFT ELECTRON-IMPACT IONIZATION. <i>Advanced Series in Physical Chemistry</i> , 2004 , 329-381		4
71	Differential cross sections from quantum calculations on coupled Ab initio potential energy surfaces and scattering experiments for Cl(2P)+H2 reactions. <i>Physical Review Letters</i> , 2003 , 91, 013201	7.4	54
70	Combined crossed-beam studies of C(3PJ)+C2H4->C3H3+H reaction dynamics between 0.49 and 30.8 kJ mol ⁻¹ . <i>Journal of Chemical Physics</i> , 2003 , 119, 10607-10617	3.9	38
69	Dynamics of the C+C2H2 reaction from differential and integral cross-section measurements in crossed-beam experiments. <i>Journal of Chemical Physics</i> , 2002 , 116, 5603-5611	3.9	34
68	C + C2H2: A Key Reaction in Interstellar Chemistry. <i>Journal of Physical Chemistry A</i> , 2002 , 106, 5541-5552	2.8	73
67	Quantum effects in the differential cross sections for the insertion reaction N(2D) + H2. <i>Physical Review Letters</i> , 2002 , 89, 013201	7.4	98
66	Experimental and theoretical differential cross sections for the reactions Cl+H2/D2. <i>Journal of Chemical Physics</i> , 2001 , 114, 10662-10672	3.9	52
65	Crossed beam studies of elementary reactions of N and C atoms and CN radicals of importance in combustion. <i>Faraday Discussions</i> , 2001 , 27-49; discussion 121-43	3.6	55
64	Dynamics of the N(2D) + D2 Reaction from Crossed-Beam and Quasiclassical Trajectory Studies. <i>Journal of Physical Chemistry A</i> , 2001 , 105, 2414-2422	2.8	46
63	A crossed-beam study of the reaction C(1D)+H2(X1Σ ⁺ , v=0)->CH(X2Σ ⁺ , v?) + H(2S). <i>Chemical Physics Letters</i> , 2000 , 327, 197-202	2.5	59
62	Dynamics of the Cl+D2 reaction: a comparison of crossed molecular beam experiments with quasi-classical trajectory calculations on a new ab initio potential energy surface. <i>Chemical Physics Letters</i> , 2000 , 328, 500-508	2.5	31
61	Cyanomethylene Formation from the Reaction of Excited Nitrogen Atoms with Acetylene: A Crossed Beam and ab Initio Study. <i>Journal of the American Chemical Society</i> , 2000 , 122, 4443-4450	16.4	57

60	Comparative dynamics of Cl(2P) and O(3P) interactions with a hydrocarbon surface. <i>Journal of Chemical Physics</i> , 2000 , 112, 5975-5984	3.9	90
59	Chemical reaction dynamics with molecular beams. <i>Reports on Progress in Physics</i> , 2000 , 63, 355-414	14.4	228
58	Dynamics of the Cl+H ₂ /D ₂ reaction: a comparison of crossed molecular beam experiments with quasiclassical trajectory and quantum mechanical calculations. <i>Physical Chemistry Chemical Physics</i> , 2000 , 2, 599-612	3.6	43
57	Statistical treatment of recoil energy and angular distributions in the products of the reactions O(1D, 3P)+ICH ₃ -OI+CH ₃ . <i>Physical Chemistry Chemical Physics</i> , 2000 , 2, 741-745	3.6	4
56	Observation of Nitrogen-Bearing Organic Molecules from Reactions of Nitrogen Atoms with Hydrocarbons: A Crossed Beam Study of N(2D) + Ethylene. <i>Journal of Physical Chemistry A</i> , 2000 , 104, 5655-5659	2.8	62
55	Exploring the reaction dynamics of nitrogen atoms: A combined crossed beam and theoretical study of N(2D)+D ₂ -kID+D. <i>Journal of Chemical Physics</i> , 1999 , 110, 8857-8860	3.9	85
54	Crossed-beam studies of reaction dynamics. <i>Annual Review of Physical Chemistry</i> , 1999 , 50, 347-76	15.7	89
53	Reactive Scattering of Oxygen and Nitrogen Atoms. <i>Accounts of Chemical Research</i> , 1999 , 32, 503-511	24.3	67
52	Crossed beam studies of the O(3P,1D)+CH ₃ I reactions: Direct evidence of intersystem crossing. <i>Faraday Discussions</i> , 1999 , 113, 133-150	3.6	28
51	Crossed molecular beams and quasiclassical trajectory studies of the reaction O(1D)+H ₂ (D ₂). <i>Journal of Chemical Physics</i> , 1998 , 108, 6698-6708	3.9	82
50	Magnetic Analysis of Supersonic Beams of Atomic Oxygen, Nitrogen, and Chlorine Generated from a Radio-Frequency Discharge. <i>Israel Journal of Chemistry</i> , 1997 , 37, 329-342	3.4	81
49	Reactive scattering of ground-state and electronically excited oxygen atoms on a liquid hydrocarbon surface. <i>Faraday Discussions</i> , 1997 , 108, 387-399	3.6	60
48	Differential Scattering Cross Sections for HeCl ₂ , NeCl ₂ , and ArCl ₂ : Multiproperty Fits of the Potential Energy Surfaces. <i>Journal of Physical Chemistry A</i> , 1997 , 101, 6528-6537	2.8	24
47	A Crossed Molecular Beam Study of the Reaction O(1D) + HI -kO + H. <i>Journal of Physical Chemistry A</i> , 1997 , 101, 6455-6462	2.8	15
46	REACTIVE SCATTERING OF O(3P, 1D), Cl(2P) AND OH RADICALS. <i>Advanced Series in Physical Chemistry</i> , 1996 , 365-437		9
45	Dynamics of the Simplest Chlorine Atom Reaction: An Experimental and Theoretical Study. <i>Science</i> , 1996 , 273, 1519-1522	33.3	92
44	The dynamics of the reaction OH + D ₂ -kOD + D: Crossed beam experiments and quantum mechanical scattering calculations on ab initio potential energy surfaces. <i>Chemical Physics</i> , 1996 , 207, 389-409	2.3	102
43	On the dynamics of the O(1D) + CF ₃ Br reaction. <i>Chemical Physics Letters</i> , 1996 , 258, 323-329	2.5	28

42	The HeCl ₂ potential: Atom-atom and ab initio compared to experiment. <i>Journal of Chemical Physics</i> , 1995 , 102, 8846-8854	3.9	52
41	Reactive scattering of atoms and radicals. <i>Journal of the Chemical Society, Faraday Transactions</i> , 1995 , 91, 575		124
40	The dynamics of the reaction of O(1D) with HBr studied by crossed molecular beams and time-resolved Fourier transform spectroscopy. <i>Canadian Journal of Chemistry</i> , 1994 , 72, 888-902	0.9	27
39	Reaction dynamics of O(3p), O(1D) and OH(2 Σ) with simple molecules 1993 , 1-63		3
38	Crossed beam studies of four-atom reactions: The dynamics of OH+D ₂ . <i>Journal of Chemical Physics</i> , 1993 , 98, 2459-2462	3.9	75
37	The HeCl ₂ potential: A combined scattering-spectroscopic study. <i>Journal of Chemical Physics</i> , 1993 , 98, 178-185	3.9	48
36	Crossed beam studies of four-atom reactions: The dynamics of OH+CO. <i>Journal of Chemical Physics</i> , 1993 , 98, 8341-8344	3.9	121
35	Multiproperty determination of a new N ₂ -Ar intermolecular interaction potential energy surface. <i>Journal of Chemical Physics</i> , 1993 , 98, 7926-7939	3.9	68
34	The enthalpy of formation of the HSO radical. <i>Chemical Physics Letters</i> , 1993 , 211, 469-472	2.5	32
33	Dynamics of the reaction O(1D) + HCl -> ClO + H from crossed-beam experiments. <i>Chemical Physics Letters</i> , 1991 , 180, 34-40	2.5	68
32	The effect of reagent electronic energy on the dynamics of chemical reactions: A high-resolution crossed beam study of O(3P,1D)+H ₂ S. <i>Journal of Chemical Physics</i> , 1991 , 94, 8611-8614	3.9	45
31	The NeO ₂ potential energy surface from high-resolution diffraction and glory scattering experiments and from the Zeeman spectrum. <i>Journal of Chemical Physics</i> , 1991 , 95, 195-204	3.9	32
30	On the N ₂ He potential energy surface. <i>Journal of Chemical Physics</i> , 1991 , 95, 5827-5845	3.9	38
29	Classical trajectory calculation of transport and relaxation properties for N ₂ Ne mixtures. <i>Journal of Chemical Physics</i> , 1990 , 93, 4699-4712	3.9	18
28	Potential Energy Surfaces for Open Shell Species. <i>NATO ASI Series Series B: Physics</i> , 1990 , 123-141		
27	Improved potential energy surface for HeO ₂ . <i>Journal of Chemical Physics</i> , 1988 , 89, 4671-4679	3.9	60
26	The NeO ₂ potential energy surface from high-resolution total differential scattering experiments and a close-coupling and infinite-order-sudden analysis. <i>Journal of Chemical Physics</i> , 1988 , 89, 3505-3518	3.9	44
25	High Resolution Crossed Molecular Beam Studies of Van Der Waals Forces 1987 , 441-454		3

24	Observation of high frequency quantum oscillations in elastic differential cross sections: A critical test of the Ne-Ar interaction potential. <i>Journal of Chemical Physics</i> , 1986 , 84, 4828-4832	3.9	30
23	High-resolution total differential cross sections for scattering of helium by O ₂ , N ₂ , and NO. <i>Journal of Chemical Physics</i> , 1986 , 85, 7011-7029	3.9	100
22	Anisotropic intermolecular potentials for NO-Ar and NO-Kr from total differential cross section measurements. <i>Chemical Physics Letters</i> , 1984 , 112, 445-451	2.5	36
21	Reactive scattering of oxygen [O(3P)] with toluene. <i>Journal of the American Chemical Society</i> , 1984 , 106, 4108-4111	16.4	4
20	Rare gas-halogen atom interaction potentials from crossed molecular beams experiments: I(2P _{3/2})+Kr, Xe(1S ₀). <i>Journal of Chemical Physics</i> , 1982 , 77, 1878-1885	3.9	60
19	A quasiclassical trajectory test for a potential energy surface of the Li+HF reaction. <i>Journal of Chemical Physics</i> , 1982 , 77, 6341-6342	3.9	42
18	Atom-molecule interactions from multiproperty analysis. An integrated study of the dynamics for oxygen-rare-gas systems. <i>Faraday Discussions of the Chemical Society</i> , 1982 , 73, 257-273		22
17	Reactive scattering of O(1D) + H ₂ . <i>Chemical Physics Letters</i> , 1981 , 82, 386-391	2.5	108
16	Interaction potentials for Br(2P)+Ar, Kr, and Xe (1S) by the crossed molecular beams method. <i>Journal of Chemical Physics</i> , 1981 , 75, 710-721	3.9	49
15	A crossed molecular beam study of the O(1D ₂)+CH ₄ reaction. <i>Journal of Chemical Physics</i> , 1980 , 73, 6351-6352	3.9	51
14	Study of the reaction dynamics of Li+HF, HCl by the crossed molecular beams method. <i>Journal of Chemical Physics</i> , 1980 , 73, 2833-2850	3.9	130
13	A crossed molecular beams investigation of the reactions O(3P)+ C ₆ H ₆ , C ₆ D ₆ . <i>Journal of Chemical Physics</i> , 1980 , 72, 4341-4349	3.9	64
12	Decoupling approximations in the quantum mechanical treatment of P-state atom collisions. <i>Journal of Chemical Physics</i> , 1980 , 73, 1173-1180	3.9	82
11	Excitation of Cd(5 ³ P ₁) and Cd(5 ¹ P ₁) in Na+-Cd Collisions: Optical Polarization and Population of Magnetic Sublevels 1980 , 413-421		
10	Cross sections for excitation of Cd(5 ³ P ₁) and Cd(5 ¹ P ₁) and of their magnetic sublevels in Na+-Cd collisions. <i>Journal of Chemical Physics</i> , 1979 , 71, 3546-3547	3.9	12
9	Coupled-channel study of halogen (2P) + rare gas (1S) scattering. <i>Journal of Chemical Physics</i> , 1979 , 70, 5477-5488	3.9	58
8	Crossed molecular beam studies on the interaction potentials for F(2P) + Ne,Ar,Kr(1S). <i>Journal of Chemical Physics</i> , 1979 , 70, 2986-2990	3.9	56
7	Crossed molecular beam studies on the interaction potentials for Cl(2P) + Xe(1S). <i>Chemical Physics Letters</i> , 1979 , 61, 1-5	2.5	39

6	Crossed molecular beam studies on the interaction potential for F(2P)+Xe(1S). <i>Journal of Chemical Physics</i> , 1978 , 69, 2377	3.9	39
5	Excitation of Hg(6 3P1) by low energy alkali ion impact: Optical polarization and cross sections for magnetic sublevels. <i>Journal of Chemical Physics</i> , 1978 , 68, 1499-1510	3.9	17
4	Quantum-mechanical phase interference and optical polarization in low-energy Na+?Hg inelastic collisions. <i>Chemical Physics Letters</i> , 1977 , 47, 288-291	2.5	6
3	Cross sections for excitation of the potassium resonance doublet in collisions between potassium atoms and alkali ions. <i>Journal of Chemical Physics</i> , 1976 , 65, 5518-5521	3.9	18
2	Total inelastic cross sections for potassium ion-atom collisions: Oscillations in the velocity dependence and correlation with molecular structure. <i>Journal of Chemical Physics</i> , 1976 , 64, 751-759	3.9	26
1	Combined crossed molecular beams and computational study on the N(2D) + HCCCN(X1 Σ) reaction and implications for extra-terrestrial environments. <i>Molecular Physics</i> , e1948126	1.7	3