

Saverio Bartalini

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/1599583/publications.pdf>

Version: 2024-02-01

94
papers

2,393
citations

172207

29
h-index

205818

48
g-index

95
all docs

95
docs citations

95
times ranked

1485
citing authors

#	ARTICLE	IF	CITATIONS
1	Molecular Gas Sensing Below Parts Per Trillion: Radiocarbon-Dioxide Optical Detection. Physical Review Letters, 2011, 107, 270802.	2.9	162
2	Observing the Intrinsic Linewidth of a Quantum-Cascade Laser: Beyond the Schawlow-Townes Limit. Physical Review Letters, 2010, 104, 083904.	2.9	147
3	Quantum-limited frequency fluctuations in a terahertz laser. Nature Photonics, 2012, 6, 525-528.	15.6	146
4	Saturated-Absorption Cavity Ring-Down Spectroscopy. Physical Review Letters, 2010, 104, 110801.	2.9	129
5	Phase-locking to a free-space terahertz comb for metrological-grade terahertz lasers. Nature Communications, 2012, 3, 1040.	5.8	105
6	Spectroscopic detection of radiocarbon dioxide at parts-per-quadrillion sensitivity. Optica, 2016, 3, 385.	4.8	104
7	Measuring frequency noise and intrinsic linewidth of a room-temperature DFB quantum cascade laser. Optics Express, 2011, 19, 17996.	1.7	86
8	Real-time terahertz digital holography with a quantum cascade laser. Scientific Reports, 2015, 5, 13566.	1.6	85
9	Retrieval of phase relation and emission profile of quantum cascade laser frequency combs. Nature Photonics, 2019, 13, 562-568.	15.6	76
10	Fully phase-stabilized quantum cascade laser frequency comb. Nature Communications, 2019, 10, 2938.	5.8	69
11	Subkilohertz linewidth room-temperature mid-infrared quantum cascade laser using a molecular sub-Doppler reference. Optics Letters, 2012, 37, 4811.	1.7	64
12	Frequency-comb-referenced quantum-cascade laser at 44 μ m. Optics Letters, 2007, 32, 988.	1.7	63
13	Comb-assisted subkilohertz linewidth quantum cascade laser for high-precision mid-infrared spectroscopy. Applied Physics Letters, 2013, 102, .	1.5	61
14	Lamb-dip-locked quantum cascade laser for comb-referenced IR absolute frequency measurements. Optics Express, 2008, 16, 11637.	1.7	56
15	Direct link of a mid-infrared QCL to a frequency comb by optical injection. Optics Letters, 2012, 37, 1011.	1.7	52
16	Frequency-Comb-Assisted Terahertz Quantum Cascade Laser Spectroscopy. Physical Review X, 2014, 4, .	2.8	52
17	Frequency modulation spectroscopy by means of quantum-cascade lasers. Applied Physics B: Lasers and Optics, 2006, 85, 223-229.	1.1	49
18	THz QCL-Based Cryogen-Free Spectrometer for in Situ Trace Gas Sensing. Sensors, 2013, 13, 3331-3340.	2.1	49

#	ARTICLE	IF	CITATIONS
19	Ultra-stable, widely tunable and absolutely linked mid-IR coherent source. Optics Express, 2009, 17, 9582.	1.7	48
20	Ti:sapphire laser intracavity difference-frequency generation of 30 mW cw radiation around 4.5 μm . Optics Letters, 2010, 35, 3616.	1.7	47
21	High-coherence mid-infrared frequency comb. Optics Express, 2013, 21, 28877.	1.7	47
22	Terahertz Frequency Metrology for Spectroscopic Applications: a Review. Journal of Infrared, Millimeter, and Terahertz Waves, 2017, 38, 1289-1315.	1.2	46
23	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
24	Frequency-Noise Dynamics of Mid-Infrared Quantum Cascade Lasers. IEEE Journal of Quantum Electronics, 2011, 47, 984-988.	1.0	40
25	Quantum cascade laser based hybrid dual comb spectrometer. Communications Physics, 2020, 3, .	2.0	40
26	Frequency stability characterization of a quantum cascade laser frequency comb. Laser and Photonics Reviews, 2016, 10, 623-630.	4.4	39
27	Mid-infrared frequency comb for broadband high precision and sensitivity molecular spectroscopy. Optics Letters, 2014, 39, 5050.	1.7	38
28	Spectral purity and tunability of terahertz quantum cascade laser sources based on intracavity difference-frequency generation. Science Advances, 2017, 3, e1603317.	4.7	33
29	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
30	Doppler-free polarization spectroscopy with a quantum cascade laser at 4.3 μm . Optics Express, 2009, 17, 7440.	1.7	30
31	Optical Detection of Radiocarbon Dioxide: First Results and AMS Intercomparison. Radiocarbon, 2013, 55, 213-223.	0.8	30
32	Frequency-comb-referenced mid-IR sources for next-generation environmental sensors. Applied Physics B: Lasers and Optics, 2011, 102, 255-269.	1.1	29
33	Wavelength tuning and thermal dynamics of continuous-wave mid-infrared distributed feedback quantum cascade lasers. Applied Physics Letters, 2013, 103, .	1.5	29
34	Absolute frequency measurements of CO ₂ transitions at 4.3 μm with a comb-referenced quantum cascade laser. Molecular Physics, 2013, 111, 2041-2045.	0.8	24
35	Bow-Tie Cavity for Terahertz Radiation. Photonics, 2019, 6, 1.	0.9	24
36	Detection of a 2.8 μm 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

#	ARTICLE	IF	CITATIONS
37	Tunable Microcavity-Stabilized Quantum Cascade Laser for Mid-IR High-Resolution Spectroscopy and Sensing. <i>Sensors</i> , 2016, 16, 238.	2.1	19
38	Waveguided Approach for Difference Frequency Generation of Broadly-Tunable Continuous-Wave Terahertz Radiation. <i>Applied Sciences (Switzerland)</i> , 2018, 8, 2374.	1.3	18
39	Saturated absorption in a rotational molecular transition at 2.5 THz using a quantum cascade laser. <i>Applied Physics Letters</i> , 2015, 106, .	1.5	17
40	Biogenic Fraction Determination in Fuel Blends by Laser-Based $^{14}\text{CO}_2$ Detection. <i>Advanced Photonics Research</i> , 2021, 2, 2000069.	1.7	16
41	Quantum cascade lasers for high-resolution spectroscopy. <i>Optical Engineering</i> , 2010, 49, 111122.	0.5	15
42	Direct Observation of Terahertz Frequency Comb Generation in Difference-Frequency Quantum Cascade Lasers. <i>Applied Sciences (Switzerland)</i> , 2021, 11, 1416.	1.3	14
43	High-Q resonant cavities for terahertz quantum cascade lasers. <i>Optics Express</i> , 2015, 23, 3751.	1.7	13
44	Room-Temperature Continuous-Wave Frequency-Referenced Spectrometer up to 7.5 THz. <i>Physical Review Applied</i> , 2018, 10, .	1.5	12
45	Controlling and Phase-Locking a THz Quantum Cascade Laser Frequency Comb by Small Optical Frequency Tuning. <i>Laser and Photonics Reviews</i> , 2021, 15, 2000417.	4.4	11
46	From superradiant Rayleigh scattering to Bragg scattering. <i>European Physical Journal D</i> , 2005, 32, 167-170.	0.6	9
47	Full characterization of the loading of a magneto-optical trap from an alkali metal dispenser. <i>European Physical Journal D</i> , 2005, 36, 101-104.	0.6	8
48	Optical Detection of Radiocarbon Dioxide: First Results and AMS Intercomparison. <i>Radiocarbon</i> , 2013, 55, .	0.8	8
49	Precise radiocarbon determination in radioactive waste by a laser-based spectroscopic technique. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2022, 119, .	3.3	6
50	Improved ground state rotational parameters of deuterium fluoride, DF. <i>Journal of Molecular Spectroscopy</i> , 2006, 235, 265-267.	0.4	5
51	All-Optical Radiocarbon Dating. <i>Optics and Photonics News</i> , 2012, 23, 52.	0.4	5
52	Mapping terahertz waves. <i>Nature Photonics</i> , 2015, 9, 147-148.	15.6	5
53	Slow light amplification in a non-inverted gain medium. <i>Europhysics Letters</i> , 2005, 69, 938-944.	0.7	3
54	Quiet Cascade: Measuring QCL Intrinsic Linewidth. <i>Optics and Photonics News</i> , 2010, 21, 32.	0.4	2

#	ARTICLE	IF	CITATIONS
55	Narrow linewidth quantum cascade lasers as ultra-sensitive probes of molecules. , 2011, , .		2
56	THz spectroscopy with an absolute frequency scale by a QCL phase-locked to a THz frequency comb. , 2013, , .		2
57	Narrow-linewidth ultra-broadband terahertz sources based on difference-frequency generation in mid-infrared quantum cascade lasers. , 2017, , .		2
58	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
59	FREQUENCY-COMB-ASSISTED MID-INFRARED SPECTROSCOPY. , 2008, , .		1
60	Frequency metrology with quantum cascade lasers. Proceedings of SPIE, 2009, , .	0.8	1
61	Optical detection of molecular species at sub-ppt concentration levels. , 2011, , .		1
62	Towards the full frequency stabilization of quantum cascade laser frequency combs. , 2017, , .		1
63	Referencing mid-IR radiation to an optical frequency comb. , 2007, , .		0
64	An ultra-stable, widely tunable and Cs-traceable mid-IR coherent source. , 2009, , .		0
65	Comb-referenced spectroscopy with quantum cascade lasers. , 2009, , .		0
66	Direct link of a mid-infrared quantum cascade laser to a frequency comb by optical injection. , 2012, , .		0
67	Phase-locking a THz quantum cascade laser to a THz comb through an all-optical beating. , 2012, , .		0
68	The intrinsic linewidth of a THz quantum cascade laser. , 2012, , .		0
69	Detection of a 2.8 THz quantum cascade laser with a semiconductor nanowire FET. , 2013, , .		0
70	Quantum-limited linewidth in THz quantum cascade lasers. Proceedings of SPIE, 2013, , .	0.8	0
71	THz-comb-assisted molecular spectroscopy. , 2013, , .		0
72	Subkilohertz-narrowed, frequency/phase-locked mid-IR quantum cascade lasers for high-precision molecular spectroscopy. , 2013, , .		0

#	ARTICLE	IF	CITATIONS
73	Atomic and molecular spectroscopy with optical-frequency-comb-referenced IR coherent sources. EPJ Web of Conferences, 2013, 57, 02003.	0.1	0
74	Towards Doppler-Free QCL-based Metrological THz Spectroscopy. , 2014, , .		0
75	High-Coherence Mid-Infrared Frequency Comb Generation and Applications. , 2014, , .		0
76	THz technologies for sensing and non-destructive testing. , 2014, , .		0
77	QCL-based Metrological-grade THz Spectroscopy Tools. , 2015, , .		0
78	Quantum cascade laser THz metrology. Proceedings of SPIE, 2015, , .	0.8	0
79	Mid-IR and terahertz digital holography based on quantum cascade lasers. , 2015, , .		0
80	Radiocarbon measurements with mid-infrared SCAR spectroscopy. , 2017, , .		0
81	Broadband CW nonlinear generation for metrological grade terahertz spectroscopy. , 2017, , .		0
82	Probing and controlling the comb features of a THz QCL. , 2017, , .		0
83	GENERATION AND PROPAGATION OF COHERENT MATTER WAVES. , 2004, , .		0
84	The intrinsic linewidth of THz quantum cascade lasers. , 2012, , .		0
85	Subkilohertz-narrowed, Frequency/phase-locked Mid-IR Quantum Cascade Lasers for High-precision Molecular Spectroscopy. , 2013, , .		0
86	Novel Infrared Sources And Spectroscopic Techniques For Cutting Edge Environmental Metrology. , 2014, , .		0
87	QCL-Based Real-Time Terahertz Digital Holography. , 2016, , .		0
88	Measuring the frequency stability of a quantum cascade laser frequency comb. , 2016, , .		0
89	Microcavity-Stabilized Quantum Cascade Laser. , 2016, , .		0
90	Saturated-Absorption Cavity Ring-Down Spectroscopy for Radiocarbon Measurements. , 2017, , .		0

#	ARTICLE	IF	CITATIONS
91	Controlling QCLs for frequency metrology from the infrared to the THz range. , 2018, , .		0
92	THz frequency metrology. , 2019, , .		0
93	Phase analysis and full phase control of chip-scale infrared frequency combs. , 2020, , .		0
94	Stabilizing chip-scale combs and infrared sources: a metrological view on the molecular world. , 2020, , .		0