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List of Publications by Year
in descending order

77 papers	6,634 citations	201385 27 h-index	66788 78 g-index
79 all docs	79 docs citations	79 times ranked	4627 citing authors

#	Article	IF	Citations
1	The HITRAN2016 molecular spectroscopic database. Journal of Quantitative Spectroscopy and Radiative Transfer, 2017, 203, 3-69.	1.1	2,840
2	The HITRAN2020 molecular spectroscopic database. Journal of Quantitative Spectroscopy and Radiative Transfer, 2022, 277, 107949.	1.1	770
3	Toward accurate CO₂and CH₄observations from GOSAT. Geophysical Research Letters, 2011, 38, n/a-n/a.	1.5	355
4	New section of the HITRAN database: Collision-induced absorption (CIA). Journal of Quantitative Spectroscopy and Radiative Transfer, 2012, 113, 1276-1285.	1.1	268
5	An isolated line-shape model to go beyond the Voigt profile in spectroscopic databases and radiative transfer codes. Journal of Quantitative Spectroscopy and Radiative Transfer, 2013, 129, 89-100.	1.1	256
6	Recommended isolated-line profile for representing high-resolution spectroscopic transitions (IUPAC) Tj ETQq0 0 0 rgBT /Overlock 10 Tf	0.9	225
7	Efficient computation of some speed-dependent isolated line profiles. Journal of Quantitative Spectroscopy and Radiative Transfer, 2013, 129, 199-203.	1.1	161
8	Update of the HITRAN collision-induced absorption section. Icarus, 2019, 328, 160-175.	1.1	105
9	Updated database plus software for line-mixing in CO2 infrared spectra and their test using laboratory spectra in the 1.5â€“2.3Î¼m region. Journal of Quantitative Spectroscopy and Radiative Transfer, 2010, 111, 2321-2331.	1.1	89
10	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
11	An improved O₂ A band absorption model and its consequences for retrievals of photon paths and surface pressures. Journal of Geophysical Research, 2008, 113, .	3.3	67
12	The implementation of non-Voigt line profiles in the HITRAN database: H2 case study. Journal of Quantitative Spectroscopy and Radiative Transfer, 2016, 177, 75-91.	1.1	64
13	Collisional parameters of H2O lines: Velocity effects on the line-shape. Journal of Quantitative Spectroscopy and Radiative Transfer, 2007, 108, 126-145.	1.1	63
14	Velocity effects on the shape of pure H2O isolated lines: Complementary tests of the partially correlated speed-dependent Keilson-Storer model. Journal of Chemical Physics, 2013, 138, 034302.	1.2	61
15	Model, software and database for line-mixing effects in the Î½3 and Î½4 bands of CH4 and tests using laboratory and planetary measurementsâ€"I: N2 (and air) broadenings and the earth atmosphere. Journal of Quantitative Spectroscopy and Radiative Transfer, 2006, 101, 284-305.	1.1	60
16	Line mixing and collision-induced absorption by oxygen in the A band: Laboratory measurements, model, and tools for atmospheric spectra computations. Journal of Geophysical Research, 2006, 111, .	3.3	59
17	<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi>A</mml:mi><mml:mi>b</mml:mi><mml:mspace width="0.28em" /><mml:mspace width="0.28em" /><mml:mi>i</mml:mi><mml:mi>n</mml:mi><mml:mi>i</mml:mi><mml:mi>t</mml:mi><mml:mi>i</mml:mi><mml:mi>o</mml:mi></m of the spectral shapes of CO<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>isolated lin...	1.0	56
18	Influence of line mixing on the retrievals of atmospheric CO₂ from spectra in the 1.6 and 2.1 Î¼m regions. Atmospheric Chemistry and Physics, 2009, 9, 7303-7312.	1.9	54

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19	Measurements and modelling of high pressure pure CO2 spectra from 750 to 8500cmâ˜'1. Iâ€"central and wing regions of the allowed vibrational bands. Journal of Quantitative Spectroscopy and Radiative Transfer, 2011, 112, 925-936.	1.1	51
20	An isolated line-shape model based on the Keilsonâ€"Storer function for velocity changes. II. Molecular dynamics simulations and the Q(1) lines for pure H2. Journal of Chemical Physics, 2009, 131, 154303.	1.2	50
21	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
22	The 2Î½3 band of CH4 revisited with line mixing: Consequences for spectroscopy and atmospheric retrievals at 1.67Î¼m. Journal of Quantitative Spectroscopy and Radiative Transfer, 2010, 111, 1344-1356.	1.1	46
23	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
24	A pure H2O isolated line-shape model based on classical molecular dynamics simulations of velocity changes and semi-classical calculations of speed-dependent collisional parameters. Journal of Chemical Physics, 2012, 136, 154310.	1.2	32
25	Far infrared measurements of absorptions by CH4â€¯+â€¯CO2 and H2â€¯+â€¯CO2 mixtures and implications for greenhouse warming on early Mars. Icarus, 2019, 321, 189-199.	1.1	31
26	Velocity-changing collisions in pure H2 and H2-Ar mixture. Journal of Chemical Physics, 2014, 141, 074301.	1.2	30
27	An isolated line-shape model based on the Keilson and Storer function for velocity changes. I. Theoretical approaches. Journal of Chemical Physics, 2009, 130, 094301.	1.2	26
28	Line mixing in the Î½6 Q branches of self- and nitrogen-broadened methyl bromide. Journal of Quantitative Spectroscopy and Radiative Transfer, 2008, 109, 119-131.	1.1	25
29	Influence of velocity effects on the shape of N2 (and air) broadened H2O lines revisited with classical molecular dynamics simulations. Journal of Chemical Physics, 2012, 137, 064302.	1.2	23
30	Intensities and shapes of H2O lines in the near-infrared by tunable diode laser spectroscopy. Journal of Quantitative Spectroscopy and Radiative Transfer, 2012, 113, 870-877.	1.1	23
31	Molecular dynamics simulations for CO2 absorption spectra. I. Line broadening and the far wing of the Î½3 infrared band. Journal of Chemical Physics, 2010, 133, 144313.	1.2	22
32	Collision-induced velocity changes from molecular dynamic simulations in H2â€"Ar: A test of the Keilsonâ€"Storer model and of line-broadening/shifting calculations for the Q(1) Raman line. Journal of Quantitative Spectroscopy and Radiative Transfer, 2011, 112, 1035-1042.	1.1	21
33	Temperature dependences of air-broadening, air-narrowing and line-mixing coefficients of the methane Î½3 R(6) manifold linesâ€"Application to in-situ measurements of atmospheric methane. Journal of Quantitative Spectroscopy and Radiative Transfer, 2014, 133, 206-216.	1.1	21
34	Femtosecond time resolved coherent anti-Stokes Raman spectroscopy: Experiment and modelization of speed memory effects on H2â€"N2 mixtures in the collision regime. Journal of Chemical Physics, 2005, 122, 194317.	1.2	19
35	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
36	Spectral shape parameters of pure CO2 transitions near 1.6Âµm by tunable diode laser spectroscopy. Journal of Quantitative Spectroscopy and Radiative Transfer, 2015, 164, 82-88.	1.1	18

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37	Accurate absorption spectroscopy of water vapor near 1.64â€¯Âµm in support of the MEthane Remote LIdar missioN (MERLIN). Journal of Quantitative Spectroscopy and Radiative Transfer, 2019, 235, 332-342.	1.1	18
38	Revising the line-shape parameters for air- and self-broadened CO2 lines toward a sub-percent accuracy level. Journal of Quantitative Spectroscopy and Radiative Transfer, 2020, 256, 107283.	1.1	18
39	Some improvements of the HNO3 spectroscopic parameters in the spectral region from 600 to 950cmâˆ’1. Journal of Quantitative Spectroscopy and Radiative Transfer, 2009, 110, 675-686.	1.1	17
40	CO2 isolated line shapes by classical molecular dynamics simulations: Influence of the intermolecular potential and comparison with new measurements. Journal of Chemical Physics, 2014, 140, 084308.	1.2	17
41	Spectral shapes of Ar-broadened HCl lines in the fundamental band by classical molecular dynamics simulations and comparison with experiments. Journal of Chemical Physics, 2014, 141, 064313.	1.2	17
42	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
43	Measurements of H2O broadening coefficients of infrared methane lines. Journal of Quantitative Spectroscopy and Radiative Transfer, 2016, 173, 40-48.	1.1	16
44	Effect of humidity on the absorption continua of CO2 and N2 near 4 <i>Î¼</i>m: Calculations, comparisons with measurements, and consequences for atmospheric spectra. Journal of Chemical Physics, 2018, 148, 054304.	1.2	16
45	Line mixing calculation in the Î½6 Q-branches of N2-broadened CH3Br at low temperatures. Journal of Molecular Spectroscopy, 2009, 256, 35-40.	0.4	15
46	High pressure Cavity Ring Down Spectroscopy: Application to the absorption continuum of CO2 near 1.7Âµm. Journal of Quantitative Spectroscopy and Radiative Transfer, 2015, 167, 97-104.	1.1	15
47	Super- and sub-Lorentzian effects in the Ar-broadened line wings of HCl gas. Journal of Chemical Physics, 2017, 146, 194305.	1.2	15
48	Measurements and modeling of absorption by CO2â€¯+â€¯H2O mixtures in the spectral region beyond the CO2 Î½3-band head. Icarus, 2018, 306, 116-121.	1.1	15
49	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
50	Line mixing in the QQ sub branches of the Î½1 band of methyl chloride. Journal of Quantitative Spectroscopy and Radiative Transfer, 2012, 113, 2182-2188.	1.1	13
51	Broadening of CO2 lines in the 4.3 Î¼m region by H2O. Journal of Molecular Spectroscopy, 2016, 326, 17-20.	0.4	13
52	Isolated line shape of methane with various collision partners. Journal of Quantitative Spectroscopy and Radiative Transfer, 2016, 185, 27-36.	1.1	13
53	Comment on â€œRadiative Transfer in CO₂â€Rich Atmospheres: 1. Collisional Line Mixing Implies a Colder Early Marsâ€• Journal of Geophysical Research E: Planets, 2017, 122, 2362-2365.	1.5	13
54	Non-Voigt line-shape effects on retrievals of atmospheric ozone: Collisionally isolated lines. Journal of Quantitative Spectroscopy and Radiative Transfer, 2010, 111, 2012-2020.	1.1	12

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55	Femtosecond time resolved coherent anti-Stokes Raman spectroscopy of H2â€“N2 mixtures in the Dicke regime: Experiments and modeling of velocity effects. Journal of Chemical Physics, 2009, 131, 174310.	1.2	11
56	Line-mixing and collision induced absorption for O2â€“CO2 mixtures in the oxygen A-band region. Journal of Quantitative Spectroscopy and Radiative Transfer, 2009, 110, 2212-2216.	1.1	11
57	Molecular dynamics simulations for CO2 spectra. IV. Collisional line-mixing in infrared and Raman bands. Journal of Chemical Physics, 2013, 138, 244310.	1.2	11
58	High sensitivity spectroscopy of the O2 band at 1.27ÂÂµm: (II) air-broadened line profile parameters. Journal of Quantitative Spectroscopy and Radiative Transfer, 2020, 240, 106673.	1.1	11
59	Line-shape parameters and their temperature dependences predicted from molecular dynamics simulations for O2- and air-broadened CO2 lines. Journal of Quantitative Spectroscopy and Radiative Transfer, 2020, 242, 106729.	1.1	11
60	The CO2 absorption continuum by high pressure CRDS in the 1.74 Âµm window. Journal of Quantitative Spectroscopy and Radiative Transfer, 2017, 203, 530-537.	1.1	10
61	Prediction of line shape parameters and their temperature dependences for CO2â€“N2 using molecular dynamics simulations. Journal of Chemical Physics, 2018, 149, 224301.	1.2	10
62	Broadening and shift coefficients for the (2â†0) overtone band of HCl (1.76 Âµm) induced by exhaust gases CO and CO2. Journal of Quantitative Spectroscopy and Radiative Transfer, 2017, 203, 434-439.	1.1	8
63	The CO2â€“broadened H2O continuum in the 100â€“1500â€¯cm-1 region: Measurements, predictions and empirical model. Journal of Quantitative Spectroscopy and Radiative Transfer, 2019, 230, 75-80.	1.1	7
64	Indirect Influence of Humidity on Atmospheric Spectra Near 4ÂÎ¼m. Geophysical Research Letters, 2018, 45, 12,593-12,601.	1.5	6
65	Temperature Dependence of the Collisionâ€Induced Absorption Band of O₂ Near 1.27ÂÂµm. Journal of Geophysical Research D: Atmospheres, 2021, 126, e2021JD034860.	1.2	6
66	Comment on â€œOrtho-Para-Dependent Pressure Effects Observed in the Near Infrared Band of Acetylene by Dual-Comb Spectroscopyâ€• Physical Review Letters, 2017, 119, 069401.	2.9	5
67	Non-Voigt line-shape effects on retrievals of atmospheric ozone: Line-mixing effects. Journal of Quantitative Spectroscopy and Radiative Transfer, 2011, 112, 2287-2295.	1.1	4
68	Infrared light on molecule-molecule and molecule-surface collisions. Physical Review A, 2015, 92, .	1.0	4
69	Measurements of H2O-broadening coefficients of O2 A-band lines. Journal of Quantitative Spectroscopy and Radiative Transfer, 2016, 184, 316-321.	1.1	4
70	Molecular dynamic simulations of N2-broadened methane line shapes and comparison with experiments. Journal of Chemical Physics, 2017, 146, 094305.	1.2	4
71	Precise predictions of H 2 O line shapes over a wide pressure range using simulations corrected by a single measurement. Journal of Quantitative Spectroscopy and Radiative Transfer, 2018, 207, 16-22.	1.1	4
72	Note on the two possible formulations of the Hartmann-Tran line profile. Journal of Quantitative Spectroscopy and Radiative Transfer, 2019, 233, 76-77.	1.1	4

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73	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
74	O2-broadening coefficients of acetylene lines in the Î½4+Î½5 band at room temperature. Journal of Molecular Spectroscopy, 2015, 314, 48-53.	0.4	3
75	Air-broadened N2O line-shape parameters and their temperature dependences by requantized classical molecular dynamics simulations. Journal of Quantitative Spectroscopy and Radiative Transfer, 2021, 267, 107607.	1.1	3
76	Absorption of methane broadened by carbon dioxide in the 3.3ÂÎ¼m spectral region: From line centers to the far wings. Icarus, 2022, 384, 115093.	1.1	2
77	Molecular dynamics simulations of pressure-broadened symmetric-top gas spectra. Application to CH3F-Ar and CH3F-He mixtures. Journal of Quantitative Spectroscopy and Radiative Transfer, 2022, 278, 108031.	1.1	1