Paul Seakins

List of Publications by Year
in descending order

94 papers	3,229 citations	126907 33 h-index	175258 52 g-index
122 all docs	122 docs citations	122 times ranked	2541 citing authors

#	Article	IF	Citations
1	Kinetics of CH₂OO reactions with SO₂, NO₂, NO, H₂O and CH₃CHO as a function of pressure. Physical Chemistry Chemical Physics, 2014, 16, 1139-1149.	2.8	215
2	Kinetics and thermochemistry of R + hydrogen bromide .dblarw. RH + bromine atom reactions: determinations of the heat of formation of ethyl, isopropyl, sec-butyl and tert-butyl radicals. The Journal of Physical Chemistry, 1992, 96, 9847-9855.	2.9	180
3	Direct evidence for a substantive reaction between the Criegee intermediate, CH₂OO, and the water vapour dimer. Physical Chemistry Chemical Physics, 2015, 17, 4859-4863.	2.8	155
4	Measurement and modelling of air pollution and atmospheric chemistry in the U.K. West Midlands conurbation: Overview of the PUMA Consortium project. Science of the Total Environment, 2006, 360, 5-25.	8.0	109
5	High levels of the hydroxyl radical in the winter urban troposphere. Geophysical Research Letters, 2004, 31, .	4.0	94
6	Interception of Excited Vibrational Quantum States by O ₂ in Atmospheric Association Reactions. Science, 2012, 337, 1066-1069.	12.6	90
7	Reporting the sensitivity of laser-induced fluorescence instruments used for HO₂ detection to an interference from RO₂ radicals and introducing a novel approach that enables HO₂ and certain RO₂ types to be selectively measured. Atmospheric Measurement Techniques, 2013, 6, 3425-3440.	3.1	77
8	The Essential Role for Laboratory Studies in Atmospheric Chemistry. Environmental Science & Technology, 2017, 51, 2519-2528.	10.0	75
9	Comparison of OH reactivity measurements in the atmospheric simulation chamber SAPHIR. Atmospheric Measurement Techniques, 2017, 10, 4023-4053.	3.1	74
10	Measurements of OH and HO₂ yields from the gas phase ozonolysis of isoprene. Atmospheric Chemistry and Physics, 2010, 10, 1441-1459.	4.9	73
11	Direct studies on the decomposition of the tert-butoxy radical and its reaction with NO. Physical Chemistry Chemical Physics, 1999, 1, 73-80.	2.8	70
12	Kinetics of the unimolecular decomposition of isopropyl: weak collision effects in helium, argon, and nitrogen. The Journal of Physical Chemistry, 1993, 97, 4450-4458.	2.9	69
13	H Atom Yields from the Reactions of CN Radicals with C2H2, C2H4, C3H6,trans-2-C4H8, andiso-C4H8â€. Journal of Physical Chemistry A, 2007, 111, 6679-6692.	2.5	66
14	Analysis of the Kinetics and Yields of OH Radical Production from the CH₃OCH₂ + O₂ Reaction in the Temperature Range 195â€“650 K: An Experimental and Computational study. Journal of Physical Chemistry A, 2014, 118, 6773-6788.	2.5	58
15	Experimental and Modeling Studies of the Pressure and Temperature Dependences of the Kinetics and the OH Yields in the Acetyl + O₂ Reaction. Journal of Physical Chemistry A, 2011, 115, 1069-1085.	2.5	57
16	Elementary radical reactions and autoignition. Journal of the Chemical Society, Faraday Transactions, 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. Journal of Physical Chemistry A, 2013, 117, 11142-11154.	2.5	55
18	Site-Specific Rate Coefficients for Reaction of OH with Ethanol from 298 to 900 K. Journal of Physical Chemistry A, 2011, 115, 3335-3345.	2.5	52

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19	Branching Ratios in Reactions of OH Radicals with Methylamine, Dimethylamine, and Ethylamine. Environmental Science & Technology, 2014, 48, 9935-9942.	10.0	52
20	H Atom Branching Ratios from the Reactions of CH with C2H2, C2H4, C2H6, andneo-C5H12at Room Temperature and 25 Torr. Journal of Physical Chemistry A, 2003, 107, 5710-5716.	2.5	48
21	Gas-Phase Reactions of OH with Methyl Amines in the Presence or Absence of Molecular Oxygen. An Experimental and Theoretical Study. Journal of Physical Chemistry A, 2013, 117, 10736-10745.	2.5	48
22	CH2OO Criegee biradical yields following photolysis of CH2I2 in O2. Physical Chemistry Chemical Physics, 2013, 15, 19119.	2.8	47
23	The fast C(³P) + CH₃OH reaction as an efficient loss process for gas-phase interstellar methanol. RSC Advances, 2014, 4, 26342-26353.	3.6	47
24	Atmospheric monitoring of volatile organic compounds using programmed temperature vaporization injection. Journal of High Resolution Chromatography, 1996, 19, 686-690.	1.4	46
25	Design of and initial results from a Highly Instrumented Reactor for Atmospheric Chemistry (HIRAC). Atmospheric Chemistry and Physics, 2007, 7, 5371-5390.	4.9	46
26	Direct measurements of OH and other product yields from the HO₂â€¯+â€¯CH₃C(O)O₂ reaction. Atmospheric Chemistry and Physics, 2016, 16, 4023-4042.	4.9	46
27	Experimental and Master Equation Study of the Kinetics of OH + C2H2:Â Temperature Dependence of the Limiting High Pressure and Pressure Dependent Rate Coefficientsâ€. Journal of Physical Chemistry A, 2007, 111, 4043-4055.	2.5	44
28	A combined experimental and theoretical study of the reaction between methylglyoxal and OH/OD radical: OH regeneration. Physical Chemistry Chemical Physics, 2007, 9, 4114.	2.8	44
29	Determination of the temperature and pressure dependence of the reaction OH + C2H4from 200â€“400 K using experimental and master equation analyses. Physical Chemistry Chemical Physics, 2006, 8, 5633-5642.	2.8	42
30	Unimolecular decomposition kinetics of the stabilised Criegee intermediates CH₂OO and CD₂OO. Physical Chemistry Chemical Physics, 2018, 20, 24940-24954.	2.8	41
31	OH yields from the CH3CO+O2 reaction using an internal standard. Chemical Physics Letters, 2007, 445, 108-112.	2.6	40
32	Direct Determination of the Rate Coefficient for the Reaction of OH Radicals with Monoethanol Amine (MEA) from 296 to 510 K. Journal of Physical Chemistry Letters, 2012, 3, 853-856.	4.6	38
33	Product branching ratios in simple gas phase reactions. Annual Reports on the Progress of Chemistry Section C, 2007, 103, 173.	4.4	37
34	Kinetic Study of the OH + Glyoxal Reaction: Experimental Evidence and Quantification of Direct OH Recycling. Journal of Physical Chemistry A, 2013, 117, 11027-11037.	2.5	34
35	Temperature and Isotope Dependence of the Reaction of Methyl Radicals with Deuterium Atoms. Journal of Physical Chemistry A, 1997, 101, 9974-9987.	2.5	31
36	Ketone photolysis in the presence of oxygen: A useful source of OH for flash photolysis kinetics experiments. International Journal of Chemical Kinetics, 2008, 40, 504-514.	1.6	31

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37	H-Atom Yields from the Photolysis of Acetylene and from the Reaction of C₂H with H₂, C₂H₂, and C₂H₄. Journal of Physical Chemistry A, 2010, 114, 4735-4741.	2.5	31
38	Reanalysis of Rate Data for the Reaction CH₃ + CH₃ â†' C₂H₆ Using Revised Cross Sections and a Linearized Second-Order Master Equation. Journal of Physical Chemistry A, 2015, 119, 7668-7682.	2.5	28
39	Global Uncertainty Propagation and Sensitivity Analysis in the CH3OCH2 + O2 System: Combining Experiment and Theory To Constrain Key Rate Coefficients in DME Combustion. Journal of Physical Chemistry A, 2015, 119, 7430-7438.	2.5	27
40	An intercomparison of HO₂ measurements by fluorescence assay by gas expansion and cavity ring-down spectroscopy within HIRAC (Highly Instrumented Reactor) Tj ETQq0 0 0 rgBT /Overlock 10	3.0	26
41	OH formation from the C2H5CO+O2 reaction: An experimental marker for the propionyl radical. Chemical Physics Letters, 2005, 408, 232-236.	2.6	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.	2.8	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	Timeâ€ofâ€flight mass spectrometry for timeâ€resolved measurements: Some developments and applications. International Journal of Chemical Kinetics, 2012, 44, 532-545.	1.6	25
45	Pressure-dependent calibration of the OH and HO₂ channels of a FAGE HO_x instrument using the Highly Instrumented Reactor for Atmospheric Chemistry (HIRAC). Atmospheric Measurement Techniques, 2015, 8, 523-540.	3.1	25
46	Kinetic studies of C₁ and C₂ Criegee intermediates with SO₂ using laser flash photolysis coupled with photoionization mass spectrometry and time resolved UV absorption spectroscopy. Physical Chemistry Chemical Physics, 2018, 20, 22218-22227.	2.8	25
47	CH₂OO Criegee intermediate UV absorption cross-sections and kinetics of CH₂OO + CH₂OO and CH₂OO + I as a function of pressure. Physical Chemistry Chemical Physics, 2020, 22, 9448-9459.	2.8	25
48	Kinetics and Product Branching Ratios of the Reaction of ¹CH₂ with H₂ and D₂. Journal of Physical Chemistry A, 2008, 112, 9575-9583.	2.5	23
49	H atom formation from benzene and toluene photoexcitation at 248 nm. Journal of Chemical Physics, 2009, 131, 204304.	3.0	23
50	Laboratory studies of photochemistry and gas phase radical reaction kinetics relevant to planetary atmospheres. Chemical Society Reviews, 2012, 41, 6318.	38.1	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.	1.6	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.	2.8	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.	8.7	22
54	Measurement of OH reactivity by laser flash photolysis coupled with laser-induced fluorescence spectroscopy. Atmospheric Measurement Techniques, 2016, 9, 2827-2844.	3.1	22

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55	A new method for atmospheric detection of the CH₃O₂ radical. Atmospheric Measurement Techniques, 2017, 10, 3985-4000.	3.1	22
56	Reaction of CH with H2O:Â Temperature Dependence and Isotope Effect. Journal of Physical Chemistry A, 1999, 103, 5699-5704.	2.5	20
57	Dynamic frequency stabilization of infrared diode laser for kinetic studies. Chemical Physics Letters, 2000, 322, 57-64.	2.6	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.	3.1	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.	2.8	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.	2.5	16
61	HONO measurement by differential photolysis. Atmospheric Measurement Techniques, 2016, 9, 2483-2495.	3.1	15
62	Production of HO₂ and OH radicals from near-UV irradiated airborne TiO₂ nanoparticles. Physical Chemistry Chemical Physics, 2019, 21, 2325-2336.	2.8	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.	2.8	14
64	Bimolecular reactions of activated species: An analysis of problematic HC(O)C(O) chemistry. Chemical Physics Letters, 2016, 661, 58-64.	2.6	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.	2.5	14
66	Heterogeneous reaction of HO₂ with airborne TiO₂ particles and its implication for climate change mitigation strategies. Atmospheric Chemistry and Physics, 2018, 18, 327-338.	4.9	12
67	Direct Trace Fitting of Experimental Data Using the Master Equation: Testing Theory and Experiments on the OH + C2H4 Reaction. Journal of Physical Chemistry A, 2020, 124, 4015-4024.	2.5	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.	2.5	11
70	An Experimental and Master Equation Study of the Kinetics of OH/OD + SO₂: The Limiting High-Pressure Rate Coefficients. Journal of Physical Chemistry A, 2017, 121, 3184-3191.	2.5	11
71	Temperature and Pressure Dependent Kinetics of QOOH Decomposition and Reaction with O₂: Experimental and Theoretical Investigations of QOOH Radicals Derived from Cl + (CH₃)₃COOH. Journal of Physical Chemistry A, 2019, 123, 10254-10262.	2.5	11
72	Observation of a new channel, the production of CH₃, in the abstraction reaction of OH radicals with acetaldehyde. Physical Chemistry Chemical Physics, 2016, 18, 26423-26433.	2.8	10

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73	An Experimental Study of the Kinetics of OH/OD(v = 1,2,3) + SO₂: The Limiting High-Pressure Rate Coefficients as a Function of Temperature. Journal of Physical Chemistry A, 2017, 121, 3175-3183.	2.5	10
74	Laser Photolysis Kinetic Study of OH Radical Reactions with Methyl tert-Butyl Ether and Trimethyl Orthoformate under Conditions Relevant to Low Temperature Combustion: Measurements of Rate Coefficients and OH Recycling. Journal of Physical Chemistry A, 2018, 122, 9701-9711.	2.5	10
75	Kinetics of the gas phase reaction of the Criegee intermediate CH₂OO with SO₂as a function of temperature. Physical Chemistry Chemical Physics, 2021, 23, 19415-19423.	2.8	10
76	An instrument to measure fast gas phase radical kinetics at high temperatures and pressures. Review of Scientific Instruments, 2016, 87, 054102.	1.3	8
77	An intercomparison of CH₃O₂ measurements by fluorescence assay by gas expansion and cavity ring-down spectroscopy within HIRAC (Highly) Tj ETQq1 1 0.784314 rgBT /Overloc 2441-2456.	3.1	8
78	Simultaneous monitoring of atmospheric methane and speciated non-methane hydrocarbon concentrations using Peltier effect sub-ambient pre-concentration and gas chromatography. Journal of Environmental Monitoring, 2000, 2, 59-63.	2.1	7
79	Kinetics of the Gas Phase Reactions of the Criegee Intermediate CH2OO with O3 and IO. Journal of Physical Chemistry A, 2020, 124, 6287-6293.	2.5	7
80	Rate coefficients for the reactions of OH with butanols from 298 K to temperatures relevant for lowâ€temperature combustion. International Journal of Chemical Kinetics, 2020, 52, 1046-1059.	1.6	7
81	FOURIER TRANSFORM INFRARED EMISSION SPECTROSCOPY AS A TOOL FOR THE STUDY OF CHEMICAL REACTIONS. Advanced Series in Physical Chemistry, 1996, , 250-314.	1.5	6
82	Studies on the Cl + C2H5I reaction; site specific abstraction reactions and thermodynamics of adduct formation studied by observation of HCL product. Physical Chemistry Chemical Physics, 2009, 11, 10417.	2.8	6
83	Developments in Laboratory Studies of Gas-Phase Reactions for Atmospheric Chemistry with Applications to Isoprene Oxidation and Carbonyl Chemistry. Annual Review of Physical Chemistry, 2011, 62, 351-373.	10.8	6
84	A new instrument for time-resolved measurement of HO₂ radicals. Atmospheric Measurement Techniques, 2020, 13, 839-852.	3.1	6
85	Direct Measurements of Isoprene Autoxidation: Pinpointing Atmospheric Oxidation in Tropical Forests. Jacs Au, 2022, 2, 809-818.	7.9	6
86	Exploring the features on the OH + SO₂potential energy surface using theory and testing its accuracy by comparison to experimental data. Physical Chemistry Chemical Physics, 2018, 20, 8984-8990.	2.8	5
87	Gasâ€phase rate coefficients for a series of alkyl cyclohexanes with OH radicals and Cl atoms. International Journal of Chemical Kinetics, 2018, 50, 544-555.	1.6	5
88	A generic method for determining Râ€¯+â€¯O2 rate parameters via OH regeneration. Chemical Physics Letters, 2019, 730, 213-219.	2.6	4
89	On-line solid phase microextraction derivatization for the sensitive determination of multi-oxygenated volatile compounds in air. Atmospheric Measurement Techniques, 2021, 14, 4989-4999.	3.1	3
90	Global Master Equation Analysis of Rate Data for the Reaction C2H4 + H â‡„ C2H5: Ï”fH0âŠ–C2H5. Journal of Physical Chemistry A, 2021, 125, 9548-9565.	2.5	3

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91	Time-Resolved Measurements and Master Equation Modelling of the Unimolecular Decomposition of CH₃OCH₂. Zeitschrift Fur Physikalische Chemie, 2020, 234, 1233-1250.	2.8	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 CH₂OO Criegee intermediate. Atmospheric Measurement Techniques, 2022, 15, 2875-2887.	3.1	2
93	Theoretical study on the enthalpies of adduct formation between alkyl iodides and chlorine atoms. Chemical Physics Letters, 2021, 762, 138140.	2.6	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.	2.5	0