

# Agata Cygan

## List of Publications by Year in descending order

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79  
papers

1,526  
citations

218677

26  
h-index

315739

38  
g-index

79  
all docs

79  
docs citations

79  
times ranked

791  
citing authors

#	ARTICLE	IF	CITATIONS
1	High-signal-to-noise-ratio laser technique for accurate measurements of spectral line parameters. <i>Physical Review A</i> , 2012, 85, .	2.5	96
2	Pound-Drever-Hall-locked, frequency-stabilized cavity ring-down spectrometer. <i>Review of Scientific Instruments</i> , 2011, 82, 063107.	1.3	92
3	Experimental constraint on dark matter detection with optical atomic clocks. <i>Nature Astronomy</i> , 2017, 1, .	10.1	84
4	Frequency-stabilized cavity ring-down spectroscopy. <i>Chemical Physics Letters</i> , 2012, 536, 1-8.	2.6	72
5	Cavity mode-width spectroscopy with widely tunable ultra narrow laser. <i>Optics Express</i> , 2013, 21, 29744.	3.4	58
6	Cavity ring-down spectroscopy of the oxygen B-band with absolute frequency reference to the optical frequency comb. <i>Journal of Chemical Physics</i> , 2012, 136, 024201.	3.0	54
7	Accurate deuterium spectroscopy for fundamental studies. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2018, 213, 41-51.	2.3	54
8	Comb-linked, cavity ring-down spectroscopy for measurements of molecular transition frequencies at the kHz-level. <i>Journal of Chemical Physics</i> , 2013, 138, 094201.	3.0	51
9	Line-shape study of self-broadened O <sub>2</sub> transitions measured by Pound-Drever-Hall-locked frequency-stabilized cavity ring-down spectroscopy. <i>Physical Review A</i> , 2011, 84, .	2.5	46
10	Influence of the line-shape model on the spectroscopic determination of the Boltzmann constant. <i>Physical Review A</i> , 2010, 82, .	2.5	45
11	Absolute measurement of the <sup>1</sup> S <sub>0</sub> → <sup>3</sup> P <sub>0</sub> clock transition in neutral <sup>88</sup> Sr over the 330 km-long stabilized fibre optic link. <i>Scientific Reports</i> , 2015, 5, 17495.	3.3	45
12	One-dimensional frequency-based spectroscopy. <i>Optics Express</i> , 2015, 23, 14472.	3.4	42
13	Spectral line shapes of self-broadened P-branch transitions of oxygen B band. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2014, 144, 36-48.	2.3	41
14	Observations of Dicke narrowing and speed dependence in air-broadened CO <sub>2</sub> lineshapes near 2.06 $\mu$ m. <i>Journal of Chemical Physics</i> , 2014, 141, 174301.	3.0	40
15	Application of the Hartmann-Tran profile to analysis of H <sub>2</sub> O spectra. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2015, 164, 221-230.	2.3	39
16	Line shapes and intensities of self-broadened O <sub>2</sub> transitions	2.5	38
17	Active control of the Pound-Drever-Hall error signal offset in high-repetition-rate cavity ring-down spectroscopy. <i>Measurement Science and Technology</i> , 2011, 22, 115303.	2.6	37
18	Absolute molecular transition frequencies measured by three cavity-enhanced spectroscopy techniques. <i>Journal of Chemical Physics</i> , 2016, 144, 214202.	3.0	37

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19	Low pressure line-shape study of self-broadened CO transitions in the (3 $\hat{+}$ 0) band. Journal of Quantitative Spectroscopy and Radiative Transfer, 2013, 130, 191-200.	2.3	32
20	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
21	Fibre-optic delivery of time and frequency to VLBI station. Astronomy and Astrophysics, 2017, 603, A48.	5.1	32
22	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
23	Broadband Optical Cavity Mode Measurements at Hz-Level Precision With a Comb-Based VIPA Spectrometer. Scientific Reports, 2019, 9, 8206.	3.3	29
24	Iterative approach to line-shape calculations based on the transport-relaxation equation. Physical Review A, 2013, 88, .	2.5	28
25	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
26	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
27	High-accuracy and wide dynamic range frequency-based dispersion spectroscopy in an optical cavity. Optics Express, 2019, 27, 21810.	3.4	26
28	Ultrahigh finesse cavity-enhanced spectroscopy for accurate tests of quantum electrodynamics for molecules. Optics Letters, 2020, 45, 1603.	3.3	26
29	One-dimensional cavity mode-dispersion spectroscopy for validation of CRDS technique. Measurement Science and Technology, 2016, 27, 045501.	2.6	21
30	Low-pressure line-shape study in molecular oxygen with absolute frequency reference. Journal of Chemical Physics, 2013, 139, 194312.	3.0	20
31	Wavelength-meter controlled cavity ring-down spectroscopy: high-sensitivity detection of trace moisture in N <sub>2</sub> at sub-ppb levels. Sensors and Actuators A: Physical, 2016, 241, 152-160.	4.1	20
32	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
33	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
34	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
35	Speed-dependent effects and Dicke narrowing in nitrogen-broadened oxygen. Journal of Quantitative Spectroscopy and Radiative Transfer, 2015, 165, 68-75.	2.3	15
36	Ultra-Narrow Laser for Optical Frequency Reference. Acta Physica Polonica A, 2012, 121, 614-621.	0.5	15

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37	Dual-comb cavity ring-down spectroscopy. <i>Scientific Reports</i> , 2022, 12, 2377.	3.3	14
38	Response of an optical cavity to phase-controlled incomplete power switching of nearly resonant incident light. <i>Optics Express</i> , 2018, 26, 5644.	3.4	11
39	Accuracy budget of the $^{88}\text{Sr}$ optical atomic clocks at KL FAMO. <i>Physica Scripta</i> , 2016, 91, 084003.	2.5	10
40	Parts-per-trillion sensitivity for trace-moisture detection using wavelength-meter-controlled cavity ring-down spectroscopy. <i>AIP Advances</i> , 2019, 9, .	1.3	10
41	Cavity buildup dispersion spectroscopy. <i>Communications Physics</i> , 2021, 4, .	5.3	9
42	Line-shape analysis for high J R-branch transitions of the oxygen B band. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2020, 242, 106789.	2.3	8
43	The Effects of Variations in Buffer Gas Mixing Ratios on Commercial Carbon Dioxide Cavity Ring-Down Spectroscopy Sensors. <i>Journal of Atmospheric and Oceanic Technology</i> , 2013, 30, 2604-2609.	1.3	7
44	Simultaneous observation of speed dependence and Dicke narrowing for self-perturbed P-branch lines of O $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si36.svg"} \rangle \langle \text{mml:msub} \rangle \langle \text{mml:mrow} / \rangle \langle \text{mml:mn} \rangle 2 \langle \text{mml:mn} \rangle \langle \text{mml:msub} \rangle \langle \text{mml:math} \rangle$ B band. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2021, 276, 107927.	2.3	7
45	Frequency-based dispersion Lamb-dip spectroscopy in a high finesse optical cavity. <i>Optics Express</i> , 2021, 29, 39449.	3.4	7
46	The hyperfine and isotope structure of the Cd intercombination line $\hat{\alpha}$ revisited. <i>European Physical Journal D</i> , 2009, 51, 295-302.	1.3	5
47	Precise cavity enhanced absorption spectroscopy. <i>Journal of Physics: Conference Series</i> , 2014, 548, 012015.	0.4	5
48	Note: Reliable, robust measurement system for trace moisture in gas at parts-per-trillion levels using cavity ring-down spectroscopy. <i>Review of Scientific Instruments</i> , 2015, 86, 106110.	1.3	4
49	Speed-dependent effects in Doppler-free saturation spectra. <i>Journal of Molecular Spectroscopy</i> , 2018, 351, 21-28.	1.2	4
50	Broadband and high resolution measurements of cavity loss and dispersion. <i>Photonics Letters of Poland</i> , 2018, 10, 48.	0.4	4
51	Spectral line-shapes of oxygen B-band transitions measured with cavity ring-down spectroscopy. <i>Journal of Physics: Conference Series</i> , 2014, 548, 012028.	0.4	3
52	Multi-spectrum fitting software for advanced spectral line shapes analysis. <i>Journal of Physics: Conference Series</i> , 2017, 810, 012025.	0.4	3
53	Spectral line-shape study by cavity-enhanced complex refractive index spectroscopy. <i>Journal of Physics: Conference Series</i> , 2017, 810, 012007.	0.4	3
54	Precision spectroscopy of cold strontium atoms, towards optical atomic clock. <i>Bulletin of the Polish Academy of Sciences: Technical Sciences</i> , 2012, 60, 707-710.	0.8	2

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55	Alternative approaches to cavity enhanced absorption spectroscopy. Journal of Physics: Conference Series, 2014, 548, 012024.	0.4	2
56	Spectral analysis of H <sub>2</sub> O near 7180 cm <sup>-1</sup> to accurately measure trace moisture in N <sub>2</sub> gas: evaluation of line shape profiles using Akaike Information Criterion. Japanese Journal of Applied Physics, 2022, 61, 012003.	1.5	2
57	CRDS investigation of line shapes and intensities of the oxygen B-band transitions at low pressures. , 2010, , .		1
58	Ultra accurate measurements andab initio calculations of collisional effects in pure D2.. Journal of Physics: Conference Series, 2017, 810, 012042.	0.4	1
59	Fourier-Transform Frequency Comb Cavity Mode Spectroscopy at Hz Level for Trace Gas Measurements. , 2018, , .		1
60	Line Shape Study of the 326.1 nm [sup 113]Cd line perturbed by Ar and Xe. , 2008, , .		0
61	Isotope Structure and Hyperfine Splitting of 326.1 nm [sup 113]Cd line. , 2008, , .		0
62	Frequency-stabilized cavity ring-down spectroscopy with a PDH locked laser. , 2010, , .		0
63	Spectral line shape problem in the spectroscopic determination of the Boltzmann constant. , 2010, , .		0
64	Demonstration of the extremely high signal-to-noise ratio and advanced O <sub>2</sub> -B-band line shape analysis in the PDH-locked FS-CRDS experiment. Journal of Physics: Conference Series, 2012, 397, 012046.	0.4	0
65	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
66	Towards Polish Optical Clock with Cold Strontium Atoms, present status and performance. , 2012, , .		0
67	Project of photoassociative measurements for determination of the density shift of the<sup>1</sup>S<sub>1</sub> and<sup>3</sup>P<sub>0</sub> clock transition in neutral strontium. , 2013, , .		0
68	Line-shapes analysis with ultra-high accuracy. Journal of Physics: Conference Series, 2014, 548, 012022.	0.4	0
69	CRDS investigation of line shapes of the nitrogen-broadened oxygen<i>B</i>-band transition. Journal of Physics: Conference Series, 2015, 635, 092109.	0.4	0
70	Two independent strontium optical lattice clocks for practical realization of the meter and secondary representation of the second. , 2015, , .		0
71	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
72	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

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73	Measurement of oxygen B&Aacute;band line center frequency in reference to strontium atomic optical clock. Journal of Physics: Conference Series, 2017, 810, 012024.	0.4	0
74	Experimental constraint on dark matter-standard model coupling with optical atomic clocks. , 2017, , .		0
75	Optical Cavity Mode Measurements at Hz-Level Precision With a Comb-Based VIPA Spectrometer. , 2018, , .		0
76	Comb-Based Fourier-Transform Spectrometry for Broadband Measurements of Absorption and Dispersion. , 2019, , .		0
77	Broadband cavity-enhanced molecular absorption and dispersion spectroscopy with a frequency comb-based VIPA spectrometer. , 2018, , .		0
78	Cavity-Enhanced Direct Optical Frequency Comb Spectroscopy with Tooth-Width Limited Resolution. , 2019, , .		0
79	Mirror Characterization and Complex Refractive Index Measurements with Hz-level Resolution Fourier Transform Spectrometry. , 2019, , .		0