

# Saverio Bartalini

## List of Publications by Year in descending order

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94  
papers

2,393  
citations

172207

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205818

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95  
all docs

95  
docs citations

95  
times ranked

1485  
citing authors

#	ARTICLE	IF	CITATIONS
1	Precise radiocarbon determination in radioactive waste by a laser-based spectroscopic technique. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, .	3.3	6
2	Direct Observation of Terahertz Frequency Comb Generation in Difference-Frequency Quantum Cascade Lasers. Applied Sciences (Switzerland), 2021, 11, 1416.	1.3	14
3	Controlling and Phase-€Locking a THz Quantum Cascade Laser Frequency Comb by Small Optical Frequency Tuning. Laser and Photonics Reviews, 2021, 15, 2000417.	4.4	11
4	Quantum Cascade Lasers: Controlling and Phase-€Locking a THz Quantum Cascade Laser Frequency Comb by Small Optical Frequency Tuning (Laser Photonics Rev. 15(6)/2021). Laser and Photonics Reviews, 2021, 15, 2170033.	4.4	2
5	Biogenic Fraction Determination in Fuel Blends by Laser-€Based <sup>14</sup> CO <sub>2</sub> Detection. Advanced Photonics Research, 2021, 2, 2000069.	1.7	16
6	Quantum cascade laser based hybrid dual comb spectrometer. Communications Physics, 2020, 3, .	2.0	40
7	Phase analysis and full phase control of chip-scale infrared frequency combs. , 2020, , .		0
8	Stabilizing chip-scale combs and infrared sources: a metrological view on the molecular world. , 2020, , .		0
9	Fully phase-stabilized quantum cascade laser frequency comb. Nature Communications, 2019, 10, 2938.	5.8	69
10	Retrieval of phase relation and emission profile of quantum cascade laser frequency combs. Nature Photonics, 2019, 13, 562-568.	15.6	76
11	Bow-Tie Cavity for Terahertz Radiation. Photonics, 2019, 6, 1.	0.9	24
12	High Dynamic Range, Heterogeneous, Terahertz Quantum Cascade Lasers Featuring Thermally Tunable Frequency Comb Operation over a Broad Current Range. ACS Photonics, 2019, 6, 73-78.	3.2	41
13	THz frequency metrology. , 2019, , .		0
14	Waveguided Approach for Difference Frequency Generation of Broadly-Tunable Continuous-Wave Terahertz Radiation. Applied Sciences (Switzerland), 2018, 8, 2374.	1.3	18
15	Room-Temperature Continuous-Wave Frequency-Referenced Spectrometer up to 7.5 THz. Physical Review Applied, 2018, 10, .	1.5	12
16	Controlling QCLs for frequency metrology from the infrared to the THz range. , 2018, , .		0
17	Narrow-linewidth ultra-broadband terahertz sources based on difference-frequency generation in mid-infrared quantum cascade lasers. , 2017, , .		2
18	Spectral purity and tunability of terahertz quantum cascade laser sources based on intracavity difference-frequency generation. Science Advances, 2017, 3, e1603317.	4.7	33

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19	Terahertz Frequency Metrology for Spectroscopic Applications: a Review. Journal of Infrared, Millimeter, and Terahertz Waves, 2017, 38, 1289-1315.	1.2	46
20	Radiocarbon measurements with mid-infrared SCAR spectroscopy. , 2017, , .		0
21	Towards the full frequency stabilization of quantum cascade laser frequency combs. , 2017, , .		1
22	Broadband CW nonlinear generation for metrological grade terahertz spectroscopy. , 2017, , .		0
23	Probing and controlling the comb features of a THz QCL. , 2017, , .		0
24	Saturated-Absorption Cavity Ring-Down Spectroscopy for Radiocarbon Measurements. , 2017, , .		0
25	Tunable Microcavity-Stabilized Quantum Cascade Laser for Mid-IR High-Resolution Spectroscopy and Sensing. Sensors, 2016, 16, 238.	2.1	19
26	Frequency stability characterization of a quantum cascade laser frequency comb. Laser and Photonics Reviews, 2016, 10, 623-630.	4.4	39
27	Spectroscopic detection of radiocarbon dioxide at parts-per-quadrillion sensitivity. Optica, 2016, 3, 385.	4.8	104
28	QCL-Based Real-Time Terahertz Digital Holography. , 2016, , .		0
29	Measuring the frequency stability of a quantum cascade laser frequency comb. , 2016, , .		0
30	Microcavity-Stabilized Quantum Cascade Laser. , 2016, , .		0
31	Real-time terahertz digital holography with a quantum cascade laser. Scientific Reports, 2015, 5, 13566.	1.6	85
32	QCL-based Metrological-grade THz Spectroscopy Tools. , 2015, , .		0
33	Quantum cascade laser THz metrology. Proceedings of SPIE, 2015, , .	0.8	0
34	High-Q resonant cavities for terahertz quantum cascade lasers. Optics Express, 2015, 23, 3751.	1.7	13
35	Mapping terahertz waves. Nature Photonics, 2015, 9, 147-148.	15.6	5
36	Mid-IR and terahertz digital holography based on quantum cascade lasers. , 2015, , .		0

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37	Saturated absorption in a rotational molecular transition at 2.5 THz using a quantum cascade laser. Applied Physics Letters, 2015, 106, .	1.5	17
38	Towards Doppler-Free QCL-based Metrological THz Spectroscopy. , 2014, , .		0
39	High-Coherence Mid-Infrared Frequency Comb Generation and Applications. , 2014, , .		0
40	THz technologies for sensing and non-destructive testing. , 2014, , .		0
41	Frequency-Comb-Assisted Terahertz Quantum Cascade Laser Spectroscopy. Physical Review X, 2014, 4, .	2.8	52
42	Detection of a 2.8â€‰THz quantum cascade laser with a semiconductor nanowire field-effect transistor coupled to a bow-tie antenna. Applied Physics Letters, 2014, 104, .	1.5	21
43	Mid-infrared frequency comb for broadband high precision and sensitivity molecular spectroscopy. Optics Letters, 2014, 39, 5050.	1.7	38
44	Quantum cascade lasers: a versatile source for precise measurements in the mid/far-infrared range. Measurement Science and Technology, 2014, 25, 012001.	1.4	32
45	Novel Infrared Sources And Spectroscopic Techniques For Cutting Edge Environmental Metrology. , 2014, , .		0
46	Wavelength tuning and thermal dynamics of continuous-wave mid-infrared distributed feedback quantum cascade lasers. Applied Physics Letters, 2013, 103, .	1.5	29
47	Detection of a 2.8 THz quantum cascade laser with a semiconductor nanowire FET. , 2013, , .		0
48	Quantum-limited linewidth in THz quantum cascade lasers. Proceedings of SPIE, 2013, , .	0.8	0
49	High-coherence mid-infrared frequency comb. Optics Express, 2013, 21, 28877.	1.7	47
50	THz QCL-Based Cryogen-Free Spectrometer for in Situ Trace Gas Sensing. Sensors, 2013, 13, 3331-3340.	2.1	49
51	Comb-assisted subkilohertz linewidth quantum cascade laser for high-precision mid-infrared spectroscopy. Applied Physics Letters, 2013, 102, .	1.5	61
52	THz-comb-assisted molecular spectroscopy. , 2013, , .		0
53	THz spectroscopy with an absolute frequency scale by a QCL phase-locked to a THz frequency comb. , 2013, , .		2
54	Subkilohertz-narrowed, frequency/phase-locked mid-IR quantum cascade lasers for high-precision molecular spectroscopy. , 2013, , .		0

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55	Absolute frequency measurements of CO <sub>2</sub> transitions at 4.3 $\mu$ m with a comb-referenced quantum cascade laser. <i>Molecular Physics</i> , 2013, 111, 2041-2045.	0.8	24
56	Optical Detection of Radiocarbon Dioxide: First Results and AMS Intercomparison. <i>Radiocarbon</i> , 2013, 55, 213-223.	0.8	30
57	Atomic and molecular spectroscopy with optical-frequency-comb-referenced IR coherent sources. <i>EPJ Web of Conferences</i> , 2013, 57, 02003.	0.1	0
58	Optical Detection of Radiocarbon Dioxide: First Results and AMS Intercomparison. <i>Radiocarbon</i> , 2013, 55, .	0.8	8
59	Subkilohertz-narrowed, Frequency/phase-locked Mid-IR Quantum Cascade Lasers for High-precision Molecular Spectroscopy. , 2013, , .		0
60	Direct link of a mid-infrared QCL to a frequency comb by optical injection. <i>Optics Letters</i> , 2012, 37, 1011.	1.7	52
61	Subkilohertz linewidth room-temperature mid-infrared quantum cascade laser using a molecular sub-Doppler reference. <i>Optics Letters</i> , 2012, 37, 4811.	1.7	64
62	Direct link of a mid-infrared quantum cascade laser to a frequency comb by optical injection. , 2012, , .		0
63	Phase-locking a THz quantum cascade laser to a THz comb through an all-optical beating. , 2012, , .		0
64	The intrinsic linewidth of a THz quantum cascade laser. , 2012, , .		0
65	Phase-locking to a free-space terahertz comb for metrological-grade terahertz lasers. <i>Nature Communications</i> , 2012, 3, 1040.	5.8	105
66	All-Optical Radiocarbon Dating. <i>Optics and Photonics News</i> , 2012, 23, 52.	0.4	5
67	Quantum-limited frequency fluctuations in a terahertz laser. <i>Nature Photonics</i> , 2012, 6, 525-528.	15.6	146
68	The intrinsic linewidth of THz quantum cascade lasers. , 2012, , .		0
69	Molecular Gas Sensing Below Parts Per Trillion: Radiocarbon-Dioxide Optical Detection. <i>Physical Review Letters</i> , 2011, 107, 270802.	2.9	162
70	Measuring frequency noise and intrinsic linewidth of a room-temperature DFB quantum cascade laser. <i>Optics Express</i> , 2011, 19, 17996.	1.7	86
71	Narrow linewidth quantum cascade lasers as ultra-sensitive probes of molecules. , 2011, , .		2
72	Frequency-Noise Dynamics of Mid-Infrared Quantum Cascade Lasers. <i>IEEE Journal of Quantum Electronics</i> , 2011, 47, 984-988.	1.0	40

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73	Frequency-comb-referenced mid-IR sources for next-generation environmental sensors. Applied Physics B: Lasers and Optics, 2011, 102, 255-269.	1.1	29
74	Optical detection of molecular species at sub-ppt concentration levels. , 2011, , .		1
75	Quantum cascade lasers for high-resolution spectroscopy. Optical Engineering, 2010, 49, 111122.	0.5	15
76	Observing the Intrinsic Linewidth of a Quantum-Cascade Laser: Beyond the Schawlow-Townes Limit. Physical Review Letters, 2010, 104, 083904.	2.9	147
77	Saturated-Absorption Cavity Ring-Down Spectroscopy. Physical Review Letters, 2010, 104, 110801.	2.9	129
78	Ti:sapphire laser intracavity difference-frequency generation of 30 mW cw radiation around 45 $\hat{1}$ / <sub>4</sub> $\mu$ m. Optics Letters, 2010, 35, 3616.	1.7	47
79	Quiet Cascade: Measuring QCL Intrinsic Linewidth. Optics and Photonics News, 2010, 21, 32.	0.4	2
80	An ultra-stable, widely tunable and Cs-traceable mid-IR coherent source. , 2009, , .		0
81	Comb-referenced spectroscopy with quantum cascade lasers. , 2009, , .		0
82	Doppler-free polarization spectroscopy with a quantum cascade laser at 43 $\hat{A}$ $\mu$ m. Optics Express, 2009, 17, 7440.	1.7	30
83	Ultra-stable, widely tunable and absolutely linked mid-IR coherent source. Optics Express, 2009, 17, 9582.	1.7	48
84	Frequency metrology with quantum cascade lasers. Proceedings of SPIE, 2009, , .	0.8	1
85	Lamb-dip-locked quantum cascade laser for comb-referenced IR absolute frequency measurements. Optics Express, 2008, 16, 11637.	1.7	56
86	FREQUENCY-COMB-ASSISTED MID-INFRARED SPECTROSCOPY. , 2008, , .		1
87	Referencing mid-IR radiation to an optical frequency comb. , 2007, , .		0
88	Frequency-comb-referenced quantum-cascade laser at 44 $\hat{1}$ / <sub>4</sub> $\mu$ m. Optics Letters, 2007, 32, 988.	1.7	63
89	Improved ground state rotational parameters of deuterium fluoride, DF. Journal of Molecular Spectroscopy, 2006, 235, 265-267.	0.4	5
90	Frequency modulation spectroscopy by means of quantum-cascade lasers. Applied Physics B: Lasers and Optics, 2006, 85, 223-229.	1.1	49

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91	From superradiant Rayleigh scattering to Bragg scattering. European Physical Journal D, 2005, 32, 167-170.	0.6	9
92	Full characterization of the loading of a magneto-optical trap from an alkali metal dispenser. European Physical Journal D, 2005, 36, 101-104.	0.6	8
93	Slow light amplification in a non-inverted gain medium. Europhysics Letters, 2005, 69, 938-944.	0.7	3
94	GENERATION AND PROPAGATION OF COHERENT MATTER WAVES. , 2004, , .		0