Matthew S Johnson

List of Publications by Year
in descending order

133 papers	3,926 citations	117625 34 h-index	155660 55 g-index
151 all docs	151 docs citations	151 times ranked	4554 citing authors

#	Article	IF	Citations
1	Photodegradation of pharmaceuticals and personal care products in water treatment using carbonaceous-TiO2 composites: A critical review of recent literature. Water Research, 2018, 142, 26-45.	11.3	299
2	Geological sulfur isotopes indicate elevated OCS in the Archean atmosphere, solving faint young sun paradox. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 14784-14789.	7.1	136
3	DRIFTS and Knudsen cell study of the heterogeneous reactivity of SO₂ and NO₂ on mineral dust. Atmospheric Chemistry and Physics, 2003, 3, 2043-2051.	4.9	133
4	Vibrational spectrum of Iâˆ'(H2O). Chemical Physics Letters, 1996, 260, 551-557.	2.6	109
5	The fate of mercury in Arctic terrestrial and aquatic ecosystems, a review. Environmental Chemistry, 2012, 9, 321.	1.5	106
6	Modeling the degradation and disinfection of water pollutants by photocatalysts and composites: A critical review. Science of the Total Environment, 2020, 698, 134197.	8.0	105
7	Highâ€precision spectroscopy of ³²S, ³³S, and ³⁴S sulfur dioxide: Ultraviolet absorption cross sections and isotope effects. Journal of Geophysical Research, 2008, 113, .	3.3	101
8	Active and widespread halogen chemistry in the tropical and subtropical free troposphere. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 9281-9286.	7.1	91
9	Airborne environmental DNA for terrestrial vertebrate community monitoring. Current Biology, 2022, 32, 701-707.e5.	3.9	91
10	Global Concentrations of Gaseous Elemental Mercury and Reactive Gaseous Mercury in the Marine Boundary Layer. Environmental Science & Technology, 2010, 44, 7425-7430.	10.0	87
11	Vibrational spectroscopy of NO+(H2O)n: Evidence for the intracluster reaction NO+(H2O)nâ†'H3O+(H2O)nâˆ'2 (HONO) at nâ‰¥4. Journal of Chemical Physics, 1994, 100, 7153-7165.	3.0	76
12	On the performance of quantum chemical methods to predict solvatochromic effects: The case of acrolein in aqueous solution. Journal of Chemical Physics, 2008, 128, 194503.	3.0	76
13	Carbon dioxide photolysis from 150 to 210 nm: Singlet and triplet channel dynamics, UV-spectrum, and isotope effects. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 17691-17696.	7.1	73
14	Photolysis of Nitrous Oxide Isotopomers Studied by Time-Dependent Hermite Propagation. Journal of Physical Chemistry A, 2001, 105, 8672-8680.	2.5	71
15	Isotopic processes in atmospheric chemistry. Chemical Society Reviews, 2002, 31, 313-323.	38.1	67
16	What can we learn from N₂O isotope data? â€" Analytics, processes and modelling. Rapid Communications in Mass Spectrometry, 2020, 34, e8858.	1.5	67
17	Global modeling of the isotopic analogues of N2O: Stratospheric distributions, budgets, and the17Oâ€"18O mass-independent anomaly. Journal of Geophysical Research, 2003, 108, .	3.3	61
18	Laboratory Comparison of Low-Cost Particulate Matter Sensors to Measure Transient Events of Pollution. Sensors, 2020, 20, 2219.	3.8	58

#	ARTICLE	IF	CITATIONS
19	Laboratory study of nitrate photolysis in Antarctic snow. II. Isotopic effects and wavelength dependence. Journal of Chemical Physics, 2014, 140, 244306.	3.0	57
20	Analysis of the Ultraviolet Absorption Cross Sections of Six Isotopically Substituted Nitrous Oxide Species Using 3D Wave Packet Propagationâ€. Journal of Physical Chemistry A, 2004, 108, 8905-8913.	2.5	56
21	Laboratory study of nitrate photolysis in Antarctic snow. I. Observed quantum yield, domain of photolysis, and secondary chemistry. Journal of Chemical Physics, 2014, 140, 244305.	3.0	51
22	Filtration efficiency of an electrostatic fibrous filter: Studying filtration dependency on ultrafine particle exposure and composition. Journal of Aerosol Science, 2014, 72, 14-20.	3.8	51
23	UV and IR Absorption Cross-sections of HCHO, HCDO, and DCDO. Journal of Physical Chemistry A, 2007, 111, 11506-11513.	2.5	50
24	SO ₂ photoexcitation mechanism links mass-independent sulfur isotopic fractionation in cryospheric sulfate to climate impacting volcanism. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 17656-17661.	7.1	50
25	The13C and D kinetic isotope effects in the reaction of CH4 with Cl. International Journal of Chemical Kinetics, 2005, 37, 110-118.	1.6	49
26	Ultraviolet absorption cross sections of carbonyl sulfide isotopologues OC³²S, OC³³S, OC³⁴S and O¹³CS: isotopic fractionation in photolysis and atmospheric implications. Atmospheric Chemistry and Physics, 2011, 11, 10293-10303.	4.9	45
27	Atmospheric chemistry of trans-CF3CHCHCl: Kinetics of the gas-phase reactions with Cl atoms, OH radicals, and O3. Journal of Photochemistry and Photobiology A: Chemistry, 2008, 199, 92-97.	3.9	43
28	Relative Reaction Rates of HCHO, HCDO, DCDO, H13CHO, and HCH18O with OH, Cl, Br, and NO3 Radicals. Journal of Physical Chemistry A, 2004, 108, 7393-7398.	2.5	41
29	Relative Tropospheric Photolysis Rates of HCHO and HCDO Measured at the European Photoreactor Facility. Journal of Physical Chemistry A, 2007, 111, 9034-9046.	2.5	41
30	Gas-Phase Advanced Oxidation for Effective, Efficient in Situ Control of Pollution. Environmental Science & Technology, 2014, 48, 8768-8776.	10.0	41
31	COâ€‰+â€‰OHâ€‰â†’â€‰CO2â€‰+â€‰H: The relative reaction rate of five CO isotopologues. Physical Chemistry Chemical Physics, 2002, 4, 4687-4693.	2.8	39
32	Ozone-assisted regeneration of magnetic carbon nanotubes for removing organic water pollutants. Chemical Engineering Journal, 2018, 335, 384-391.	12.7	37
33	Intracluster rearrangement of protonated nitric acid: Infrared spectroscopic studies of H+(HNO3)(H2O)n. Journal of Chemical Physics, 1993, 99, 9307-9309.	3.0	36
34	Ultra-violet absorption cross sections of isotopically substituted nitrous oxide species: ¹⁴N¹⁴NO, ¹⁵N¹⁴NO, ¹⁴N¹⁵NO and ¹⁵N¹⁵NO. Atmospheric Chemistry and Physics, 2004, 4, 1237-1253.	4.9	36
35	Isotope effects in N₂O photolysis from first principles. Atmospheric Chemistry and Physics, 2011, 11, 8965-8975.	4.9	36
36	Enhanced biodegradation of styrene vapors in the biotrickling filter inoculated with biosurfactant-generating bacteria under H2O2 stimulation. Science of the Total Environment, 2020, 704, 135325.	8.0	36

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37	Atmospheric chemistry of cis-CF3CHCHF: Kinetics of reactions with OH radicals and O3 and products of OH radical initiated oxidation. Chemical Physics Letters, 2009, 473, 233-237.	2.6	35
38	Atmospheric Chemistry of Two Biodiesel Model Compounds: Methyl Propionate and Ethyl Acetate. Journal of Physical Chemistry A, 2011, 115, 8906-8919.	2.5	35
39	Photoabsorption crossâ€section measurements of ³²S, ³³S, ³⁴S, and ³⁶S sulfur dioxide from 190 to 220â€‰nm. Journal of Geophysical Research D: Atmospheres, 2015, 120, 2546-2557.	3.3	35
40	Coherent synchrotron radiation in the far infrared from a 1-mm electron bunch. Optical Engineering, 2000, 39, 3099.	1.0	34
41	Infrared spectrum of the silicon hydride cation SiH7+. The Journal of Physical Chemistry, 1993, 97, 5215-5217.	2.9	33
42	Atmospheric deuterium fractionation: HCHO and HCDO yields in the CH₂DO + O₂ reaction. Atmospheric Chemistry and Physics, 2007, 7, 5873-5881.	4.9	33
43	Clumped isotope effects during OH and Cl oxidation of methane. Geochimica Et Cosmochimica Acta, 2017, 196, 307-325.	3.9	33
44	Relative Tropospheric Photolysis Rates of HCHO, H13CHO, HCH18O, and DCDO Measured at the European Photoreactor Facility. Journal of Physical Chemistry A, 2005, 109, 8314-8319.	2.5	32
45	Freezing of water droplets colliding with kaolinite particles. Atmospheric Chemistry and Physics, 2009, 9, 4295-4300.	4.9	32
46	Isotopic effects of nitrate photochemistry in snow: a field study at Dome C, Antarctica. Atmospheric Chemistry and Physics, 2015, 15, 11243-11256.	4.9	32
47	UV absorption spectra of HO2, CH3O2, C2H5O2, and CH3C(O)CH2O2 radicals and mechanism of the reactions of F and Cl atoms with CH3C(O)CH3. International Journal of Chemical Kinetics, 2002, 34, 283-291.	1.6	30
48	Performance of a new diffusive sampler for Hg0 determination in the troposphere. Environmental Chemistry, 2007, 4, 75.	1.5	29
49	Communication: Multi-state analysis of the OCS ultraviolet absorption including vibrational structure. Journal of Chemical Physics, 2012, 136, 131101.	3.0	29
50	Chemistry and Photochemistry of Pyruvic Acid at the Airâ€“Water Interface. Journal of Physical Chemistry A, 2021, 125, 1036-1049.	2.5	29
51	Ab initio study of sulfur isotope fractionation in the reaction of OCS with OH. Chemical Physics Letters, 2008, 450, 214-220.	2.6	27
52	Photoabsorption crossâ€section measurements of³²S, ³³S, ³⁴S, and ³⁶S sulfur dioxide for the <i>B</i>¹<i>B</i>₁<i>â€X</i>¹<i>A</i>₁ absorption band. Journal of Geophysical Research, 2012, 117, .	3.3	27
53	Atmospheric Chemistry of Ethyl Propionate. Journal of Physical Chemistry A, 2012, 116, 5164-5179.	2.5	27
54	Theoretical study of the gas phase reaction of methyl acetate with the hydroxyl radical: Structures, mechanisms, rates and temperature dependencies. Chemical Physics Letters, 2010, 490, 116-122.	2.6	26

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55	OCS photolytic isotope effects from first principles: sulfur and carbon isotopes, temperature dependence and implications for the stratosphere. Atmospheric Chemistry and Physics, 2013, 13, 1511-1520.	4.9	25
56	Evidence for the Role of Ions in Aerosol Nucleation. Journal of Physical Chemistry A, 2008, 112, 10305-10309.	2.5	24
57	Carbonyl sulfide isotopologues: Ultraviolet absorption cross sections and stratospheric photolysis. Journal of Chemical Physics, 2009, 131, 024307.	3.0	24
58	Green and facile approach for enhancing the inherent magnetic properties of carbon nanotubes for water treatment applications. PLoS ONE, 2017, 12, e0180636.	2.5	24
59	Microstructure and Chemical Composition of Particles from Small-scale Gas Flaring. Aerosol and Air Quality Research, 2019, 19, 2205-2221.	2.1	24
60	Quantum Dressed Classical Mechanics:Â Application to the HO + CO â†' H + CO2Reaction. Journal of Physical Chemistry A, 2001, 105, 11171-11176.	2.5	21
61	Atmospheric photochemical loss of H and H2from formaldehyde: the relevance of ultrafast processes. Physical Chemistry Chemical Physics, 2008, 10, 674-680.	2.8	21
62	Temperature-dependent quantum efficiency degradation of K-Cs-Sb bialkali antimonide photocathodes grown by a triple-element codeposition method. Physical Review Accelerators and Beams, 2017, 20, .	1.6	21
63	Relative rates of reaction of 13C16O, 12C18O, 12C17O and 13C18O with OH and OD radicals. Physical Chemistry Chemical Physics, 2005, 7, 2318.	2.8	20
64	Isotope Effect in the Carbonyl Sulfide Reaction with O(³<i>P</i>). Journal of Physical Chemistry A, 2012, 116, 3521-3526.	2.5	20
65	Predicting the Safety and Effectiveness of Inferior Vena Cava Filters Study: Design of a unique safety and effectiveness study of inferior vena cava filters in clinical practice. Journal of Vascular Surgery: Venous and Lymphatic Disorders, 2020, 8, 187-194.e1.	1.6	20
66	The Î½5Band of HClO4. Journal of Molecular Spectroscopy, 1998, 190, 269-273.	1.2	18
67	High-resolution gas phase spectroscopy with a synchrotron radiation source. Nuovo Cimento Della Societa Italiana Di Fisica D - Condensed Matter, Atomic, Molecular and Chemical Physics, Biophysics, 1998, 20, 449-462.	0.4	18
68	Pressure dependence of the deuterium isotope effect in the photolysis of formaldehyde by ultraviolet light. Atmospheric Chemistry and Physics, 2010, 10, 3455-3462.	4.9	18
69	New Method of Destroying Waste Anesthetic Gases Using Gas-Phase Photochemistry. Anesthesia and Analgesia, 2020, 131, 288-297.	2.2	18
70	Predictions of the sulfur and carbon kinetic isotope effects in the OH + OCS reaction. Chemical Physics Letters, 2012, 531, 64-69.	2.6	17
71	Global modeling of tropospheric iodine aerosol. Geophysical Research Letters, 2016, 43, 10012-10019.	4.0	17
72	<title>Observation of coherent synchrotron radiation from a 1-mm electron bunch at the MAX-I storage ring</title>. , 1999, , .		16

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73	Photodissociation of N2O: Triplet states and triplet channel. Journal of Chemical Physics, 2011, 135, 194303.	3.0	16
74	Rate coefficients for the gas-phase reaction of isoprene with NO3 and NO2. International Journal of Chemical Kinetics, 2005, 37, 57-65.	1.6	15
75	¹³C, ¹⁸O, and D Fractionation Effects in the Reactions of CH₃OH Isotopologues with Cl and OH Radicals. Journal of Physical Chemistry A, 2008, 112, 11099-11114.	2.5	15
76	High-Resolution Far-Infrared Torsional Spectrum of CH3SiD3 Using a Synchrotron Source. Journal of Molecular Spectroscopy, 2002, 215, 134-143.	1.2	14
77	An isotopic analysis of ionising radiation as a source of sulphuric acid. Atmospheric Chemistry and Physics, 2012, 12, 5319-5327.	4.9	14
78	Chemical and isotopic composition of secondary organic aerosol generated by <i>Î±</i>-pinene ozonolysis. Atmospheric Chemistry and Physics, 2017, 17, 6373-6391.	4.9	14
79	Gas-phase advanced oxidation as an integrated air pollution control technique. AIMS Environmental Science, 2016, 3, 141-158.	1.4	14
80	Clumped isotope perturbation in tropospheric nitrous oxide from stratospheric photolysis. Geophysical Research Letters, 2015, 42, 3546-3552.	4.0	13
81	HCl and DCl: A case study of different approaches for determining photo fractionation constants. Physical Chemistry Chemical Physics, 2006, 8, 4798.	2.8	12
82	Monitoring Excess Exposure to Air Pollution for Professional Drivers in London Using Low-Cost Sensors. Atmosphere, 2020, 11, 749.	2.3	12
83	High-Resolution Infrared Study of the Î½11 Band of Allene. Journal of Molecular Spectroscopy, 2002, 216, 197-202.	1.2	11
84	Relative Tropospheric Photolysis Rates of Acetaldehyde and Formaldehyde Isotopologues Measured at the European Photoreactor Facility. Journal of Physical Chemistry A, 2009, 113, 3498-3504.	2.5	11
85	Recoil Inversion in the Photodissociation of Carbonyl Sulfide near 234Ânm. Physical Review Letters, 2017, 118, 253001.	7.8	11
86	Treatment of reduced sulphur compounds and SO2 by Gas Phase Advanced Oxidation. Chemical Engineering Journal, 2017, 307, 427-434.	12.7	11
87	Correlation of Respiratory Aerosols and Metabolic Carbon Dioxide. Sustainability, 2021, 13, 12203.	3.2	11
88	Isotope Effects in Photodissociation: Chemical Reaction Dynamics and Implications for Atmospheres. Advances in Quantum Chemistry, 2008, 55, 101-135.	0.8	10
89	Do Gas Nanobubbles Enhance Aqueous Photocatalysis? Experiment and Analysis of Mechanism. Catalysts, 2021, 11, 511.	3.5	10
90	Methyl acetate reaction with OH and Cl: Reaction rates and products for a biodiesel analogue. Chemical Physics Letters, 2009, 472, 23-29.	2.6	9

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91	Electrospun Nanofibre Air Filters for Particles and Gaseous Pollutants. Sustainability, 2021, 13, 6553.	3.2	8
92	Kinetic isotope effects of ¹²CH₃Dâ€¯â€¯+â€¯OH and ¹³CH₃Dâ€¯â€¯+â€¯OH from 278 to 313â€¯K. Atmospheric Chemistry and Physics, 2016, 16, 4439-4449.	4.9	7
93	Multiphoton Ionization Spectroscopy of AlArN Clusters. Journal of Physical Chemistry A, 2003, 107, 6948-6965.	2.5	6
94	On the origin of the asymmetric shape of the HCl photodissociation cross section. Chemical Physics Letters, 2009, 480, 168-172.	2.6	6
95	Isotope Effects in the Reactions of Chloroform Isotopologues with Cl, OH, and OD. Journal of Physical Chemistry A, 2009, 113, 1731-1739.	2.5	6
96	Photodissociation of N₂O: Excitation of ¹Aâ€³ States. Journal of Physical Chemistry A, 2012, 116, 11083-11087.	2.5	6
97	Pressure dependent isotopic fractionation in the photolysis of formaldehyde-d₂. Atmospheric Chemistry and Physics, 2014, 14, 551-558.	4.9	6
98	Reactions of Three Lactones with Cl, OD, and O₃: Atmospheric Impact and Trends in Furan Reactivity. Journal of Physical Chemistry A, 2017, 121, 4123-4131.	2.5	6
99	Chemical analysis and origin of the smell of line-dried laundry. Environmental Chemistry, 2020, 17, 355.	1.5	6
100	Formation of Formaldehyde and Other Byproducts by TiO2 Photocatalyst Materials. Sustainability, 2021, 13, 4821.	3.2	6
101	Kinetics of the gasâ€phase reactions of chlorine atoms with CH₂F₂, CH₃CCl₃, and CF₃CFH₂ over the temperature range 253â€“553 K. International Journal of Chemical Kinetics, 2009, 41, 401-406.	1.6	5
102	Rate coefficients for the chemical reactions of CH2F2, CHClF2, CH2FCF3 and CH3CCl3 with O(1D) at 298K. Chemical Physics Letters, 2012, 554, 27-32.	2.6	5
103	Atmospheric oxidation of selected chlorinated alkenes by O 3 , OH, NO 3 and Cl. Atmospheric Environment, 2017, 170, 12-21.	4.1	5
104	Exit-channel recoil resonances by imaging the photodissociation of single quantum-state-selected OCS molecules. Physical Review A, 2018, 98, .	2.5	5
105	The Kinetic Isotope Effects in the Reactions of Four Ethene Isotopologues with Chlorine and Bromine Atoms. Journal of Physical Chemistry A, 2003, 107, 7667-7670.	2.5	4
106	Novel Materials for Combined Nitrogen Dioxide and Formaldehyde Pollution Control under Ambient Conditions. Catalysts, 2020, 10, 1040.	3.5	4
107	Water vapor inhibits hydrogen sulfide detection in pulsed fluorescence sulfur monitors. Atmospheric Measurement Techniques, 2016, 9, 2669-2673.	3.1	4
108	Gaseous mercury in coastal urban areas. Environmental Chemistry, 2010, 7, 537.	1.5	3

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109	Industrial Emissions Control Technologies: Introduction. , 2019, , 1-35.		3
110	Airborne Nanoparticles: Control and Detection. , 2021, , 85-133.		3
111	The effect of body position while coughing on the airborne transmission of pathogens. Physics of Fluids, 2022, 34, .	4.0	3
112	Photochemical method for removing methane interference for improved gas analysis. Atmospheric Measurement Techniques, 2021, 14, 8041-8067.	3.1	3
113	Applications of Theoretical Methods to Atmospheric Science. Advances in Quantum Chemistry, 2008, 55, 1-4.	0.8	2
114	Atmospheric Chemistry. , 2015, , .		2
115	On adduct formation and reactivity in the OCS + OH reaction: A combined theoretical and experimental study. Chemical Physics Letters, 2017, 675, 111-117.	2.6	2
116	The riddle of the forbidden UV absorption of aqueous nitrate: the oscillator strength of the n â†' Ï€* transition in NO₃^{â^'} including second order vibronic coupling. Physical Chemistry Chemical Physics, 2019, 21, 23466-23472.	2.8	2
117	Photolytic fractionation of seven singly and doubly substituted nitrous oxide isotopocules measured by quantum cascade laser absorption spectroscopy. Atmospheric Environment: X, 2020, 8, 100094.	1.4	2
118	The unexpected effect of aqueous ion pairs on the forbidden n â†' Ï€* transition in nitrate. Physical Chemistry Chemical Physics, 2020, 22, 11678-11685.	2.8	2
119	Indoor Air Quality: Status and Standards. , 2021, , 135-162.		2
120	Bypassing the multireference character of singlet molecular oxygen, part 1:1,4â€cycloâ€addition. International Journal of Quantum Chemistry, 2021, 121, e26523.	2.0	2
121	Low-Cost Sensors for Indoor and Outdoor Pollution. , 2019, , 1-31.		2
122	Air Pollution and Climate Change: Sustainability, Restoration, and Ethical Implications. , 2020, , 1-48.		2
123	Industrial Emissions Control Technologies: Introduction. , 2021, , 477-511.		2
124	Kinetics of the reaction of Cl atoms with CHCl3 over the temperature range 253â€"313K. Chemical Physics Letters, 2010, 494, 160-162.	2.6	1
125	Chemistry of the atmosphere. , 0, , 140-168.		1
126	The Sulfolene Protecting Group: Observation of a Direct Photoinitiated Cheletropic Ring Opening. ChemPhotoChem, 2021, 5, 863-870.	3.0	1

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127	Urban Air Quality: Sources and Concentrations. , 2019, , 1-23.		1
128	Compact Algorithms for Predicting of Atmospheric Visibility Using PM2.5, Relative Humidity and NO2. Aerosol and Air Quality Research, 2020, , .	2.1	1
129	Air Pollution Sources, Statistics, and Health Effects, Introduction. , 2020, , 1-3.		1
130	Tropospheric Photolysis Rates of the Acetaldehyde Isotopologues CD3CHO and CD3CDO Relative to CH3CHO Measured at the European Photoreactor Facility. Journal of Physical Chemistry A, 2015, 119, 2562-2567.	2.5	0
131	Indoor Air Quality: Status and Standards. , 2019, , 1-28.		0
132	Airborne Nanoparticles: Control and Detection. , 2020, , 1-49.		0
133	Perturbation of the UV transitions of formaldehyde by TiO2 photocatalysts and Aun nanoclusters. Physical Chemistry Chemical Physics, 2022, , .	2.8	0