

Paul Seakins

List of Publications by Year in descending order

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94
papers

3,229
citations

126858

33
h-index

175177

52
g-index

122
all docs

122
docs citations

122
times ranked

2541
citing authors

#	ARTICLE	IF	CITATIONS
1	Kinetics of CH ₂ OO reactions with SO ₂ , NO ₂ , NO, H ₂ O and CH ₃ CHO as a function of pressure. <i>Physical Chemistry Chemical Physics</i> , 2014, 16, 1139-1149.	1.3	215
2	Kinetics and thermochemistry of R + hydrogen bromide. RH + bromine atom reactions: determinations of the heat of formation of ethyl, isopropyl, sec-butyl and tert-butyl radicals. <i>The Journal of Physical Chemistry</i> , 1992, 96, 9847-9855.	2.9	180
3	Direct evidence for a substantive reaction between the Criegee intermediate, CH ₂ OO, and the water vapour dimer. <i>Physical Chemistry Chemical Physics</i> , 2015, 17, 4859-4863.	1.3	155
4	Measurement and modelling of air pollution and atmospheric chemistry in the U.K. West Midlands conurbation: Overview of the PUMA Consortium project. <i>Science of the Total Environment</i> , 2006, 360, 5-25.	3.9	109
5	High levels of the hydroxyl radical in the winter urban troposphere. <i>Geophysical Research Letters</i> , 2004, 31, .	1.5	94
6	Interception of Excited Vibrational Quantum States by O ₂ in Atmospheric Association Reactions. <i>Science</i> , 2012, 337, 1066-1069.	6.0	90
7	Reporting the sensitivity of laser-induced fluorescence instruments used for HO ₂ detection to an interference from RO ₂ radicals and introducing a novel approach that enables HO ₂ and certain RO ₂ types to be selectively measured. <i>Atmospheric Measurement Techniques</i> , 2013, 6, 2425-2440.	1.2	77
8	The Essential Role for Laboratory Studies in Atmospheric Chemistry. <i>Environmental Science & Technology</i> , 2017, 51, 2519-2528.	4.6	75
9	Comparison of OH reactivity measurements in the atmospheric simulation chamber SAPHIR. <i>Atmospheric Measurement Techniques</i> , 2017, 10, 4023-4053.	1.2	74
10	Measurements of OH and HO ₂ yields from the gas phase ozonolysis of isoprene. <i>Atmospheric Chemistry and Physics</i> , 2010, 10, 1441-1459.	1.9	73
11	Direct studies on the decomposition of the tert-butoxy radical and its reaction with NO. <i>Physical Chemistry Chemical Physics</i> , 1999, 1, 73-80.	1.3	70
12	Kinetics of the unimolecular decomposition of isopropyl: weak collision effects in helium, argon, and nitrogen. <i>The Journal of Physical Chemistry</i> , 1993, 97, 4450-4458.	2.9	69
13	H Atom Yields from the Reactions of CN Radicals with C ₂ H ₂ , C ₂ H ₄ , C ₃ H ₆ , trans-2-C ₄ H ₈ , and iso-C ₄ H ₈ . <i>Journal of Physical Chemistry A</i> , 2007, 111, 6679-6692.	1.1	66
14	Analysis of the Kinetics and Yields of OH Radical Production from the CH ₃ OCH ₂ + O ₂ Reaction in the Temperature Range 195-650 K: An Experimental and Computational study. <i>Journal of Physical Chemistry A</i> , 2014, 118, 6773-6788.	1.1	58
15	Experimental and Modeling Studies of the Pressure and Temperature Dependences of the Kinetics and the OH Yields in the Acetyl + O ₂ Reaction. <i>Journal of Physical Chemistry A</i> , 2011, 115, 1069-1085.	1.1	57
16	Elementary radical reactions and autoignition. <i>Journal of the Chemical Society, Faraday Transactions</i> , 1995, 91, 4179.	1.7	56
17	Experimental and Theoretical Study of the Kinetics and Mechanism of the Reaction of OH Radicals with Dimethyl Ether. <i>Journal of Physical Chemistry A</i> , 2013, 117, 11142-11154.	1.1	55
18	Site-Specific Rate Coefficients for Reaction of OH with Ethanol from 298 to 900 K. <i>Journal of Physical Chemistry A</i> , 2011, 115, 3335-3345.	1.1	52

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19	Branching Ratios in Reactions of OH Radicals with Methylamine, Dimethylamine, and Ethylamine. <i>Environmental Science & Technology</i> , 2014, 48, 9935-9942.	4.6	52
20	H Atom Branching Ratios from the Reactions of CH with C ₂ H ₂ , C ₂ H ₄ , C ₂ H ₆ , and neo-C ₅ H ₁₂ at Room Temperature and 25 Torr. <i>Journal of Physical Chemistry A</i> , 2003, 107, 5710-5716.	1.1	48
21	Gas-Phase Reactions of OH with Methyl Amines in the Presence or Absence of Molecular Oxygen. An Experimental and Theoretical Study. <i>Journal of Physical Chemistry A</i> , 2013, 117, 10736-10745.	1.1	48
22	CH ₂ OO Criegee biradical yields following photolysis of CH ₂ I ₂ in O ₂ . <i>Physical Chemistry Chemical Physics</i> , 2013, 15, 19119.	1.3	47
23	The fast C(³ P) + CH ₃ OH reaction as an efficient loss process for gas-phase interstellar methanol. <i>RSC Advances</i> , 2014, 4, 26342-26353.	1.7	47
24	Atmospheric monitoring of volatile organic compounds using programmed temperature vaporization injection. <i>Journal of High Resolution Chromatography</i> , 1996, 19, 686-690.	2.0	46
25	Design of and initial results from a Highly Instrumented Reactor for Atmospheric Chemistry (HIRAC). <i>Atmospheric Chemistry and Physics</i> , 2007, 7, 5371-5390.	1.9	46
26	Direct measurements of OH and other product yields from the HO ₂ + CH ₃ C(O)O ₂ reaction. <i>Atmospheric Chemistry and Physics</i> , 2016, 16, 4023-4042.	1.9	46
27	Experimental and Master Equation Study of the Kinetics of OH + C ₂ H ₂ : A Temperature Dependence of the Limiting High Pressure and Pressure Dependent Rate Coefficients. <i>Journal of Physical Chemistry A</i> , 2007, 111, 4043-4055.	1.1	44
28	A combined experimental and theoretical study of the reaction between methylglyoxal and OH/OD radical: OH regeneration. <i>Physical Chemistry Chemical Physics</i> , 2007, 9, 4114.	1.3	44
29	Determination of the temperature and pressure dependence of the reaction OH + C ₂ H ₄ from 200 to 400 K using experimental and master equation analyses. <i>Physical Chemistry Chemical Physics</i> , 2006, 8, 5633-5642.	1.3	42
30	Unimolecular decomposition kinetics of the stabilised Criegee intermediates CH ₂ OO and CD ₂ OO. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 24940-24954.	1.3	41
31	OH yields from the CH ₃ CO + O ₂ reaction using an internal standard. <i>Chemical Physics Letters</i> , 2007, 445, 108-112.	1.2	40
32	Direct Determination of the Rate Coefficient for the Reaction of OH Radicals with Monoethanol Amine (MEA) from 296 to 510 K. <i>Journal of Physical Chemistry Letters</i> , 2012, 3, 853-856.	2.1	38
33	Product branching ratios in simple gas phase reactions. <i>Annual Reports on the Progress of Chemistry Section C</i> , 2007, 103, 173.	4.4	37
34	Kinetic Study of the OH + Glyoxal Reaction: Experimental Evidence and Quantification of Direct OH Recycling. <i>Journal of Physical Chemistry A</i> , 2013, 117, 11027-11037.	1.1	34
35	Temperature and Isotope Dependence of the Reaction of Methyl Radicals with Deuterium Atoms. <i>Journal of Physical Chemistry A</i> , 1997, 101, 9974-9987.	1.1	31
36	Ketone photolysis in the presence of oxygen: A useful source of OH for flash photolysis kinetics experiments. <i>International Journal of Chemical Kinetics</i> , 2008, 40, 504-514.	1.0	31

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37	H-Atom Yields from the Photolysis of Acetylene and from the Reaction of C ₂ H with H ₂ , C ₂ H ₂ , and C ₂ H ₄ . Journal of Physical Chemistry A, 2010, 114, 4735-4741.	1.1	31
38	Reanalysis of Rate Data for the Reaction CH ₃ + CH ₃ → C ₂ H ₆ Using Revised Cross Sections and a Linearized Second-Order Master Equation. Journal of Physical Chemistry A, 2015, 119, 7668-7682.	1.1	28
39	Global Uncertainty Propagation and Sensitivity Analysis in the CH ₃ OCH ₂ + O ₂ System: Combining Experiment and Theory To Constrain Key Rate Coefficients in DME Combustion. Journal of Physical Chemistry A, 2015, 119, 7430-7438.	1.1	27
40	An intercomparison of HO ₂ measurements by fluorescence assay by gas expansion and cavity ring-down spectroscopy within HIRAC (Highly Instrumented Reactor) Tj ETQq0 0zrgBT /Ozlock 10	1.1	26
41	OH formation from the C ₂ H ₅ CO+O ₂ reaction: An experimental marker for the propionyl radical. Chemical Physics Letters, 2005, 408, 232-236.	1.2	25
42	Studies of site selective hydrogen atom abstractions by Cl atoms from isobutane and propane by laser flash photolysis/IR diode laser spectroscopy. Physical Chemistry Chemical Physics, 2006, 8, 2172.	1.3	25
43	Design and performance of a throughput-matched, zero-geometric-loss, modified three objective multipass matrix system for FTIR spectrometry. Applied Optics, 2007, 46, 7872.	2.1	25
44	Time-of-flight mass spectrometry for time-resolved measurements: Some developments and applications. International Journal of Chemical Kinetics, 2012, 44, 532-545.	1.0	25
45	Pressure-dependent calibration of the OH and HO ₂ channels of a FAGE HO ₂ instrument using the Highly Instrumented Reactor for Atmospheric Chemistry (HIRAC). Atmospheric Measurement Techniques, 2015, 8, 523-540.	1.2	25
46	Kinetic studies of C ₁ and C ₂ Criegee intermediates with SO ₂ using laser flash photolysis coupled with photoionization mass spectrometry and time resolved UV absorption spectroscopy. Physical Chemistry Chemical Physics, 2018, 20, 22218-22227.	1.3	25
47	CH ₂ OO Criegee intermediate UV absorption cross-sections and kinetics of CH ₂ OO + CH ₂ OO and CH ₂ OO + I as a function of pressure. Physical Chemistry Chemical Physics, 2020, 22, 9448-9459.	1.3	25
48	Kinetics and Product Branching Ratios of the Reaction of ¹ CH ₂ with H ₂ and D ₂ . Journal of Physical Chemistry A, 2008, 112, 9575-9583.	1.1	23
49	H atom formation from benzene and toluene photoexcitation at 248 nm. Journal of Chemical Physics, 2009, 131, 204304.	1.2	23
50	Laboratory studies of photochemistry and gas phase radical reaction kinetics relevant to planetary atmospheres. Chemical Society Reviews, 2012, 41, 6318.	18.7	23
51	A laser flash photolysis/IR diode laser absorption study of the reaction of chlorine atoms with selected alkanes. International Journal of Chemical Kinetics, 2002, 34, 86-94.	1.0	22
52	Rate coefficients and production of vibrationally excited HCl from the reactions of chlorine atoms with methanol, ethanol, acetaldehyde and formaldehyde. Physical Chemistry Chemical Physics, 2004, 6, 2224.	1.3	22
53	Atmospheric Oxidation of Piperazine by OH has a Low Potential To Form Carcinogenic Compounds. Environmental Science and Technology Letters, 2014, 1, 367-371.	3.9	22
54	Measurement of OH reactivity by laser flash photolysis coupled with laser-induced fluorescence spectroscopy. Atmospheric Measurement Techniques, 2016, 9, 2827-2844.	1.2	22

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55	A new method for atmospheric detection of the CH ₃ O radical. Atmospheric Measurement Techniques, 2017, 10, 3985-4000.	1.2	22
56	Reaction of CH with H ₂ O: Temperature Dependence and Isotope Effect. Journal of Physical Chemistry A, 1999, 103, 5699-5704.	1.1	20
57	Dynamic frequency stabilization of infrared diode laser for kinetic studies. Chemical Physics Letters, 2000, 322, 57-64.	1.2	19
58	Implementation of a chemical background method for atmospheric OH measurements by laser-induced fluorescence: characterisation and observations from the UK and China. Atmospheric Measurement Techniques, 2020, 13, 3119-3146.	1.2	18
59	OH production from the photolysis of isoprene-derived peroxy radicals: cross-sections, quantum yields and atmospheric implications. Physical Chemistry Chemical Physics, 2017, 19, 2332-2345.	1.3	16
60	Kinetics of the Reaction of OH with Isoprene over a Wide Range of Temperature and Pressure Including Direct Observation of Equilibrium with the OH Adducts. Journal of Physical Chemistry A, 2018, 122, 7239-7255.	1.1	16
61	HONO measurement by differential photolysis. Atmospheric Measurement Techniques, 2016, 9, 2483-2495.	1.2	15
62	Production of HO ₂ and OH radicals from near-UV irradiated airborne TiO ₂ nanoparticles. Physical Chemistry Chemical Physics, 2019, 21, 2325-2336.	1.3	15
63	Branching ratios for the reactions of OH with ethanol amines used in carbon capture and the potential impact on carcinogen formation in the emission plume from a carbon capture plant. Physical Chemistry Chemical Physics, 2015, 17, 25342-25353.	1.3	14
64	Bimolecular reactions of activated species: An analysis of problematic HC(O)C(O) chemistry. Chemical Physics Letters, 2016, 661, 58-64.	1.2	14
65	Kinetics of the Reactions of Hydroxyl Radicals with Furan and Its Alkylated Derivatives 2-Methyl Furan and 2,5-Dimethyl Furan. Journal of Physical Chemistry A, 2020, 124, 7416-7426.	1.1	14
66	Heterogeneous reaction of HO ₂ with airborne TiO ₂ particles and its implication for climate change mitigation strategies. Atmospheric Chemistry and Physics, 2018, 18, 327-338.	1.9	12
67	Direct Trace Fitting of Experimental Data Using the Master Equation: Testing Theory and Experiments on the OH + C ₂ H ₄ Reaction. Journal of Physical Chemistry A, 2020, 124, 4015-4024.	1.1	12
68	Chapter 2 Elementary reactions. Comprehensive Chemical Kinetics, 1997, , 125-234.	2.3	11
69	Kinetic Study of the Gas-Phase Reactions of Chlorine Atoms with 2-Chlorophenol, 2-Nitrophenol, and Four Methyl-2-nitrophenol Isomers. Journal of Physical Chemistry A, 2015, 119, 4735-4745.	1.1	11
70	An Experimental and Master Equation Study of the Kinetics of OH/OD + SO ₂ : The Limiting High-Pressure Rate Coefficients. Journal of Physical Chemistry A, 2017, 121, 3184-3191.	1.1	11
71	Temperature and Pressure Dependent Kinetics of QOOH Decomposition and Reaction with O ₂ : Experimental and Theoretical Investigations of QOOH Radicals Derived from Cl + (CH ₃) ₃ COOH. Journal of Physical Chemistry A, 2019, 123, 10254-10262.	1.1	11
72	Observation of a new channel, the production of CH ₃ , in the abstraction reaction of OH radicals with acetaldehyde. Physical Chemistry Chemical Physics, 2016, 18, 26423-26433.	1.3	10

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73	An Experimental Study of the Kinetics of OH/OD($v = 1,2,3$) + SO ₂ : The Limiting High-Pressure Rate Coefficients as a Function of Temperature. <i>Journal of Physical Chemistry A</i> , 2017, 121, 3175-3183.	1.1	10
74	Laser Photolysis Kinetic Study of OH Radical Reactions with Methyl <i>tert</i> -Butyl Ether and Trimethyl Orthoformate under Conditions Relevant to Low Temperature Combustion: Measurements of Rate Coefficients and OH Recycling. <i>Journal of Physical Chemistry A</i> , 2018, 122, 9701-9711.	1.1	10
75	Kinetics of the gas phase reaction of the Criegee intermediate CH ₂ OO with SO ₂ as a function of temperature. <i>Physical Chemistry Chemical Physics</i> , 2021, 23, 19415-19423.	1.3	10
76	An instrument to measure fast gas phase radical kinetics at high temperatures and pressures. <i>Review of Scientific Instruments</i> , 2016, 87, 054102.	0.6	8
77	An intercomparison of CH ₃ O ₂ measurements by fluorescence assay by gas expansion and cavity ring-down spectroscopy within HIRAC (Highly) Tj ETQq1 1 0.784B1 4 rgBT #Overloc 2441-2456.		
78	Simultaneous monitoring of atmospheric methane and speciated non-methane hydrocarbon concentrations using Peltier effect sub-ambient pre-concentration and gas chromatography. <i>Journal of Environmental Monitoring</i> , 2000, 2, 59-63.	2.1	7
79	Kinetics of the Gas Phase Reactions of the Criegee Intermediate CH ₂ OO with O ₃ and IO. <i>Journal of Physical Chemistry A</i> , 2020, 124, 6287-6293.	1.1	7
80	Rate coefficients for the reactions of OH with butanols from 298 K to temperatures relevant for low-temperature combustion. <i>International Journal of Chemical Kinetics</i> , 2020, 52, 1046-1059.	1.0	7
81	FOURIER TRANSFORM INFRARED EMISSION SPECTROSCOPY AS A TOOL FOR THE STUDY OF CHEMICAL REACTIONS. <i>Advanced Series in Physical Chemistry</i> , 1996, , 250-314.	1.5	6
82	Studies on the Cl + C ₂ H ₅ I reaction; site specific abstraction reactions and thermodynamics of adduct formation studied by observation of HCl product. <i>Physical Chemistry Chemical Physics</i> , 2009, 11, 10417.	1.3	6
83	Developments in Laboratory Studies of Gas-Phase Reactions for Atmospheric Chemistry with Applications to Isoprene Oxidation and Carbonyl Chemistry. <i>Annual Review of Physical Chemistry</i> , 2011, 62, 351-373.	4.8	6
84	A new instrument for time-resolved measurement of HO ₂ radicals. <i>Atmospheric Measurement Techniques</i> , 2020, 13, 839-852.	1.2	6
85	Direct Measurements of Isoprene Autoxidation: Pinpointing Atmospheric Oxidation in Tropical Forests. <i>Jacs Au</i> , 2022, 2, 809-818.	3.6	6
86	Exploring the features on the OH + SO ₂ potential energy surface using theory and testing its accuracy by comparison to experimental data. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 8984-8990.	1.3	5
87	Gas-phase rate coefficients for a series of alkyl cyclohexanes with OH radicals and Cl atoms. <i>International Journal of Chemical Kinetics</i> , 2018, 50, 544-555.	1.0	5
88	A generic method for determining R _{OH} +O ₂ rate parameters via OH regeneration. <i>Chemical Physics Letters</i> , 2019, 730, 213-219.	1.2	4
89	On-line solid phase microextraction derivatization for the sensitive determination of multi-oxygenated volatile compounds in air. <i>Atmospheric Measurement Techniques</i> , 2021, 14, 4989-4999.	1.2	3
90	Global Master Equation Analysis of Rate Data for the Reaction C ₂ H ₄ + H ₂ , C ₂ H ₅ : \hat{r} fH0âŠ–C ₂ H ₅ . <i>Journal of Physical Chemistry A</i> , 2021, 125, 9548-9565.	1.1	3

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91	Time-Resolved Measurements and Master Equation Modelling of the Unimolecular Decomposition of CH ₃ OCH ₂ . Zeitschrift Fur Physikalische Chemie, 2020, 234, 1233-1250.	1.4	2
92	Identification, monitoring, and reaction kinetics of reactive trace species using time-resolved mid-infrared quantum cascade laser absorption spectroscopy: development, characterisation, and initial results for the CH ₂ OO Criegee intermediate. Atmospheric Measurement Techniques, 2022, 15, 2875-2887.	1.2	2
93	Theoretical study on the enthalpies of adduct formation between alkyl iodides and chlorine atoms. Chemical Physics Letters, 2021, 762, 138140.	1.2	1
94	OH Kinetics with a Range of Nitrogen-Containing Compounds: N-Methylformamide, t-Butylamine, and N-Methyl-propane Diamine. Journal of Physical Chemistry A, 2021, 125, 10439-10450.	1.1	0