Joseph Hodges

List of Publications by Year
in descending order

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100 papers	10,499 citations	81743 39 h-index	39575 94 g-index
100 all docs	100 docs citations	100 times ranked	6514 citing authors

#	Article	IF	Citations
1	The HITRAN2020 molecular spectroscopic database. Journal of Quantitative Spectroscopy and Radiative Transfer, 2022, 277, 107949.	1.1	770
2	Assessment of the precision, bias and numerical correlation of fitted parameters obtained by multi-spectrum fits of the Hartmann-Tran line profile to simulated absorption spectra. Journal of Quantitative Spectroscopy and Radiative Transfer, 2022, 280, 108100.	1.1	3
3	The effects of advanced spectral line shapes on atmospheric carbon dioxide retrievals. Journal of Quantitative Spectroscopy and Radiative Transfer, 2022, 291, 108324.	1.1	1
4	Comparison of Primary Laser Spectroscopy and Mass Spectrometry Methods for Measuring Mass Concentration of Gaseous Elemental Mercury. Analytical Chemistry, 2021, 93, 1050-1058.	3.2	10
5	Cavity buildup dispersion spectroscopy. Communications Physics, 2021, 4, .	2.0	9
6	Validation of spectroscopic data in the 1.27 Âµm spectral region by comparisons with ground-based atmospheric measurements. Journal of Quantitative Spectroscopy and Radiative Transfer, 2021, 261, 107495.	1.1	4
7	Near-infrared cavity ring-down spectroscopy measurements of nitrous oxide in the (4200)â†(0000) and (5000)â†(0000) bands. Journal of Quantitative Spectroscopy and Radiative Transfer, 2021, 262, 107527.	1.1	12
8	Absolute 13C/12C isotope amount ratio for Vienna PeeDee Belemnite from infrared absorption spectroscopy. Nature Physics, 2021, 17, 889-893.	6.5	27
9	Frequency stabilization of a quantum cascade laser by weak resonant feedback from a Fabryâ€"Perot cavity. Optics Letters, 2021, 46, 3057.	1.7	16
10	Air-broadening in near-infrared carbon dioxide line shapes: Quantifying contributions from O2, N2, and Ar. Journal of Quantitative Spectroscopy and Radiative Transfer, 2021, 270, 107669.	1.1	4
11	High accuracy spectroscopic parameters of the 1.27 Âµm band of O2 measured with comb-referenced, cavity ring-down spectroscopy. Journal of Quantitative Spectroscopy and Radiative Transfer, 2021, 270, 107684.	1.1	9
12	Molecular transition frequencies of CO2 near 1.6 Âµm with kHz-level uncertainties. Journal of Quantitative Spectroscopy and Radiative Transfer, 2021, 271, 107681.	1.1	15
13	Improvement of the spectroscopic parameters of the air- and self-broadened N<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si3.svg"><mml:msub><mml:mrow /><mml:mn>2</mml:mn></mml:msub></mml:math>O and CO lines for the HITRAN2020 database applications. Journal of Quantitative Spectroscopy and Radiative Transfer, 2021, 271, 107735.	1.1	13
14	Inclusion of the recoil shift in Doppler-broadened measurements of CO2 transition frequencies. Journal of Quantitative Spectroscopy and Radiative Transfer, 2021, 275, 107885.	1.1	5
15	The update of the line positions and intensities in the line list of carbon dioxide for the HITRAN2020 spectroscopic database. Journal of Quantitative Spectroscopy and Radiative Transfer, 2021, 276, 107896.	1.1	11
16	Doppler-Free Two-Photon Cavity Ring-Down Spectroscopy of a Molecular Vibrational Overtone Transition. , 2021, , .		0
17	Absorption coefficient (ABSCO) tables for the Orbiting Carbon Observatories: Version 5.1. Journal of Quantitative Spectroscopy and Radiative Transfer, 2020, 255, 107217.	1.1	24
18	Cavity ring-down spectroscopy of CO2 near Î»Â=Â2.06ÂÂµm: Accurate transition intensities for the Orbiting Carbon Observatory-2 (OCO-2) â€œstrong bandâ€. Journal of Quantitative Spectroscopy and Radiative Transfer, 2020, 252, 107104.	1.1	18

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19	Doppler-free two-photon cavity ring-down spectroscopy of a nitrous oxide (<mml:math) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 5 Physical Review A, 2020, 101, .	1.0	21
20	Highâ€Accuracy Nearâ€Infrared Carbon Dioxide Intensity Measurements to Support Remote Sensing. Geophysical Research Letters, 2020, 47, e2019GL086344.	1.5	23
21	SI-traceable molecular transition frequency measurements at the 10^{â^’12} relative uncertainty level. Optica, 2020, 7, 1209.	4.8	24
22	Comb-locked cavity-ringdown spectroscopy for molecular transition frequency measurements below 1Ã—10-12 relative uncertainty. , 2020, , .		0
23	Cavity ring-down spectroscopy of CO near = 2.06 Î¼m: Accurate transition intensities for the Orbiting Carbon Observatory-2 (OCO-2) "strong band". Journal of Quantitative Spectroscopy and Radiative Transfer, 2020, 252, .	1.1	0
24	Doppler-Free Two-Photon Cavity Ring-Down Spectroscopy of a Nitrous Oxide (NO) Vibrational Overtone Transition. Physical Review A, 2020, 101, .	1.0	2
25	Twenty-Five-Fold Reduction in Measurement Uncertainty for a Molecular Line Intensity. Physical Review Letters, 2019, 123, 043001.	2.9	33
26	Advances in reference materials and measurement techniques for greenhouse gas atmospheric observations. Metrologia, 2019, 56, 034006.	0.6	24
27	Measurement and Modeling of Airâ€Broadened Methane Absorption in the MERLIN Spectral Region at Low Temperatures. Journal of Geophysical Research D: Atmospheres, 2019, 124, 3556-3564.	1.2	17
28	Recommendation of a consensus value of the ozone absorption cross-section at 253.65â€‰nm based on a literature review. Metrologia, 2019, 56, 034001.	0.6	22
29	Using a speed-dependent Voigt line shape to retrieve O₂ from Total Carbon Column Observing Network solar spectra to improve measurements of XCO₂. Atmospheric Measurement Techniques, 2019, 12, 35-50.	1.2	20
30	Prediction of high-order line-shape parameters for air-broadened O2 lines using requantized classical molecular dynamics simulations and comparison with measurements. Journal of Quantitative Spectroscopy and Radiative Transfer, 2019, 222-223, 108-114.	1.1	14
31	High-accuracy 12C16O2 line intensities in the 2ÂÂµm wavelength region measured by frequency-stabilized cavity ring-down spectroscopy. Journal of Quantitative Spectroscopy and Radiative Transfer, 2018, 206, 367-377.	1.1	18
32	Recent advances in collisional effects on spectra of molecular gases and their practical consequences. Journal of Quantitative Spectroscopy and Radiative Transfer, 2018, 213, 178-227.	1.1	85
33	Multispectrum analysis of the oxygen A-band. Journal of Quantitative Spectroscopy and Radiative Transfer, 2017, 186, 118-138.	1.1	67
34	Spectral shapes of rovibrational lines of CO broadened by He, Ar, Kr and SF6: A test case of the Hartmann-Tran profile. Journal of Quantitative Spectroscopy and Radiative Transfer, 2017, 203, 325-333.	1.1	19
35	A variable-temperature cavity ring-down spectrometer with application to line shape analysis of CO2 spectra in the 1600Ânm region. Applied Physics B: Lasers and Optics, 2017, 123, 1.	1.1	25
36	Optical Measurement of Radiocarbon below Unity Fraction Modern by Linear Absorption Spectroscopy. Journal of Physical Chemistry Letters, 2017, 8, 4550-4556.	2.1	52

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37	Line shape parameters of helium-broadened 12C16O transitions in the 3â€¯â†’â€¯0 overtone band near 1.57â€¯Âµm. Journal of Quantitative Spectroscopy and Radiative Transfer, 2017, 203, 300-308.	1.1	8
38	The HITRAN2016 molecular spectroscopic database. Journal of Quantitative Spectroscopy and Radiative Transfer, 2017, 203, 3-69.	1.1	2,840
39	High precision 2.0 Âµm Photoacoustic Spectrometer for Determination of the 13CO2/12CO2 Isotope Ratio. , 2017, , .		0
40	Precise methane absorption measurements in the 1.64â€‰Î¼m spectral region for the MERLIN mission. Journal of Geophysical Research D: Atmospheres, 2016, 121, 7360-7370.	1.2	50
41	Multiplexed sub-Doppler spectroscopy with an optical frequency comb. Physical Review A, 2016, 94, .	1.0	53
42	Ultra-sensitive cavity ring-down spectroscopy in the mid-infrared spectral region. Optics Letters, 2016, 41, 1612.	1.7	27
43	High-Accuracy<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>CO</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:math>Line Intensities Determined from Theory and Experiment. Physical Review Letters, 2015, 114, 243001.	2.9	103
44	Cavity ring-down spectrometer for high-fidelity molecular absorption measurements. Journal of Quantitative Spectroscopy and Radiative Transfer, 2015, 161, 11-20.	1.1	43
45	Frequency-agile, rapid scanning cavity ring-down spectroscopy (FARS-CRDS) measurements of the (30012)â†(00001) near-infrared carbon dioxide band. Journal of Quantitative Spectroscopy and Radiative Transfer, 2015, 161, 35-40.	1.1	39
46	Application of the Hartmannâ€“Tran profile to analysis of H2O spectra. Journal of Quantitative Spectroscopy and Radiative Transfer, 2015, 164, 221-230.	1.1	39
47	Line shapes, positions and intensities of water transitions near 1.28Î¼m. Journal of Quantitative Spectroscopy and Radiative Transfer, 2015, 152, 1-15.	1.1	46
48	Recommended isolated-line profile for representing high-resolution spectroscopic transitions (IUPAC) Tj ETQq0 0 0 rgBT /Overlock 10 Tf	0.9	225
49	Isolated line shapes of molecular oxygen: Requantized classical molecular dynamics calculations versus measurements. Physical Review A, 2014, 89, .	1.0	18
50	Frequency-agile, rapid scanning spectroscopy: absorption sensitivity of 2ÂÃ—Â10â^'12Âcmâ^'1ÂHzâ^'1/2 with a tunable diode laser. Applied Physics B: Lasers and Optics, 2014, 114, 489-495.	1.1	43
51	A database of water transitions from experiment and theory (IUPAC Technical Report). Pure and Applied Chemistry, 2014, 86, 71-83.	0.9	76
52	Photoacoustic spectrometer for accurate, continuous measurements of atmospheric carbon dioxide concentration. Applied Physics B: Lasers and Optics, 2014, 117, 645-657.	1.1	5
53	Collisional broadening and spectral shapes of absorption lines of free and nanopore-confined O<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mn>2</mml:mn></mml:msub></mml:math>gas. Physical Review A, 2013, 87, .	1.0	52
54	Spectral line-shapes investigation with Pound-Drever-Hall-locked frequency-stabilized cavity ring-down spectroscopy. European Physical Journal: Special Topics, 2013, 222, 2119-2142.	1.2	29

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55	Effects of incomplete light extinction in frequency-agile, rapid scanning spectroscopy. Proceedings of SPIE, 2013, , .	0.8	6
56	The HITRAN2012 molecular spectroscopic database. Journal of Quantitative Spectroscopy and Radiative Transfer, 2013, 130, 4-50.	1.1	2,810
57	Absolute 12C16O2 transition frequencies at the kHz-level from 1.6 to 7.8 Âµm. Journal of Quantitative Spectroscopy and Radiative Transfer, 2013, 130, 112-115.	1.1	32
58	Comb-linked, cavity ring-down spectroscopy for measurements of molecular transition frequencies at the kHz-level. Journal of Chemical Physics, 2013, 138, 094201.	1.2	51
59	Frequency-agile, rapid scanning spectroscopy. Nature Photonics, 2013, 7, 532-534.	15.6	91
60	IUPAC critical evaluation of the rotationalâ€“vibrational spectra of water vapor, Part III: Energy levels and transition wavenumbers for H216O. Journal of Quantitative Spectroscopy and Radiative Transfer, 2013, 117, 29-58.	1.1	215
61	Direct Measurements of Mass-Specific Optical Cross Sections of Single-Component Aerosol Mixtures. Analytical Chemistry, 2013, 85, 8319-8325.	3.2	28
62	Differential cavity ring-down spectroscopy. Journal of the Optical Society of America B: Optical Physics, 2013, 30, 1486.	0.9	14
63	The Effects of Variations in Buffer Gas Mixing Ratios on Commercial Carbon Dioxide Cavity Ring-Down Spectroscopy Sensors. Journal of Atmospheric and Oceanic Technology, 2013, 30, 2604-2609.	0.5	7
64	Highâ€accuracy measurements of the vapor pressure of ice referenced to the triple point. Geophysical Research Letters, 2013, 40, 6303-6307.	1.5	20
65	Frequency-stabilized cavity ring-down spectroscopy measurements of line mixing and collision-induced absorption in the O2â€ˆ<i>A</i>-band. Journal of Chemical Physics, 2012, 137, 014307.	1.2	14
66	High-signal-to-noise-ratio laser technique for accurate measurements of spectral line parameters. Physical Review A, 2012, 85, .	1.0	96
67	Spectroscopic measurement of the vapour pressure of ice. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2012, 370, 2509-2519.	1.6	4
68	Demonstration of the extremely high signal-to-noise ratio and advanced O₂B-band line shape analysis in the PDH-locked FS-CRDS experiment. Journal of Physics: Conference Series, 2012, 397, 012046.	0.3	0
69	Measurement of H₂O Broadening of O₂ A-Band Transitions and Implications for Atmospheric Remote Sensing. Journal of Physical Chemistry A, 2012, 116, 4069-4073.	1.1	10
70	On spectroscopic models of the O₂<i>A</i>â€band and their impact upon atmospheric retrievals. Journal of Geophysical Research, 2012, 117, .	3.3	21
71	Frequency-stabilized cavity ring-down spectroscopy. Chemical Physics Letters, 2012, 536, 1-8.	1.2	72
72	Pound-Drever-Hall-locked, frequency-stabilized cavity ring-down spectrometer. Review of Scientific Instruments, 2011, 82, 063107.	0.6	92

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73	O2 A-band line parameters to support atmospheric remote sensing. Part II: The rare isotopologues. Journal of Quantitative Spectroscopy and Radiative Transfer, 2011, 112, 2527-2541.	1.1	19
74	Frequency-stabilized cavity ring-down spectroscopy measurements of carbon dioxide isotopic ratios. Applied Physics B: Lasers and Optics, 2011, 105, 471-477.	1.1	29
75	The air-broadened, near-infrared CO2 line shape in the spectrally isolated regime: Evidence of simultaneous Dicke narrowing and speed dependence. Journal of Chemical Physics, 2011, 135, 064308.	1.2	67
76	O2 A-band line parameters to support atmospheric remote sensing. Journal of Quantitative Spectroscopy and Radiative Transfer, 2010, 111, 2021-2036.	1.1	69
77	IUPAC critical evaluation of the rotationalâ€“vibrational spectra of water vapor. Part II. Journal of Quantitative Spectroscopy and Radiative Transfer, 2010, 111, 2160-2184.	1.1	178
78	Cavity ring-down spectroscopy measurements of sub-Doppler hyperfine structure. Physical Review A, 2010, 81, .	1.0	15
79	Line shapes and intensities of self-broadened<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mi mathvariant="normal">O</mml:mi><mml:mrow><mml:mn>2</mml:mn></mml:mrow></mml:msub></mml:mrow></mml:math><mml:m xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi>b</mml:mi></mml:mrow></mml:math><mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:m	1.0	38
80	Photoacoustic Spectrometer with a Calculable Cell Constant for Measurements of Gases and Aerosolsâ€. Analytical Chemistry, 2010, 82, 7935-7942.	3.2	30
81	Standard photoacoustic spectrometer: Model and validation using O2â€ˆA-band spectra. Review of Scientific Instruments, 2010, 81, 064902.	0.6	32
82	Spectroscopic line parameters of water vapor for rotation-vibration transitions near<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mn>7180</mml:mn><mml:mtext>â€‚</mml:mtext><mml:msup><mml:mrow><mml:mtext>cm</m Physical Review A, 2009, 79, .	1.0	99
83	...nd theoretical calculations of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mtext>O</mml:mtext><mml:mn>2</mml:mn></mml:msub></mml:mrow></mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>A</mml:mi></mml:math>band electric quadrupole transitions. Physical Review A, 2009, 80, .	1.0	41
84	IUPAC critical evaluation of the rotationalâ€“vibrational spectra of water vapor. Part Iâ€"Energy levels and transition wavenumbers for H217O and H218O. Journal of Quantitative Spectroscopy and Radiative Transfer, 2009, 110, 573-596.	1.1	188
85	Ultra-sensitive optical measurements of high-J transitions in the O2 A-band. Chemical Physics Letters, 2009, 483, 49-54.	1.2	25
86	Experimental Line Parameters of the b¹Î£_g⁺ â†• X³Î£_g^{â^'} Band of Oxygen Isotopologues at 760 nm Using Frequency-Stabilized Cavity Ring-Down Spectroscopy. Journal of Physical Chemistry A, 2009, 113, 13089-13099.	1.1	25
87	Experimental intensity and lineshape parameters of the oxygen A-band using frequency-stabilized cavity ring-down spectroscopy. Journal of Molecular Spectroscopy, 2008, 248, 1-13.	0.4	57
88	High-precision pressure shifting measurement technique using frequency-stabilized cavity ring-down spectroscopy. Journal of Quantitative Spectroscopy and Radiative Transfer, 2008, 109, 435-444.	1.1	26
89	Low-uncertainty H2O line intensities for the 930-nm region. Journal of Molecular Spectroscopy, 2008, 249, 6-13.	0.4	28
90	High-accuracy transition frequencies for the O2 A-band. Journal of Molecular Spectroscopy, 2008, 251, 27-37.	0.4	54

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91	Comparison between theoretical calculations and high-resolution measurements of pressure broadening for near-infrared water spectra. Journal of Molecular Spectroscopy, 2008, 249, 86-94.	0.4	54
92	Linking Molecular- and Atomic- Frequency Standards with Cavity Ring-Down Spectroscopy. , 2008, , .		0
93	High-resolution cavity ring-down spectroscopy measurements of blended H2O transitions. Applied Physics B: Lasers and Optics, 2007, 88, 317-325.	1.1	51
94	Frequency-stabilized cavity ring-down spectrometer for high-sensitivity measurements of water vapor concentration. Applied Physics B: Lasers and Optics, 2006, 85, 375-382.	1.1	43
95	Comparison of semiclassical line-shape models to rovibrationalH2Ospectra measured by frequency-stabilized cavity ring-down spectroscopy. Physical Review A, 2006, 73, .	1.0	95
96	Automated high-resolution frequency-stabilized cavity ring-down absorption spectrometer. Review of Scientific Instruments, 2005, 76, 023112.	0.6	77
97	Frequency-stabilized single-mode cavity ring-down apparatus for high-resolution absorption spectroscopy. Review of Scientific Instruments, 2004, 75, 849-863.	0.6	152
98	Pulsed, single-mode cavity ringdown spectroscopy. Applied Optics, 1999, 38, 3951.	2.1	89
99	Laser bandwidth effects in quantitative cavity ring-down spectroscopy. Applied Optics, 1996, 35, 4112.	2.1	116
100	Response of a ringâ€down cavity to an arbitrary excitation. Journal of Chemical Physics, 1996, 105, 10278-10288.	1.2	106