Daniel Lisak

List of Publications by Year
in descending order

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134 papers	2,972 citations	147801 31 h-index	182427 51 g-index
136 all docs	136 docs citations	136 times ranked	1224 citing authors

#	Article	IF	Citations
1	Spectral analysis of H₂O near 7180 cm^{â€“1} to accurately measure trace moisture in N₂ gas: evaluation of line shape profiles using Akaike Information Criterion. Japanese Journal of Applied Physics, 2022, 61, 012003.	1.5	2
2	Line mixing in the oxygen B band head. Journal of Chemical Physics, 2022, 156, 084301.	3.0	4
3	Dual-comb cavity ring-down spectroscopy. Scientific Reports, 2022, 12, 2377.	3.3	14
4	The first comprehensive dataset of beyond-Voigt line-shape parameters from ab initio quantum scattering calculations for the HITRAN database: He-perturbed H<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si11.svg"><mml:msub><mml:mrow /><mml:mn>2</mml:mn></mml:msub></mml:math> case study. Journal of Quantitative Spectroscopy and Radiative Transfer, 2021, 260, 107477.	2.3	21
5	Cavity buildup dispersion spectroscopy. Communications Physics, 2021, 4, .	5.3	9
6	Simultaneous observation of speed dependence and Dicke narrowing for self-perturbed P-branch lines of O<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si36.svg"><mml:msub><mml:mrow /><mml:mn>2</mml:mn></mml:msub></mml:math> B band. Journal of Quantitative Spectroscopy and Radiative Transfer, 2021, 276, 107927.	2.3	7
7	Frequency-based dispersion Lamb-dip spectroscopy in a high finesse optical cavity. Optics Express, 2021, 29, 39449.	3.4	7
8	Line-shape analysis for high J R-branch transitions of the oxygen B band. Journal of Quantitative Spectroscopy and Radiative Transfer, 2020, 242, 106789.	2.3	8
9	Analytical-function correction to the Hartmannâ€“Tran profile for more reliable representation of the Dicke-narrowed molecular spectra. Journal of Quantitative Spectroscopy and Radiative Transfer, 2020, 242, 106784.	2.3	18
10	H2 -He collisions: Ab initio theory meets cavity-enhanced spectra. Physical Review A, 2020, 101, .	2.5	24
11	Ultrahigh finesse cavity-enhanced spectroscopy for accurate tests of quantum electrodynamics for molecules. Optics Letters, 2020, 45, 1603.	3.3	26
12	Broadband Optical Cavity Mode Measurements at Hz-Level Precision With a Comb-Based VIPA Spectrometer. Scientific Reports, 2019, 9, 8206.	3.3	29
13	Comb-Based Fourier-Transform Spectrometry for Broadband Measurements of Absorption and Dispersion. , 2019, , .		0
14	Parts-per-trillion sensitivity for trace-moisture detection using wavelength-meter-controlled cavity ring-down spectroscopy. AIP Advances, 2019, 9, .	1.3	10
15	Dual-laser cavity ring-down spectroscopy for real-time, long-term measurement of trace moisture in gas. Measurement Science and Technology, 2019, 30, 015002.	2.6	2
16	High-accuracy and wide dynamic range frequency-based dispersion spectroscopy in an optical cavity. Optics Express, 2019, 27, 21810.	3.4	26
17	Cavity-Enhanced Direct Optical Frequency Comb Spectroscopy with Tooth-Width Limited Resolution. , 2019, , .		0
18	Mirror Characterization and Complex Refractive Index Measurements with Hz-level Resolution Fourier Transform Spectrometry. , 2019, , .		0

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19	Nonlinear resonances in linear segmented Paul trap of short central segment. Journal of Mass Spectrometry, 2018, 53, 541-547.	1.6	5
20	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.	2.3	85
21	Response of an optical cavity to phase-controlled incomplete power switching of nearly resonant incident light. Optics Express, 2018, 26, 5644.	3.4	11
22	Speed-dependent effects in Doppler-free saturation spectra. Journal of Molecular Spectroscopy, 2018, 351, 21-28.	1.2	4
23	Accurate deuterium spectroscopy for fundamental studies. Journal of Quantitative Spectroscopy and Radiative Transfer, 2018, 213, 41-51.	2.3	54
24	Measurement of electron-calcium ionization integral cross section using an ion trap with a low-energy, pulsed electron gun. Journal of Electron Spectroscopy and Related Phenomena, 2018, 228, 13-19.	1.7	3
25	Optical Cavity Mode Measurements at Hz-Level Precision With a Comb-Based VIPA Spectrometer. , 2018, , .		0
26	Fourier-Transform Frequency Comb Cavity Mode Spectroscopy at Hz Level for Trace Gas Measurements. , 2018, , .		1
27	Broadband cavity-enhanced molecular absorption and dispersion spectroscopy with a frequency comb-based VIPA spectrometer. , 2018, , .		0
28	Broadband and high resolution measurements of cavity loss and dispersion. Photonics Letters of Poland, 2018, 10, 48.	0.4	4
29	Line positions, pressure broadening and shift coefficients for the second overtone transitions of carbon monoxide in argon. Journal of Quantitative Spectroscopy and Radiative Transfer, 2017, 191, 46-54.	2.3	16
30	VIPA spectrometer calibration and comb-cavity locking schemes comparison for sensitive and accurate frequency comb spectroscopy. Journal of Physics: Conference Series, 2017, 810, 012035.	0.4	2
31	Multispectrum-fitting of phenomenological collisional line-shape models to a speed-dependent Blackmore profile for spectroscopic analysis and databases. Journal of Physics: Conference Series, 2017, 810, 012061.	0.4	2
32	Ultra accurate measurements andab initiocalculations of collisional effects in pure D2.. Journal of Physics: Conference Series, 2017, 810, 012042.	0.4	1
33	Speed-dependent Voigt profile parameters for oxygen B-band measured by cavity ring-down spectrometer referenced to the optical frequency comb. Journal of Physics: Conference Series, 2017, 810, 012030.	0.4	0
34	Experimental constraint on dark matter detection with optical atomic clocks. Nature Astronomy, 2017, 1, .	10.1	84
35	Absolute frequency determination of molecular transition in the Doppler regime at kHz level of accuracy. Journal of Quantitative Spectroscopy and Radiative Transfer, 2017, 201, 156-160.	2.3	19
36	Measurement of oxygen Bâ€“band line center frequency in reference to strontium atomic optical clock. Journal of Physics: Conference Series, 2017, 810, 012024.	0.4	0

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37	Experimental constraint on dark matter-standard model coupling with optical atomic clocks. , 2017, , .		0
38	Multi-spectrum fitting software for advanced spectral line shapes analysis. Journal of Physics: Conference Series, 2017, 810, 012025.	0.4	3
39	Dispersion and relativistic corrections to the spectral line-shape models. Journal of Physics: Conference Series, 2017, 810, 012062.	0.4	1
40	XXIII International Conference on Spectral Line Shapes. Journal of Physics: Conference Series, 2017, 810, 011001.	0.4	0
41	Electron impact ionization of calcium atoms inside quadrupole trap. Journal of Physics: Conference Series, 2017, 875, 052008.	0.4	3
42	Optical Frequency Comb Spectroscopy for Gas Metrology and Trace Gas Detection. , 2017, , .		0
43	Fibre-optic delivery of time and frequency to VLBI station. Astronomy and Astrophysics, 2017, 603, A48.	5.1	32
44	Spectral line-shape study by cavity-enhanced complex refractive index spectroscopy. Journal of Physics: Conference Series, 2017, 810, 012007.	0.4	3
45	Optical system for Doppler cooling of trapped calcium ions. Photonics Letters of Poland, 2017, 9, 119.	0.4	5
46	Absolute molecular transition frequencies measured by three cavity-enhanced spectroscopy techniques. Journal of Chemical Physics, 2016, 144, 214202.	3.0	37
47	Dispersion corrections to the Gaussian profile describing the Doppler broadening of spectral lines. Physical Review A, 2016, 93, .	2.5	5
48	Accuracy budget of the88Sr optical atomic clocks at KL FAMO. Physica Scripta, 2016, 91, 084003.	2.5	10
49	One-dimensional cavity mode-dispersion spectroscopy for validation of CRDS technique. Measurement Science and Technology, 2016, 27, 045501.	2.6	21
50	The optical 88Sr lattice clocks and stabilized fibre links: A frequency reference for the VLBI system over a 15.5-km link and an absolute measurement of the clock transition over a 330-km link. , 2016, , .		0
51	A new approach to spectral line shapes of the weak oxygen transitions for atmospheric applications. Journal of Quantitative Spectroscopy and Radiative Transfer, 2016, 169, 111-121.	2.3	27
52	Wavelength-meter controlled cavity ring-down spectroscopy: high-sensitivity detection of trace moisture in N 2 at sub-ppb levels. Sensors and Actuators A: Physical, 2016, 241, 152-160.	4.1	20
53	Self-referenced, accurate and sensitive optical frequency comb spectroscopy with a virtually imaged phased array spectrometer. Optics Letters, 2016, 41, 974.	3.3	18
54	VIPA Spectrometer for Accurate and Sensitive Self-Referenced Frequency Comb Spectroscopy. , 2016, , .		1

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55	Absolute measurement of the 1S0â€‰â€“â€‰3P0 clock transition in neutral 88Sr over the 330 km-long stabilized fibre optic link. Scientific Reports, 2015, 5, 17495.	3.3	45
56	Note: Reliable, robust measurement system for trace moisture in gas at parts-per-trillion levels using cavity ring-down spectroscopy. Review of Scientific Instruments, 2015, 86, 106110.	1.3	4
57	CRDS investigation of line shapes of the nitrogen-broadened oxygenB-band transition. Journal of Physics: Conference Series, 2015, 635, 092109.	0.4	0
58	Spectral line shapes and frequencies of the molecular oxygen B-band R-branch transitions. Journal of Quantitative Spectroscopy and Radiative Transfer, 2015, 155, 22-31.	2.3	19
59	Speed-dependent effects and Dicke narrowing in nitrogen-broadened oxygen. Journal of Quantitative Spectroscopy and Radiative Transfer, 2015, 165, 68-75.	2.3	15
60	One-dimensional frequency-based spectroscopy. Optics Express, 2015, 23, 14472.	3.4	42
61	Application of the Hartmannâ€“Tran profile to analysis of H2O spectra. Journal of Quantitative Spectroscopy and Radiative Transfer, 2015, 164, 221-230.	2.3	39
62	Strontium optical lattice clocks for practical realization of the metre and secondary representation of the second. Measurement Science and Technology, 2015, 26, 075201.	2.6	26
63	Two independent strontium optical lattice clocks for practical realization of the meter and secondary representation of the second. , 2015, , .		0
64	Quadratic speed dependence of collisional broadening and shifting for atmospheric applications. Journal of Quantitative Spectroscopy and Radiative Transfer, 2015, 151, 43-48.	2.3	32
65	Broadband CO2 measurements with VIPA spectrometer in the near-infrared. Photonics Letters of Poland, 2015, 7, .	0.4	2
66	Recommended isolated-line profile for representing high-resolution spectroscopic transitions (IUPAC) Tj ETQq0 0 0 rgBT /Overlock 10 Tf	1.9	225
67	Spectral line shapes of self-broadened P-branch transitions of oxygen B band. Journal of Quantitative Spectroscopy and Radiative Transfer, 2014, 144, 36-48.	2.3	41
68	Observations of Dicke narrowing and speed dependence in air-broadened CO2 lineshapes near 2.06ÂÎ¼m. Journal of Chemical Physics, 2014, 141, 174301.	3.0	40
69	Line-shapes analysis with ultra-high accuracy. Journal of Physics: Conference Series, 2014, 548, 012022.	0.4	0
70	Alternative approaches to cavity enhanced absorption spectroscopy. Journal of Physics: Conference Series, 2014, 548, 012024.	0.4	2
71	Precise cavity enhanced absorption spectroscopy. Journal of Physics: Conference Series, 2014, 548, 012015.	0.4	5
72	Spectral line-shapes of oxygen B-band transitions measured with cavity ring-down spectroscopy. Journal of Physics: Conference Series, 2014, 548, 012028.	0.4	3

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73	Spectral line-shapes investigation with Pound-Drever-Hall-locked frequency-stabilized cavity ring-down spectroscopy. European Physical Journal: Special Topics, 2013, 222, 2119-2142.	2.6	29
74	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.	2.3	256
75	Low pressure line-shape study of self-broadened CO transitions in the (3â†0) band. Journal of Quantitative Spectroscopy and Radiative Transfer, 2013, 130, 191-200.	2.3	32
76	Comb-linked, cavity ring-down spectroscopy for measurements of molecular transition frequencies at the kHz-level. Journal of Chemical Physics, 2013, 138, 094201.	3.0	51
77	Cavity mode-width spectroscopy with widely tunable ultra narrow laser. Optics Express, 2013, 21, 29744.	3.4	58
78	Low-pressure line-shape study in molecular oxygen with absolute frequency reference. Journal of Chemical Physics, 2013, 139, 194312.	3.0	20
79	Iterative approach to line-shape calculations based on the transport-relaxation equation. Physical Review A, 2013, 88, .	2.5	28
80	Project of photoassociative measurements for determination of the density shift of the¹S<inf>0</inf>−³P<inf>0</inf> clock transition in neutral strontium. , 2013, , .		0
81	Highâ€accuracy measurements of the vapor pressure of ice referenced to the triple point. Geophysical Research Letters, 2013, 40, 6303-6307.	4.0	20
82	Precision spectroscopy of cold strontium atoms, towards optical atomic clock. Bulletin of the Polish Academy of Sciences: Technical Sciences, 2012, 60, 707-710.	0.8	2
83	High-signal-to-noise-ratio laser technique for accurate measurements of spectral line parameters. Physical Review A, 2012, 85, .	2.5	96
84	Spectroscopic measurement of the vapour pressure of ice. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2012, 370, 2509-2519.	3.4	4
85	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.	0.4	0
86	Transition frequencies of oxygen B-band lines measured with optical frequency comb assisted cavity ring-down spectroscopy. Journal of Physics: Conference Series, 2012, 397, 012045.	0.4	0
87	Towards Polish Optical Clock with Cold Strontium Atoms, present status and performance. , 2012, , .		0
88	Cavity ring-down spectroscopy of the oxygen B-band with absolute frequency reference to the optical frequency comb. Journal of Chemical Physics, 2012, 136, 024201.	3.0	54
89	Frequency-stabilized cavity ring-down spectroscopy. Chemical Physics Letters, 2012, 536, 1-8.	2.6	72
90	Ultra-Narrow Laser for Optical Frequency Reference. Acta Physica Polonica A, 2012, 121, 614-621.	0.5	15

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91	Pound-Drever-Hall-locked, frequency-stabilized cavity ring-down spectrometer. Review of Scientific Instruments, 2011, 82, 063107.	1.3	92
92	Temperature effects on the width, shift and asymmetry of 748.8Ânm self-broadened neon line. European Physical Journal D, 2011, 61, 1-6.	1.3	3
93	Line-shape study of self-broadened 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>transitions measured by Pound-Drever-Hall-locked frequency-stabilized cavity ring-down spectroscopy. Physical Review A, 2011, 84, .	2.5	46
94	Active control of the Poundâ€“Dreverâ€“Hall error signal offset in high-repetition-rate cavity ring-down spectroscopy. Measurement Science and Technology, 2011, 22, 115303.	2.6	37
95	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.	3.0	67
96	Temperature Effects on Dissociative Recombination in Neon. Acta Physica Polonica A, 2011, 119, 336-341.	0.5	0
97	Application of precise line shape measurements to determine the vapor pressure of ice in the temperature range from 0 to â˜70Â°â€‰C. , 2010, , .		1
98	CRDS investigation of line shapes and intensities of the oxygen B-band transitions at low pressures. , 2010, , .		1
99	Frequency-stabilized cavity ring-down spectroscopy with a PDH locked laser. , 2010, , .		0
100	Spectral line shape problem in the spectroscopic determination of the Boltzmann constant. , 2010, , .		0
101	Asymmetry and speed-dependent effects on the 748.8Ânm self-broadened neon line. European Physical Journal D, 2010, 56, 17-25.	1.3	4
102	Influence of the line-shape model on the spectroscopic determination of the Boltzmann constant. Physical Review A, 2010, 82, .	2.5	45
103	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:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi>b</mml:mi></mml:mrow></mml:math><mml:math	2.5	38
104	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</mml:mtext></mml:mrow> Physical Review A, 2009, 79, .	2.5	99
105	The hyperfine and isotope structure of the Cd intercombination line â€“ revisited. European Physical Journal D, 2009, 51, 295-302.	1.3	5
106	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.	1.2	57
107	High-precision pressure shifting measurement technique using frequency-stabilized cavity ring-down spectroscopy. Journal of Quantitative Spectroscopy and Radiative Transfer, 2008, 109, 435-444.	2.3	26
108	Low-uncertainty H2O line intensities for the 930-nm region. Journal of Molecular Spectroscopy, 2008, 249, 6-13.	1.2	28

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109	Comparison between theoretical calculations and high-resolution measurements of pressure broadening for near-infrared water spectra. Journal of Molecular Spectroscopy, 2008, 249, 86-94.	1.2	54
110	Semi-classical line shape models of rovibrational H[sub 2]O spectra tested using frequency-stabilized cavity ring-down spectroscopy. , 2008, , .		2
111	Line Shape Study of the 326.1 nm [sup 113]Cd line perturbed by Ar and Xe. , 2008, , .		0
112	Isotope Structure and Hyperfine Splitting of 326.1 nm [sup 113]Cd line. , 2008, , .		0
113	Asymmetry of hyperfine-structure components of the 5 1S0-53P1 113Cd line perturbed by argon. European Physical Journal: Special Topics, 2007, 144, 239-242.	2.6	1
114	High-resolution cavity ring-down spectroscopy measurements of blended H2O transitions. Applied Physics B: Lasers and Optics, 2007, 88, 317-325.	2.2	51
115	Methane-in-air standards measured using a 1.65Î¼m frequency-stabilized cavity ring-down spectrometer. , 2006, , .		0
116	Frequency-stabilized cavity ring-down spectrometer for high-sensitivity measurements of water vapor concentration. Applied Physics B: Lasers and Optics, 2006, 85, 375-382.	2.2	43
117	Comparison of semiclassical line-shape models to rovibrationalH2Ospectra measured by frequency-stabilized cavity ring-down spectroscopy. Physical Review A, 2006, 73, .	2.5	95
118	Line-mixing and collision duration asymmetry of the 51S 0 -53P 1 line of even-odd and even-even isotopes of cadmium. , 2005, , .		0
119	Speed-dependent and correlation effects on the line shape of acetylene. Physical Review A, 2005, 72, .	2.5	18
120	Investigation of highly excited states of calcium by three-photon ionization. European Physical Journal D, 2004, 30, 15-22.	1.3	4
121	An accurate comparison of lineshape models on H2O lines in the spectral region around 3Î¼m. Journal of Molecular Spectroscopy, 2004, 227, 162-171.	1.2	40
122	Non-Adiabatic Semiclassical Calculations of the Collision-Time Asymmetry of the114Cd 326.1 nm Line Perturbed by Noble Gases. Acta Physica Polonica A, 2004, 105, 217-232.	0.5	2
123	Observation of the Line-Mixing and Collision-Time Asymmetry of the 5¹S₀-5³P₁Line of the Even-Odd¹¹³Cd Isotope. Acta Physica Polonica A, 2004, 105, 329-338.	0.5	5
124	Laser-induced fluorescence study of the influence of N $scriptstyle mathsf {}$ 2 and CH $scriptstyle mathsf {}$ 4 on the $scriptstyle mathsf {}$. European Physical Journal D, 2003, 23, 217-222.	1.3	9
125	On the role of Dicke narrowing in the formation of atomic line shapes in the optical domain. Journal of Physics B: Atomic, Molecular and Optical Physics, 2003, 36, 3985-3998.	1.5	13
126	Asymmetric line broadening. , 2003, , .		0

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127	Effects of Low-Polarizability Perturbers on the Cadmium Intercombination Line. Acta Physica Polonica A, 2003, 103, 23-40.	0.5	7
128	Role of velocity- and speed-changing collisions on speed-dependent line shapes ofH2. Physical Review A, 2002, 66, .	2.5	22
129	Collision-time asymmetry of the 114Cd 326.1 nm line perturbed by Ar. European Physical Journal D, 2001, 14, 27-31.	1.3	10
130	Collision-Time Asymmetry and Speed-Dependent Effects on the114Cd 326.1 nm Line Perturbed by Kr. Acta Physica Polonica A, 2001, 99, 243-256.	0.5	12
131	Laser-induced fluorescence study of collision-time asymmetry and speed-dependent effects on the114Cd326.1-nm line perturbed by Xe. Physical Review A, 2000, 62, .	2.5	26
132	Pressure Broadening and Shift of the 326.1 nm Cd Line Perturbed by H₂and D₂. Acta Physica Polonica A, 2000, 97, 1003-1010.	0.5	8
133	Influence of Excitation Processes on the Shape of Argon and Neon Lines. Acta Physica Polonica A, 2000, 97, 275-284.	0.5	5
134	Speed-Dependent Effects on the 748.8 nm Ne Self-Broadened Line. Acta Physica Polonica A, 1999, 96, 359-372.	0.5	6