Angelo Sampaolo

List of Publications by Year
in descending order

99	3,341	87723 38	149479 56
papers	citations	h-index	g-index

99	99	99	854
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Recent advances in quartz enhanced photoacoustic sensing. Applied Physics Reviews, 2018, 5, .	5.5	174
2	Compact TDLAS based sensor design using interband cascade lasers for mid-IR trace gas sensing. Optics Express, 2016, 24, A528.	1.7	150
3	Quartz enhanced photoacoustic H2S gas sensor based on a fiber-amplifier source and a custom tuning fork with large prong spacing. Applied Physics Letters, 2015, 107, .	1.5	128
4	Atmospheric CH4 measurement near a landfill using an ICL-based QEPAS sensor with V-T relaxation self-calibration. Sensors and Actuators B: Chemical, 2019, 297, 126753.	4.0	127
5	Analysis of the electro-elastic properties of custom quartz tuning forks for optoacoustic gas sensing. Sensors and Actuators B: Chemical, 2016, 227, 539-546.	4.0	110
6	Widely-tunable mid-infrared fiber-coupled quartz-enhanced photoacoustic sensor for environmental monitoring. Optics Express, 2014, 22, 28222.	1.7	93
7	Ultra-high sensitive trace gas detection based on light-induced thermoelastic spectroscopy and a custom quartz tuning fork. Applied Physics Letters, 2020, 116, .	1.5	90
8	Single-tube on-beam quartz-enhanced photoacoustic spectroscopy. Optics Letters, 2016, 41, 978.	1.7	88
9	Quartz-enhanced photoacoustic spectroscopy for multi-gas detection: A review. Analytica Chimica Acta, 2022, 1202, 338894.	2.6	79
10	A quartz enhanced photo-acoustic gas sensor based on a custom tuning fork and a terahertz quantum cascade laser. Analyst, The, 2014, 139, 2079-2087.	1.7	77
11	Tuning forks with optimized geometries for quartz-enhanced photoacoustic spectroscopy. Optics Express, 2019, 27, 1401.	1.7	77
12	THz Quartz-enhanced photoacoustic sensor for H_2S trace gas detection. Optics Express, 2015, 23, 7574.	1.7	76
13	Ppt level carbon monoxide detection based on light-induced thermoelastic spectroscopy exploring custom quartz tuning forks and a mid-infrared QCL. Optics Express, 2021, 29, 25100.	1.7	76
14	High and flat spectral responsivity of quartz tuning fork used as infrared photodetector in tunable diode laser spectroscopy. Applied Physics Reviews, 2021, 8, .	5.5	76
15	Allan Deviation Plot as a Tool for Quartz-Enhanced Photoacoustic Sensors Noise Analysis. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2016, 63, 555-560.	1.7	72
16	Ultra-highly sensitive HCl-LITES sensor based on a low-frequency quartz tuning fork and a fiber-coupled multi-pass cell. Photoacoustics, 2022, 27, 100381.	4.4	72
17	Ppb-Level Quartz-Enhanced Photoacoustic Detection of Carbon Monoxide Exploiting a Surface Grooved Tuning Fork. Analytical Chemistry, 2019, 91, 5834-5840.	3.2	67
18	Methane, ethane and propane detection using a compact quartz enhanced photoacoustic sensor and a single interband cascade laser. Sensors and Actuators B: Chemical, 2019, 282, 952-960.	4.0	66

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19	Simultaneous dual-gas QEPAS detection based on a fundamental and overtone combined vibration of quartz tuning fork. Applied Physics Letters, 2017, 110, .	1.5	64
20	Quartz-enhanced photoacoustic spectroscopy exploiting tuning fork overtone modes. Applied Physics Letters, 2015, 107, .	1.5	61
21	Improved Tuning Fork for Terahertz Quartz-Enhanced Photoacoustic Spectroscopy. Sensors, 2016, 16, 439.	2.1	59
22	In-plane quartz-enhanced photoacoustic spectroscopy. Applied Physics Letters, 2020, 116, .	1.5	59
23	Highly sensitive gas leak detector based on a quartz-enhanced photoacoustic SF6 sensor. Optics Express, 2016, 24, 15872.	1.7	57
24	Analysis of overtone flexural modes operation in quartz-enhanced photoacoustic spectroscopy. Optics Express, 2016, 24, A682.	1.7	57
25	Ppb-level gas detection using on-beam quartz-enhanced photoacoustic spectroscopy based on a 28ÂkHz tuning fork. Photoacoustics, 2022, 25, 100321.	4.4	57
26	Dual-Gas Quartz-Enhanced Photoacoustic Sensor for Simultaneous Detection of Methane/Nitrous Oxide and Water Vapor. Analytical Chemistry, 2019, 91, 12866-12873.	3.2	53
27	Multi-pass quartz-enhanced photoacoustic spectroscopy-based trace gas sensing. Optics Letters, 2021, 46, 977.	1.7	52
28	Light-induced thermo-elastic effect in quartz tuning forks exploited as a photodetector in gas absorption spectroscopy. Optics Express, 2020, 28, 19074.	1.7	51
29	Broadband detection of methane and nitrous oxide using a distributed-feedback quantum cascade laser array and quartz-enhanced photoacoustic sensing. Photoacoustics, 2020, 17, 100159.	4.4	47
30	Overtone resonance enhanced single-tube on-beam quartz enhanced photoacoustic spectrophone. Applied Physics Letters, 2016, 109, .	1.5	46
31	Fiber-ring laser intracavity QEPAS gas sensor using a 7.2â€¯kHz quartz tuning fork. Sensors and Actuators B: Chemical, 2018, 268, 512-518.	4.0	46
32	Quartz-enhanced photoacoustic sensor for ethylene detection implementing optimized custom tuning fork-based spectrophone. Optics Express, 2019, 27, 4271.	1.7	46
33	Compact and portable quartz-enhanced photoacoustic spectroscopy sensor for carbon monoxide environmental monitoring in urban areas. Photoacoustics, 2022, 25, 100318.	4.4	45
34	Purely wavelength- and amplitude-modulated quartz-enhanced photoacoustic spectroscopy. Optics Express, 2016, 24, 25943.	1.7	44
35	Quartzâ€“enhanced photoacoustic spectrophones exploiting custom tuning forks: a review. Advances in Physics: X, 2017, 2, 169-187.	1.5	44
36	Quartz-enhanced photoacoustic spectroscopy for hydrocarbon trace gas detection and petroleum exploration. Fuel, 2020, 277, 118118.	3.4	43

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37	Quartz-enhanced photoacoustic spectroscopy exploiting low-frequency tuning forks as a tool to measure the vibrational relaxation rate in gas species. Photoacoustics, 2021, 21, 100227.	4.4	43
38	Partial Least-Squares Regression as a Tool to Retrieve Gas Concentrations in Mixtures Detected Using Quartz-Enhanced Photoacoustic Spectroscopy. Analytical Chemistry, 2020, 92, 11035-11043.	3.2	42
39	High-concentration methane and ethane QEPAS detection employing partial least squares regression to filter out energy relaxation dependence on gas matrix composition. Photoacoustics, 2022, 26, 100349.	4.4	41
40	A quartz-enhanced photoacoustic sensor for H2S trace-gas detection at 2.6ÂÎ¼m. Applied Physics B: Lasers and Optics, 2015, 119, 21-27.	1.1	37
41	H2S quartz-enhanced photoacoustic spectroscopy sensor employing a liquid-nitrogen-cooled THz quantum cascade laser operating in pulsed mode. Photoacoustics, 2021, 21, 100219.	4.4	37
42	Nitrous oxide quartz-enhanced photoacoustic detection employing a broadband distributed-feedback quantum cascade laser array. Applied Physics Letters, 2018, 113, .	1.5	34
43	Double antinode excited quartz-enhanced photoacoustic spectrophone. Applied Physics Letters, 2017, 110, .	1.5	33
44	Single mode operation with mid-IR hollow fibers in the range 51-105 Âµm. Optics Express, 2015, 23, 195.	1.7	32
45	Loss Mechanisms Determining the Quality Factors in Quartz Tuning Forks Vibrating at the Fundamental and First Overtone Modes. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2018, 65, 1951-1957.	1.7	29
46	Environmental Monitoring of Methane with Quartz-Enhanced Photoacoustic Spectroscopy Exploiting an Electronic Hygrometer to Compensate the H2O Influence on the Sensor Signal. Sensors, 2020, 20, 2935.	2.1	29
47	Fiber-Coupled Quartz-Enhanced Photoacoustic Spectroscopy System for Methane and Ethane Monitoring in the Near-Infrared Spectral Range. Molecules, 2020, 25, 5607.	1.7	28
48	Sub-ppb-level CH‹sub›4‹/sub› detection by exploiting a low-noise differential photoacoustic resonator with a room-temperature interband cascade laser. Optics Express, 2020, 28, 19446.	1.7	27
49	Acoustic Coupling between Resonator Tubes in Quartz-Enhanced Photoacoustic Spectrophones Employing a Large Prong Spacing Tuning Fork. Sensors, 2019, 19, 4109.	2.1	26
50	Quartz-enhanced photoacoustic NH3 sensor exploiting a large-prong-spacing quartz tuning fork and an optical fiber amplifier for biomedical applications. Photoacoustics, 2022, 26, 100363.	4.4	25
51	Low-Loss Coupling of Quantum Cascade Lasers into Hollow-Core Waveguides with Single-Mode Output in the 3.7â€“7.6 Î¼m Spectral Range. Sensors, 2016, 16, 533.	2.1	21
52	Hollow core waveguide as mid-infrared laser modal beam filter. Journal of Applied Physics, 2015, 118, 113102.	1.1	20
53	Octupole electrode pattern for tuning forks vibrating at the first overtone mode in quartz-enhanced photoacoustic spectroscopy. Optics Letters, 2018, 43, 1854.	1.7	20
54	Compact quartz-enhanced photoacoustic sensor for ppb-level ambient NO2 detection by use of a high-power laser diode and a grooved tuning fork. Photoacoustics, 2022, 25, 100325.	4.4	20

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55	Photoacoustic spectroscopy for gas sensing: A comparison between piezoelectric and interferometric readout in custom quartz tuning forks. Photoacoustics, 2020, 17, 100155.	4.4	19
56	Front-End Amplifiers for Tuning Forks in Quartz Enhanced PhotoAcoustic Spectroscopy. Applied Sciences (Switzerland), 2020, 10, 2947.	1.3	16
57	Mid-infrared intracavity quartz-enhanced photoacoustic spectroscopy with pptv â€“ Level sensitivity using a T-shaped custom tuning fork. Photoacoustics, 2022, 25, 100330.	4.4	16
58	Damping Mechanisms of Piezoelectric Quartz Tuning Forks Employed in Photoacoustic Spectroscopy for Trace Gas Sensing. Physica Status Solidi (A) Applications and Materials Science, 2019, 216, 1800552.	0.8	13
59	Piezo-enhanced acoustic detection module for mid-infrared trace gas sensing using a grooved quartz tuning fork. Optics Express, 2019, 27, 35267.	1.7	12
60	Mid infrared quantum cascade laser operating in pure amplitude modulation for background-free trace gas spectroscopy. Optics Express, 2016, 24, 26464.	1.7	11
61	Quartz-Enhanced Photoacoustic Detection of Ethane in the Near-IR Exploiting a Highly Performant Spectrophone. Applied Sciences (Switzerland), 2020, 10, 2447.	1.3	11
62	Simultaneous Detection of Methane, Ethane, and Propane by QEPAS Sensors for On-Site Hydrocarbon Characterization and Production Monitoring. ACS Omega, 2022, 7, 3395-3406.	1.6	11
63	Simultaneous multi-gas detection between 3 and 4 Î¼m based on a 2.5-m multipass cell and a tunable Fabry-PÃ©rot filter detector. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2019, 216, 154-160.	2.0	9
64	Mode matching of a laser-beam to a compact high finesse bow-tie optical cavity for quartz enhanced photoacoustic gas sensing. Sensors and Actuators A: Physical, 2017, 267, 70-75.	2.0	7
65	Compact and Versatile QEPAS-Based Sensor Box for Simultaneous Detection of Methane and Infrared Absorber Gas Molecules in Ambient Air. Frontiers in Environmental Chemistry, 0, 3, .	0.7	7
66	Influence of Air Pressure on the Resonance Properties of a T-Shaped Quartz Tuning Fork Coupled with Resonator Tubes. Applied Sciences (Switzerland), 2021, 11, 7974.	1.3	6
67	Application of standard and custom quartz tuning forks for quartz-enhanced photoacoustic spectroscopy gas sensing. Applied Spectroscopy Reviews, 2023, 58, 562-584.	3.4	6
68	Influence of Tuning Fork Resonance Properties on Quartz-Enhanced Photoacoustic Spectroscopy Performance. Sensors, 2019, 19, 3825.	2.1	3
69	Modeling and Design of a Semi-Integrated QEPAS Sensor. Journal of Lightwave Technology, 2021, 39, 646-653.	2.7	3
70	New approaches in quartz-enhanced photoacoustic sensing. Proceedings of SPIE, 2015, , .	0.8	2
71	Innovative quartz enhanced photoacoustic sensors for trace gas detection. , 2016, , .		2
72	New Developments in Quartz-Enhanced Photoacoustic Sensing Real-World Applications. , 2020, , .		2

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73	Compact and low-noise quartz-enhanced photoacoustic sensor for sub-ppm ethylene detection in atmosphere. , 2018, , .		2
74	Recent advances in quartz-enhanced photoacoustic sensing. , 2018, , .		2
75	THz quantum cascade laser-based quartz enhanced photo-acoustic sensor. , 2013, , .		1
76	Quartz-enhanced photoacoustic sensors for H2S trace gas detection. , 2015, , .		1
77	New developments in THz quartz enhanced photoacoustic spectroscopy. , 2016, , .		1
78	Modeling the dependence of fork geometry on the performance of quartz enhanced photoacoustic spectroscopic sensors. , 2015, , .		1
79	Interband cascade laser based quartz-enhanced photoacoustic sensor for multiple hydrocarbons detection. , 2018, , .		1
80	Simultaneous dual gas QEPAS sensing of water and methane/nitrous oxide. , 2019, , .		1
81	Simultaneous measurement of N2O, CH4, and NH3 with a compact quartz-enhanced photoacoustic sensor for monitoring agricultural activities. , 2022, , .		1
82	Measurement of the methane isotopologues relaxation rate exploiting quartz-enhanced photoacoustic spectroscopy. , 2022, , .		1
83	Pure amplitude and wavelength modulation spectroscopy for detection of N2O using a three-section quantum cascade laser. , 2017, , .		0
84	Low power consumption quartz-enhanced photoacoustic gas sensor employing a quantum cascade laser in pulsed operation. Proceedings of SPIE, 2017, , .	0.8	0
85	Single-tube on beam quartz-enhanced photoacoustic spectrophones exploiting a custom quartz tuning fork operating in the overtone mode. Proceedings of SPIE, 2017, , .	0.8	0
86	Broadband Gas QEPAS Detection Exploiting a Monolithic DFB-QCL Array. NATO Science for Peace and Security Series B: Physics and Biophysics, 2021, , 61-70.	0.2	0
87	Quartz Enhanced Photoacoustic Sensors for Trace Gas Detection in the IR and THz Spectral Range. NATO Science for Peace and Security Series B: Physics and Biophysics, 2014, , 139-151.	0.2	0
88	Micro-resonator Parameter Optimization of a QEPAS Spectrophone using a Custom Quartz Tuning Fork with large Prong Spacing. , 2016, , .		0
89	Tapered hollow-core fibers providing single-mode output in the 3.5um-7.8um spectral range. , 2018, , .		0
90	New generation of tuning forks for quartz-enhanced photoacoustic spectroscopy. , 2019, , .		0

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91	Quartz-enhanced photoacoustic sensors for detection of multiple hydrocarbon and methane isotopes. , 2019, , .		0
92	Octupole electrode pattern for tuning forks vibrating at the first overtone mode in quartz-enhanced photoacoustic spectroscopy. , 2019, , .		0
93	Quartz-enhanced photoacoustic spectroscopy employing a distributed feedback-quantum cascade laser array for nitrous oxide and methane broadband detection. , 2019, , .		0
94	A novel double-tuning fork acoustic detection module for photoacoustic wide range sensing. , 2022, , .		0
95	Quartz-Enhanced Photoacoustic and Photothermal Spectroscopy. Applied Sciences (Switzerland), 2022, 12, 2613.	1.3	0
96	Compact sensor for wide concentration range methane and ethane detection employing quartz tuning fork as photodetector in tunable diode laser spectroscopy. , 2022, , .		0
97	Quartz enhanced photoacoustic spectrometer for natural gas composition analysis. , 2022, , .		0
98	Quartz-enhanced photoacoustic spectroscopy employing a Vernier-effect distributed feedback-quantum cascade laser for multiple analytes detection. , 2022, , .		0
99	Quartz-enhanced photoacoustic sensors for environmental monitoring applications. , 2022, , .		0