

Robin Walsh

List of Publications by Year in descending order

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101
papers

3,472
citations

185998

28
h-index

161609

54
g-index

106
all docs

106
docs citations

106
times ranked

1661
citing authors

#	ARTICLE	IF	CITATIONS
1	Bond dissociation energy values in silicon-containing compounds and some of their implications. <i>Accounts of Chemical Research</i> , 1981, 14, 246-252.	7.6	786
2	Thermal unimolecular reactions of hydrocarbons. <i>Chemical Reviews</i> , 1969, 69, 103-124.	23.0	218
3	Quantitative assessment of antioxidant properties of natural colorants and phytochemicals: carotenoids, flavonoids, phenols and indigoids. The role of β -carotene in antioxidant functions. <i>Journal of the Science of Food and Agriculture</i> , 2001, 81, 559-568.	1.7	200
4	Prototype Si-H insertion reaction of silylene with silane. Absolute rate constants, temperature dependence, RRKM modelling and the potential-energy surface. <i>Journal of the Chemical Society, Faraday Transactions</i> , 1995, 91, 2723-2732.	1.7	87
5	Thermochemistry of silicon-containing compounds. Part 1. "Silicon-halogen compounds, an evaluation. <i>Journal of the Chemical Society Faraday Transactions I</i> , 1983, 79, 2233.	1.0	70
6	The Prototype Ge-H Insertion Reaction of Germylene with Germane. Absolute Rate Constants, Temperature Dependence, RRKM Modeling and the Potential Energy Surface. <i>Journal of the American Chemical Society</i> , 1998, 120, 12657-12665.	6.6	64
7	What have we learnt about heavy carbenes through laser flash photolysis studies?. <i>Physical Chemistry Chemical Physics</i> , 2007, 9, 2817.	1.3	61
8	The cyclopropene pyrolysis story. <i>Chemical Society Reviews</i> , 2005, 34, 714.	18.7	58
9	Kinetics of the gas-phase reaction between iodine and monosilane and the bond dissociation energy $D(\text{H}_3\text{Si}\cdot\text{H})$. <i>International Journal of Chemical Kinetics</i> , 1981, 13, 503-514.	1.0	51
10	Absolute rate constants for the gas-phase reactions of silylene with silane, disilane and the methylsilanes. <i>Journal of the Chemical Society, Faraday Transactions</i> , 1990, 86, 27.	1.7	50
11	Gas phase pyrolysis of cyclopropene. Part 1. "Kinetics and mechanism. <i>Journal of the Chemical Society Faraday Transactions I</i> , 1978, 74, 1146.	1.0	46
12	An investigation of the prototype germylene addition reaction, $\text{GeH}_2 + \text{C}_2\text{H}_4$: Time-resolved gas-phase kinetic studies and quantum chemical calculations of the reaction energy surface. <i>Physical Chemistry Chemical Physics</i> , 2002, 4, 5079-5087.	1.3	46
13	Gas phase kinetics of pyrolysis of 1-methylcyclopropene. <i>Chemische Berichte</i> , 1985, 118, 3579-3587.	0.2	44
14	On the Question of Cyclopropylidene Intermediates in Cyclopropene-to-Allene Rearrangements of Tetrakis(trimethylsilyl)cyclopropene, 3-Alkenyl-1,2,3-tris(trimethylsilyl)cyclopropenes, and Related Model Compounds. <i>European Journal of Organic Chemistry</i> , 2001, 2001, 663-680.	1.2	41
15	The insertion reaction of germylene into the Si-H bond of silane: absolute rate constants, temperature dependence, RRKM modelling, and quantum chemical (ab initio and DFT) calculations. <i>Physical Chemistry Chemical Physics</i> , 2001, 3, 184-192.	1.3	39
16	Kinetics of the gas-phase reaction between iodine and monogermane and the bond dissociation energy $D(\text{H}_3\text{Ge}\cdot\text{H})$. <i>International Journal of Chemical Kinetics</i> , 1983, 15, 547-560.	1.0	38
17	Time-resolved gas-phase kinetic study of the reaction of germylene with propene over the temperature range 293-415 K: the thermal stabilities of germiranes. <i>Journal of Organometallic Chemistry</i> , 2001, 636, 49-55.	0.8	38
18	Germanium-hydrogen bond strengths in germanes. <i>Journal of the American Chemical Society</i> , 1982, 104, 4717-4718.	6.6	37

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19	Absolute rate measurements for some gas-phase addition reactions of dimethylsilylene. <i>Journal of the Chemical Society, Faraday Transactions 2</i> , 1988, 84, 515.	1.1	37
20	Investigation of the Prototype Silylene Reaction, SiH ₂ + H ₂ O (and D ₂ O): A Time-Resolved Gas-Phase Kinetic Studies, Isotope Effects, RRKM Calculations, and Quantum Chemical Calculations of the Reaction Energy Surface. <i>Journal of Physical Chemistry A</i> , 2003, 107, 11049-11056.	1.1	36
21	Concerning the kinetics and mechanism of allene to methylacetylene isomerisation. <i>Journal of the Chemical Society Faraday Transactions I</i> , 1976, 72, 2137.	1.0	34
22	Cyclic alkyl radical isomerization: A correction to the literature. <i>International Journal of Chemical Kinetics</i> , 1970, 2, 71-74.	1.0	32
23	The kinetics of the Diels-Alder addition of cyclopentadiene to acetylene and the decomposition of norbornadiene. <i>International Journal of Chemical Kinetics</i> , 1975, 7, 319-329.	1.0	32
24	A gas-phase kinetic study of the reaction of germylene with trimethylsilane: absolute rate constants, temperature dependence and mechanism. <i>Physical Chemistry Chemical Physics</i> , 1999, 1, 5301-5304.	1.3	31
25	Reactions of Silylene with Unreactive Molecules. I: Carbon Dioxide; Gas-Phase Kinetic and Theoretical Studies. <i>Journal of Physical Chemistry A</i> , 2002, 106, 4922-4927.	1.1	31
26	Direct Detection of Dimethylstannylene and Tetramethyldistannene in Solution and the Gas Phase by Laser Flash Photolysis of 1,1-Dimethylstannacyclopent-3-enes. <i>Journal of the American Chemical Society</i> , 2005, 127, 17469-17478.	6.6	31
27	Silylene Does React with Carbon Monoxide: Some Gas-Phase Kinetic and Theoretical Studies. <i>Journal of Physical Chemistry A</i> , 2001, 105, 1897-1903.	1.1	30
28	Time-resolved gas-phase kinetic and quantum chemical studies of the reaction of silylene with oxygen. <i>Physical Chemistry Chemical Physics</i> , 2005, 7, 2900.	1.3	30
29	Gas-Phase Kinetics of Pyrolysis of 3,3-Dimethylcyclopropene and Its Trimethylsilyl Derivative The Effect of Silyl Substitution on Cyclopropene Isomerisation. <i>Chemische Berichte</i> , 1989, 122, 637-642.	0.2	29
30	Experimental and Theoretical Evidence for Homogeneous Catalysis in the Gas-Phase Reaction of SiH ₂ with H ₂ O (and D ₂ O): A Combined Kinetic and Quantum Chemical Study. <i>Journal of the American Chemical Society</i> , 2004, 126, 6816-6824.	6.6	29
31	Absolute rate constants for the reactions of germylene and dimethylgermylene with dimethylgermane: the deactivating effect of methyl groups in heavy carbenes. <i>Chemical Physics Letters</i> , 2002, 351, 47-52.	1.2	28
32	Kinetic studies of reactions of organosilylenes: what have they taught us?. <i>Dalton Transactions</i> , 2010, 39, 9217.	1.6	28
33	Time-Resolved Studies of the Kinetics of the Reactions of CHO with HI and HBr: Thermochemistry of the CHO Radical and the C-H Bond Strengths in CH ₂ O and CHO. <i>Journal of Physical Chemistry A</i> , 1997, 101, 4185-4190.	1.1	27
34	Direct time-resolved study of the kinetics of the gas-phase reaction of germylene with triethylgermane: a negative activation energy for the Ge-H insertion process. <i>Mendeleev Communications</i> , 1997, 7, 87-88.	0.6	27
35	A gas-phase kinetic study of the reaction of silylene with germane: absolute rate constants, temperature dependence and mechanism. <i>Journal of the Chemical Society, Faraday Transactions</i> , 1998, 94, 3569-3572.	1.7	27
36	An investigation of the germylene addition reaction, GeH ₂ +C ₂ H ₂ : Time-resolved gas-phase kinetic studies and quantum chemical calculations of the reaction energy surface. <i>Physical Chemistry Chemical Physics</i> , 2004, 6, 3370-3382.	1.3	27

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37	Thermochemical kinetics: a success story. <i>The Journal of Physical Chemistry</i> , 1986, 90, 389-394.	2.9	25
38	Time-resolved studies of the temperature dependence of gas-phase insertion reactions of phenylsilylene with silicon-hydrogen bonds. <i>The Journal of Physical Chemistry</i> , 1990, 94, 3294-3297.	2.9	25
39	First Gas-Phase Detection of Dimethylstannylene and Time-Resolved Study of Some of Its Reactions. <i>Journal of the American Chemical Society</i> , 2002, 124, 7555-7562.	6.6	24
40	Time-resolved gas-phase kinetic study of the germylene addition reaction, $\text{GeH}_2 + \text{C}_2\text{D}_4$, as a function of temperature and pressure: isotope effects and mechanistic complexities. <i>Physical Chemistry Chemical Physics</i> , 2002, 4, 6001-6005.	1.3	24
41	The insertion of germylene into the $\text{H}-\text{H}$ bond; rate constant limits and thermochemistry. Ab initio and DFT calculations on the reactions of GeH_2 and SiH_2 with H_2 . <i>Canadian Journal of Chemistry</i> , 2000, 78, 1428-1433.	0.6	24
42	The enthalpy of formation of bicyclo[2,2,1]hepta-2,5-diene thermodynamic functions of bicyclo[2,2,1]heptane and bicyclo[2,2,1]hepta-2,5-diene. <i>Journal of Chemical Thermodynamics</i> , 1975, 7, 149-154.	1.0	23
43	The formation of C_3H_3 (propynyl) radicals in the reaction of $\text{CH}_2(1A_1)$ with acetylene. <i>International Journal of Chemical Kinetics</i> , 1984, 16, 1103-1110.	1.0	23
44	Time-resolved gas-phase kinetic studies of the reactions of silylene with disilane and trisilane. <i>Journal of Organometallic Chemistry</i> , 1996, 521, 343-349.	0.8	23
45	Silylene Does React with Carbon Monoxide. <i>Journal of the American Chemical Society</i> , 2000, 122, 3246-3247.	6.6	22
46	Thermal Rearrangements of Bicyclopropylidene and Substituted Bicyclopropylidenes - A Gas Phase Kinetic and Product Study. <i>European Journal of Organic Chemistry</i> , 2001, 2001, 3607.	1.2	22
47	Time-resolved studies of the temperature dependence of the gas-phase reactions of methylsilylene with silane and the methylsilanes. <i>Journal of the Chemical Society, Faraday Transactions</i> , 1993, 89, 411.	1.7	21
48	Kinetics of the gas-phase reaction between iodine and trimethylgermane and the bond dissociation energy $D(\text{Me}_3\text{Ge}-\text{H})$. <i>The Journal of Physical Chemistry</i> , 1979, 83, 578-581.	2.9	20
49	Pressure-dependent isotope effect in the reaction of silylene ($\text{SiH}_2, 1A_1$) with acetylene and $[\text{2H}_2]\text{acetylene}$. <i>Journal of the Chemical Society Chemical Communications</i> , 1993, , 1050.	2.0	20
50	Direct Time-Resolved Study of the Gas-Phase Reactions of Germylene with Ethyl- and Diethylgermane: Absolute Rate Constants, Temperature Dependences, and Mechanism. <i>Journal of Physical Chemistry A</i> , 2007, 111, 1434-1440.	1.1	20
51	Gas-Phase Kinetics of the Pyrolysis of Some 3,3-Dimethyl-1-(trimethylsilyl)cyclopropenes - Unexpected Product Distribution in the Cyclopropene Rearrangement. <i>Chemische Berichte</i> , 1994, 127, 237-245.	0.2	19
52	Gas-Phase Kinetic and Mechanistic Studies of some Interconverting Alkylcyclopropene Pairs: Involvement of Dialkylvinylidene Intermediates and Their Quantitative Behaviour. <i>Chemistry - A European Journal</i> , 2000, 6, 1963-1979.	1.7	19
53	Time-Resolved Gas-Phase Kinetic and Quantum Chemical Studies of Reactions of Silylene with Chlorine-Containing Species. 1. HCl . <i>Journal of Physical Chemistry A</i> , 2004, 108, 3987-3993.	1.1	19
54	First Detection of Methylgermylene in the Gas Phase and Time-Resolved Study of Some of Its Reactions. <i>Organometallics</i> , 2006, 25, 4439-4443.	1.1	19

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55	The enthalpy of formation and thermodynamic functions of bicyclo[2,2,1]hept-2-ene. <i>Journal of Chemical Thermodynamics</i> , 1976, 8, 55-60.	1.0	18
56	Thermal Rearrangements, XIX. The Kinetics of the Thermal Isomerization of 1-ethynyl-2,2,3,3-tetramethylcyclopropane. <i>Chemische Berichte</i> , 1989, 122, 377-382.	0.2	18
57	Reactions of SiCl ₂ with N ₂ O, NO and O ₂ . <i>Physical Chemistry Chemical Physics</i> , 2003, 5, 5371.	1.3	18
58	The Addition Reaction between Silylene and Ethyne: Further Isotope Studies, Pressure Dependence Studies, and Quantum Chemical Calculations. <i>Journal of Physical Chemistry A</i> , 2008, 112, 8665-8677.	1.1	18
59	On the Substituent Effects of the Thermal Ethenylcyclopropane-to-Cyclopentene Rearrangement: Gas-Phase Kinetics of Ethoxy-, Methylthio- and Trimethylsilyl-Substituted Ethenylcyclopropanes. <i>European Journal of Organic Chemistry</i> , 2001, 2001, 3559-3573.	1.2	17
60	Thermochemical kinetics: does it still give insights?. <i>Chemical Society Reviews</i> , 2008, 37, 686.	18.7	17
61	Communication: The insertion of silylene in C-H bonds; rate constant limits and the energy barrier. <i>International Journal of Chemical Kinetics</i> , 1999, 31, 393-395.	1.0	16
62	The Gas-Phase Reaction of Silylene with Acetaldehyde. 2. Theoretical Calculations of Isotope Effects for SiH ₂ versus SiD ₂ Addition. <i>Journal of Physical Chemistry A</i> , 2002, 106, 11558-11564.	1.1	16
63	Time-Resolved Gas-Phase Kinetic and Quantum Chemical Studies of the Reaction of Silylene with Nitric Oxide. <i>Journal of Physical Chemistry A</i> , 2005, 109, 1071-1080.	1.1	16
64	Time-Resolved Gas-Phase Kinetic and Quantum Chemical Studies of Reactions of Silylene with Chlorine-Containing Species. 2. CH ₃ Cl. <i>Journal of Physical Chemistry A</i> , 2006, 110, 6680-6686.	1.1	16
65	The kinetics of pyrolysis of 1,3,3-trimethylcyclopropene. Evidence for the involvement of alkylidene carbenes in the thermal isomerisation of cyclopropenes. <i>Journal of the Chemical Society Chemical Communications</i> , 1992, , 421.	2.0	15
66	Alkyl Migration Aptitudes in the Vinylidene-Acetylene Rearrangement and Isotope Effect in the Vinylidene Formation Process from a Deuterium-Labeled Cyclopropene. <i>Angewandte Chemie - International Edition</i> , 1999, 38, 1128-1130.	7.2	15
67	The insertion of germylene into the H-H bond; rate constant limits and thermochemistry. Ab initio and DFT calculations on the reactions of GeH ₂ and SiH ₂ with H ₂ . <i>Canadian Journal of Chemistry</i> , 2000, 78, 1428-1433.	0.6	15
68	Thermal Behaviour of C ₈ H ₈ Hydrocarbons Gas-Phase Thermolysis of Cuneane, a New Example of a High-Strain Energy Release Process. <i>Chemische Berichte</i> , 1988, 121, 369-372.	0.2	14
69	Gas-Phase Kinetics of the Thermal Alkoxyvinylcyclopropane to Alkoxy-cyclopentene Rearrangement. <i>Chemische Berichte</i> , 1991, 124, 939-945.	0.2	14
70	A comparison of the reactivity of germylene and dimethylgermylene with some methylgermanes. Direct kinetic and quantum chemical studies. <i>Physical Chemistry Chemical Physics</i> , 2007, 9, 4395.	1.3	14
71	Some striking rate and migration effects of trimethylsilyl substituents on cyclopropene isomerisation. <i>Journal of the Chemical Society Chemical Communications</i> , 1992, , 422.	2.0	12
72	Evaluation of Data for Atmospheric Models: Master Equation/RRKM Calculations on the Combination Reaction, BrO + NO ₂ → BrONO ₂ , a Conundrum. <i>Journal of Physical Chemistry A</i> , 2008, 112, 3891-3897.	1.1	12

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73	Thermochemistry of germanium and organogermanium compounds. <i>Physical Chemistry Chemical Physics</i> , 2019, 21, 988-1008.	1.3	12
74	The photochemistry of methyl cyclobutyl ketone. Part 2. Temperature dependence and the acetyl radical decomposition. <i>International Journal of Chemical Kinetics</i> , 1987, 19, 997-1013.	1.0	11
75	Direct Study of a Nondegenerate Cyclopropene-to-Cyclopropene Isomerization. <i>Angewandte Chemie International Edition in English</i> , 1997, 36, 381-383.	4.4	11
76	The gas-phase reaction between silylene and 2-butyne: kinetics, isotope studies, pressure dependence studies and quantum chemical calculations. <i>Physical Chemistry Chemical Physics</i> , 2009, 11, 5331.	1.3	11
77	Time-Resolved Gas-Phase Kinetic, Quantum Chemical and RRKM Studies of Reactions of Silylene with Cyclic Ethers. <i>Journal of Physical Chemistry A</i> , 2010, 114, 784-793.	1.1	11
78	An experimental approach to the C ₈ H ₁₀ hypersurface. Kinetic and thermochemical investigations on a formally forbidden ground-state [2f + 2f] cycloaddition. <i>Chemische Berichte</i> , 1987, 120, 177-186.	0.2	10
79	Some Hazards of Electronegativity Correlations. <i>Journal of Physical Chemistry A</i> , 1997, 101, 8959-8963.	1.1	10
80	Gas-Phase Kinetics of Chlorosilylene Reactions. I. ClSiH + Me ₃ SiH: Absolute Rate Measurements and Theoretical Calculations for Prototype Si ⁺ H Insertion Reactions. <i>Journal of Physical Chemistry A</i> , 2009, 113, 5512-5518.	1.1	10
81	Kinetics of the gas-phase reaction between iodine and trifluorosilane and the bond dissociation energy D(F ₃ Si-H). <i>International Journal of Chemical Kinetics</i> , 1978, 10, 101-110.	1.0	8
82	The kinetics of secondary reactions in the iodination of monogermene. The effect of iodine substitution on the Ge-H bond dissociation energy. <i>International Journal of Chemical Kinetics</i> , 1983, 15, 561-568.	1.0	8
83	Reactions of Silylene with Unreactive Molecules. 2. Nitrogen: Gas-Phase Kinetic and Theoretical Studies. <i>Journal of Physical Chemistry A</i> , 2003, 107, 9588-9593.	1.1	8
84	The gas-phase reactions of SiCl ₄ and Si ₂ Cl ₆ with CH ₃ OH and C ₂ H ₅ OH: An investigation by mass spectrometry and matrix-isolation infrared spectroscopy. <i>Physical Chemistry Chemical Physics</i> , 2004, 6, 3264.	1.3	8
85	Thermal Isomerisations, XXIV. Gas Phase Kinetics of the Pyrolysis of Some 3,3-Dimethylcyclopropenes: Some Surprising Substituent Activation Effects and the Intramolecular Trapping of Vinylidene Intermediates. <i>Liebigs Annalen</i> , 1996, 1996, 825-835.	0.8	8
86	Time-resolved gas-phase kinetic study of the germylene addition reaction, GeH ₂ + CH ₃ C≡CCH ₃ . <i>Physical Chemistry Chemical Physics</i> , 2009, 11, 3539.	1.3	8
87	The Thermal Transformations of Bicyclopropylidene and MethyleneSpiropentane Revisited. <i>European Journal of Organic Chemistry</i> , 2007, 2007, 1510-1516.	1.2	7
88	The reaction between silylene and ammonia: Some gas-phase kinetic and quantum chemical studies. <i>Silicon Chemistry</i> , 2007, 3, 131-138.	0.8	7
89	Direct Time-Resolved Study of the Kinetics of the Reaction of Silylene with Phenylsilane in the Gas Phase. Does SiH ₂ React with the Aromatic Ring?. <i>Organometallics</i> , 2009, 28, 6339-6346.	1.1	7
90	Unusual Isotope Effect in the Reaction of Chlorosilylene with Trimethylsilane - <i>1</i> < i > d < / i >. Absolute Rate Studies and Quantum Chemical and Rice-Ramsperger-Kassel-Marcus Calculations Provide Strong Evidence for the Involvement of an Intermediate Complex. <i>Journal of the American Chemical Society</i> , 2012, 134, 10493-10501.	6.6	7

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91	Kinetic determination of the bond dissociation energy $D(\text{Me}_3\text{Ge}\text{---}\text{H})$ and its implications for bond strengths in germanes. <i>Journal of the Chemical Society Chemical Communications</i> , 1977, .	2.0	6
92	Direkte Beobachtung einer nicht entarteten Cyclopropen \rightleftharpoons Cyclopropen \rightleftharpoons Isomerisierung. <i>Angewandte Chemie</i> , 1997, 109, 415-417.	1.6	6
93	Time-resolved gas-phase kinetic study of the germylene addition reaction, $\text{GeH}_2 + \text{C}_2\text{D}_2$. <i>Physical Chemistry Chemical Physics</i> , 2010, 12, 2923.	1.3	6
94	Reaction of Germylene with Sulfur Dioxide: Gas-Phase Kinetic and Theoretical Studies. <i>Organometallics</i> , 2014, 33, 6493-6503.	1.1	6
95	Thermochemistry of Organosilicon Compounds. , 2017, , 79-113.		6
96	Dramatic Isotope Effect in the Reaction of ClSiH with Trimethylsilane-1-d: Experimental Evidence for Intermediate Complexes in Silylene $\text{Si}\text{---}\text{H}(\text{D})$ Insertion Reactions. <i>Organometallics</i> , 2011, 30, 4225-4227.	1.1	4
97	Thermal Rearrangements, XX ^[1] The Kinetics of Thermal Isomerisation of 4-Methyl-1,2,5-hexatriene in the Gas Phase. <i>Chemische Berichte</i> , 1992, 125, 711-721.	0.2	3
98	Gas-Phase Kinetics of Chlorosilylene Reactions II. $\text{ClSiH} + \text{C}_2\text{H}_4$: Absolute Rate Measurements and Quantum Chemical and RRKM Calculations for the Prototype I^{\ominus} Addition Reaction. <i>ChemPhysChem</i> , 2010, 11, 419-428.	1.0	3
99	Time-Resolved Gas-Phase Kinetic, Quantum Chemical, and RRKM Studies of the Reaction of Silylene with 2,5-Dihydrofuran. <i>Journal of Physical Chemistry A</i> , 2015, 119, 11241-11253.	1.1	2
100	Time-Resolved Gas-Phase Kinetic Study of $\text{SiD}_2 + \text{C}_2\text{H}_4$. <i>Journal of Physical Chemistry A</i> , 2018, 122, 4785-4789.	1.1	2
101	The Cyclopropene Pyrolysis Story. <i>ChemInform</i> , 2005, 36, no.	0.1	1