

Pietro Patimisco

List of Publications by Year in descending order

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110
papers

4,026
citations

70961

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docs citations

111
times ranked

1029
citing authors

#	ARTICLE	IF	CITATIONS
1	Application of standard and custom quartz tuning forks for quartz-enhanced photoacoustic spectroscopy gas sensing. <i>Applied Spectroscopy Reviews</i> , 2023, 58, 562-584.	3.4	6
2	Quartz-enhanced photoacoustic spectroscopy for multi-gas detection: A review. <i>Analytica Chimica Acta</i> , 2022, 1202, 338894.	2.6	79
3	Compact and portable quartz-enhanced photoacoustic spectroscopy sensor for carbon monoxide environmental monitoring in urban areas. <i>Photoacoustics</i> , 2022, 25, 100318.	4.4	45
4	Ppb-level gas detection using on-beam quartz-enhanced photoacoustic spectroscopy based on a 28ÅkHz tuning fork. <i>Photoacoustics</i> , 2022, 25, 100321.	4.4	57
5	Compact quartz-enhanced photoacoustic sensor for ppb-level ambient NO ₂ detection by use of a high-power laser diode and a grooved tuning fork. <i>Photoacoustics</i> , 2022, 25, 100325.	4.4	20
6	A novel double-tuning fork acoustic detection module for photoacoustic wide range sensing. , 2022, , .		0
7	Measurement of the methane isotopologues relaxation rate exploiting quartz-enhanced photoacoustic spectroscopy. , 2022, , .		1
8	Compact sensor for wide concentration range methane and ethane detection employing quartz tuning fork as photodetector in tunable diode laser spectroscopy. , 2022, , .		0
9	Quartz enhanced photoacoustic spectrometer for natural gas composition analysis. , 2022, , .		0
10	Quartz-enhanced photoacoustic spectroscopy employing a Vernier-effect distributed feedback-quantum cascade laser for multiple analytes detection. , 2022, , .		0
11	High-concentration methane and ethane QEPAS detection employing partial least squares regression to filter out energy relaxation dependence on gas matrix composition. <i>Photoacoustics</i> , 2022, 26, 100349.	4.4	41
12	Quartz-enhanced photoacoustic sensors for environmental monitoring applications. , 2022, , .		0
13	Quartz-enhanced photoacoustic NH ₃ sensor exploiting a large-prong-spacing quartz tuning fork and an optical fiber amplifier for biomedical applications. <i>Photoacoustics</i> , 2022, 26, 100363.	4.4	25
14	Ultra-highly sensitive HCl-LITES sensor based on a low-frequency quartz tuning fork and a fiber-coupled multi-pass cell. <i>Photoacoustics</i> , 2022, 27, 100381.	4.4	72
15	A theoretical-experimental framework for the analysis of the dynamic response of a QEPAS tuning fork device immersed in a fluid medium. <i>Mechanical Systems and Signal Processing</i> , 2021, 149, 107298.	4.4	3
16	Broadband Gas QEPAS Detection Exploiting a Monolithic DFB-QCL Array. <i>NATO Science for Peace and Security Series B: Physics and Biophysics</i> , 2021, , 61-70.	0.2	0
17	Multi-pass quartz-enhanced photoacoustic spectroscopy-based trace gas sensing. <i>Optics Letters</i> , 2021, 46, 977.	1.7	52
18	H ₂ S quartz-enhanced photoacoustic spectroscopy sensor employing a liquid-nitrogen-cooled THz quantum cascade laser operating in pulsed mode. <i>Photoacoustics</i> , 2021, 21, 100219.	4.4	37

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19	Quartz-enhanced photoacoustic spectroscopy exploiting low-frequency tuning forks as a tool to measure the vibrational relaxation rate in gas species. <i>Photoacoustics</i> , 2021, 21, 100227.	4.4	43
20	Parts-per-billion detection of carbon monoxide: A comparison between quartz-enhanced photoacoustic and photothermal spectroscopy. <i>Photoacoustics</i> , 2021, 22, 100244.	4.4	34
21	Ppt level carbon monoxide detection based on light-induced thermoelastic spectroscopy exploring custom quartz tuning forks and a mid-infrared QCL. <i>Optics Express</i> , 2021, 29, 25100.	1.7	76
22	Influence of Air Pressure on the Resonance Properties of a T-Shaped Quartz Tuning Fork Coupled with Resonator Tubes. <i>Applied Sciences (Switzerland)</i> , 2021, 11, 7974.	1.3	6
23	High and flat spectral responsivity of quartz tuning fork used as infrared photodetector in tunable diode laser spectroscopy. <i>Applied Physics Reviews</i> , 2021, 8, .	5.5	76
24	Ultra-high sensitive trace gas detection based on light-induced thermoelastic spectroscopy and a custom quartz tuning fork. <i>Applied Physics Letters</i> , 2020, 116, .	1.5	90
25	Broadband detection of methane and nitrous oxide using a distributed-feedback quantum cascade laser array and quartz-enhanced photoacoustic sensing. <i>Photoacoustics</i> , 2020, 17, 100159.	4.4	47
26	Quartz-enhanced photoacoustic spectroscopy for gas sensing applications. , 2020, , 597-659.		4
27	New Developments in Quartz-Enhanced Photoacoustic Sensing Real-World Applications. , 2020, , .		2
28	Partial Least-Squares Regression as a Tool to Retrieve Gas Concentrations in Mixtures Detected Using Quartz-Enhanced Photoacoustic Spectroscopy. <i>Analytical Chemistry</i> , 2020, 92, 11035-11043.	3.2	42
29	Mid-Infrared Quartz-Enhanced Photoacoustic Sensor for ppb-Level CO Detection in a SF ₆ Gas Matrix Exploiting a T-Grooved Quartz Tuning Fork. <i>Analytical Chemistry</i> , 2020, 92, 13922-13929.	3.2	42
30	Fiber-Coupled Quartz-Enhanced Photoacoustic Spectroscopy System for Methane and Ethane Monitoring in the Near-Infrared Spectral Range. <i>Molecules</i> , 2020, 25, 5607.	1.7	28
31	Quartz-Enhanced Photoacoustic Detection of Ethane in the Near-IR Exploiting a Highly Performant Spectrophone. <i>Applied Sciences (Switzerland)</i> , 2020, 10, 2447.	1.3	11
32	Front-End Amplifiers for Tuning Forks in Quartz Enhanced PhotoAcoustic Spectroscopy. <i>Applied Sciences (Switzerland)</i> , 2020, 10, 2947.	1.3	16
33	Environmental Monitoring of Methane with Quartz-Enhanced Photoacoustic Spectroscopy Exploiting an Electronic Hygrometer to Compensate the H ₂ O Influence on the Sensor Signal. <i>Sensors</i> , 2020, 20, 2935.	2.1	29
34	Quartz-enhanced photoacoustic spectroscopy for hydrocarbon trace gas detection and petroleum exploration. <i>Fuel</i> , 2020, 277, 118118.	3.4	43
35	In-plane quartz-enhanced photoacoustic spectroscopy. <i>Applied Physics Letters</i> , 2020, 116, .	1.5	59
36	Photoacoustic spectroscopy for gas sensing: A comparison between piezoelectric and interferometric readout in custom quartz tuning forks. <i>Photoacoustics</i> , 2020, 17, 100155.	4.4	19

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37	Sub-ppb-level CH ₄ detection by exploiting a low-noise differential photoacoustic resonator with a room-temperature interband cascade laser. <i>Optics Express</i> , 2020, 28, 19446.	1.7	27
38	Light-induced thermo-elastic effect in quartz tuning forks exploited as a photodetector in gas absorption spectroscopy. <i>Optics Express</i> , 2020, 28, 19074.	1.7	51
39	Atmospheric CH ₄ measurement near a landfill using an ICL-based QEPAS sensor with V-T relaxation self-calibration. <i>Sensors and Actuators B: Chemical</i> , 2019, 297, 126753.	4.0	127
40	Dual-Gas Quartz-Enhanced Photoacoustic Sensor for Simultaneous Detection of Methane/Nitrous Oxide and Water Vapor. <i>Analytical Chemistry</i> , 2019, 91, 12866-12873.	3.2	53
41	Acoustic Coupling between Resonator Tubes in Quartz-Enhanced Photoacoustic Spectrophones Employing a Large Prong Spacing Tuning Fork. <i>Sensors</i> , 2019, 19, 4109.	2.1	26
42	Damping Mechanisms of Piezoelectric Quartz Tuning Forks Employed in Photoacoustic Spectroscopy for Trace Gas Sensing. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2019, 216, 1800552.	0.8	13
43	Ppb-Level Quartz-Enhanced Photoacoustic Detection of Carbon Monoxide Exploiting a Surface Grooved Tuning Fork. <i>Analytical Chemistry</i> , 2019, 91, 5834-5840.	3.2	67
44	Simultaneous multi-gas detection between 3 and 4 $\hat{1}$ / ₄ m based on a 2.5-m multipass cell and a tunable Fabry-Pérot filter detector. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2019, 216, 154-160.	2.0	9
45	Near-Infrared Quartz-Enhanced Photoacoustic Sensor for H ₂ S Detection in Biogas. <i>Applied Sciences (Switzerland)</i> , 2019, 9, 5347.	1.3	7
46	Influence of Tuning Fork Resonance Properties on Quartz-Enhanced Photoacoustic Spectroscopy Performance. <i>Sensors</i> , 2019, 19, 3825.	2.1	3
47	Methane, ethane and propane detection using a compact quartz enhanced photoacoustic sensor and a single interband cascade laser. <i>Sensors and Actuators B: Chemical</i> , 2019, 282, 952-960.	4.0	66
48	Tuning forks with optimized geometries for quartz-enhanced photoacoustic spectroscopy. <i>Optics Express</i> , 2019, 27, 1401.	1.7	77
49	Quartz-enhanced photoacoustic sensor for ethylene detection implementing optimized custom tuning fork-based spectrophone. <i>Optics Express</i> , 2019, 27, 4271.	1.7	46
50	Piezo-enhanced acoustic detection module for mid-infrared trace gas sensing using a grooved quartz tuning fork. <i>Optics Express</i> , 2019, 27, 35267.	1.7	12
51	New generation of tuning forks for quartz-enhanced photoacoustic spectroscopy. , 2019, , .		0
52	Quartz-enhanced photoacoustic sensors for detection of multiple hydrocarbon and methane isotopes. , 2019, , .		0
53	Octupole electrode pattern for tuning forks vibrating at the first overtone mode in quartz-enhanced photoacoustic spectroscopy. , 2019, , .		0
54	Simultaneous dual gas QEPAS sensing of water and methane/nitrous oxide. , 2019, , .		1

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55	Quartz-enhanced photoacoustic spectroscopy employing a distributed feedback-quantum cascade laser array for nitrous oxide and methane broadband detection. , 2019, , .		0
56	Recent advances in quartz enhanced photoacoustic sensing. Applied Physics Reviews, 2018, 5, .	5.5	174
57	Nitrous oxide quartz-enhanced photoacoustic detection employing a broadband distributed-feedback quantum cascade laser array. Applied Physics Letters, 2018, 113, .	1.5	34
58	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
59	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
60	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
61	Compact and low-noise quartz-enhanced photoacoustic sensor for sub-ppm ethylene detection in atmosphere. , 2018, , .		2
62	Tapered hollow-core fibers providing single-mode output in the 3.5um-7.8um spectral range. , 2018, , .		0
63	Interband cascade laser based quartz-enhanced photoacoustic sensor for multiple hydrocarbons detection. , 2018, , .		1
64	Recent advances in quartz-enhanced photoacoustic sensing. , 2018, , .		2
65	Quartzâ€”enhanced photoacoustic spectrophones exploiting custom tuning forks: a review. Advances in Physics: X, 2017, 2, 169-187.	1.5	44
66	Pure amplitude and wavelength modulation spectroscopy for detection of N2O using a three-section quantum cascade laser. , 2017, , .		0
67	Low power consumption quartz-enhanced photoacoustic gas sensor employing a quantum cascade laser in pulsed operation. Proceedings of SPIE, 2017, , .	0.8	0
68	Double antinode excited quartz-enhanced photoacoustic spectrophone. Applied Physics Letters, 2017, 110, .	1.5	33
69	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
70	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
71	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
72	Improved Tuning Fork for Terahertz Quartz-Enhanced Photoacoustic Spectroscopy. Sensors, 2016, 16, 439.	2.1	59

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73	Low-Loss Coupling of Quantum Cascade Lasers into Hollow-Core Waveguides with Single-Mode Output in the 3.7–7.6 μm Spectral Range. <i>Sensors</i> , 2016, 16, 533.	2.1	21
74	Highly sensitive gas leak detector based on a quartz-enhanced photoacoustic SF ₆ sensor. <i>Optics Express</i> , 2016, 24, 15872.	1.7	57
75	Purely wavelength- and amplitude-modulated quartz-enhanced photoacoustic spectroscopy. <i>Optics Express</i> , 2016, 24, 25943.	1.7	44
76	Mid infrared quantum cascade laser operating in pure amplitude modulation for background-free trace gas spectroscopy. <i>Optics Express</i> , 2016, 24, 26464.	1.7	11
77	Overtone resonance enhanced single-tube on-beam quartz enhanced photoacoustic spectrophone. <i>Applied Physics Letters</i> , 2016, 109, .	1.5	46
78	Innovative quartz enhanced photoacoustic sensors for trace gas detection. , 2016, , .		2
79	Analysis of overtone flexural modes operation in quartz-enhanced photoacoustic spectroscopy. <i>Optics Express</i> , 2016, 24, A682.	1.7	57
80	New developments in THz quartz enhanced photoacoustic spectroscopy. , 2016, , .		1
81	Allan Deviation Plot as a Tool for Quartz-Enhanced Photoacoustic Sensors Noise Analysis. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , 2016, 63, 555-560.	1.7	72
82	Single-tube on-beam quartz-enhanced photoacoustic spectroscopy. <i>Optics Letters</i> , 2016, 41, 978.	1.7	88
83	Analysis of the electro-elastic properties of custom quartz tuning forks for optoacoustic gas sensing. <i>Sensors and Actuators B: Chemical</i> , 2016, 227, 539-546.	4.0	110
84	Recent advances of mid-infrared compact, field deployable sensors and their real world applications in the petrochemical industry, atmospheric chemistry and security. , 2016, , .		0
85	Micro-resonator Parameter Optimization of a QEPAS Spectrophone using a Custom Quartz Tuning Fork with large Prong Spacing. , 2016, , .		0
86	Hollow core waveguide as mid-infrared laser modal beam filter. <i>Journal of Applied Physics</i> , 2015, 118, 113102.	1.1	20
87	Quartz-enhanced photoacoustic spectroscopy exploiting tuning fork overtone modes. <i>Applied Physics Letters</i> , 2015, 107, .	1.5	61
88	A quartz-enhanced photoacoustic sensor for H ₂ S trace-gas detection at 2.6 μm . <i>Applied Physics B: Lasers and Optics</i> , 2015, 119, 21-27.	1.1	37
89	Quartz-enhanced photoacoustic sensors for H ₂ S trace gas detection. , 2015, , .		1
90	New approaches in quartz-enhanced photoacoustic sensing. <i>Proceedings of SPIE</i> , 2015, , .	0.8	2

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91	THz Quartz-enhanced photoacoustic sensor for H ₂ S trace gas detection. Optics Express, 2015, 23, 7574.	1.7	76
92	Single mode operation with mid-IR hollow fibers in the range 51-105 μm . Optics Express, 2015, 23, 195.	1.7	32
93	Quartz enhanced photoacoustic H ₂ S 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
94	High finesse optical cavity coupled with a quartz-enhanced photoacoustic spectroscopic sensor. Analyst, The, 2015, 140, 736-743.	1.7	41
95	Modeling the dependence of fork geometry on the performance of quartz enhanced photoacoustic spectroscopic sensors. , 2015, , .		1
96	Atmospheric CH ₄ and N ₂ O measurements near Greater Houston area landfills using a QCL-based QEPAS sensor system during DISCOVER-AQ 2013. Optics Letters, 2014, 39, 957.	1.7	62
97	Widely-tunable mid-infrared fiber-coupled quartz-enhanced photoacoustic sensor for environmental monitoring. Optics Express, 2014, 22, 28222.	1.7	93
98	Hydrogen peroxide detection with quartz-enhanced photoacoustic spectroscopy using a distributed-feedback quantum cascade laser. Applied Physics Letters, 2014, 104, .	1.5	44
99	Quartz-Enhanced Photoacoustic Spectroscopy: A Review. Sensors, 2014, 14, 6165-6206.	2.1	336
100	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
101	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
102	Mid-infrared fiber-coupled QCL-QEPAS sensor. Applied Physics B: Lasers and Optics, 2013, 112, 25-33.	1.1	66
103	Low-Loss Hollow Waveguide Fibers for Mid-Infrared Quantum Cascade Laser Sensing Applications. Sensors, 2013, 13, 1329-1340.	2.1	42
104	Spatial mode filtering of mid-infrared (mid-IR) laser beams with hollow core fiber optics. Proceedings of SPIE, 2013, , .	0.8	8
105	Electronic temperatures of terahertz quantum cascade active regions with phonon scattering assisted injection and extraction scheme. Optics Express, 2013, 21, 10172.	1.7	8
106	THz quantum cascade laser-based quartz enhanced photo-acoustic sensor. , 2013, , .		1
107	Quantum cascade laser-based sensor system for hydrogen peroxide detection. , 2013, , .		0
108	Part-per-trillion level SF ₆ detection using a quartz enhanced photoacoustic spectroscopy-based sensor with single-mode fiber-coupled quantum cascade laser excitation. Optics Letters, 2012, 37, 4461.	1.7	142

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109	Coupling external cavity mid-IR quantum cascade lasers with low loss hollow metallic/dielectric waveguides. <i>Applied Physics B: Lasers and Optics</i> , 2012, 108, 255-260.	1.1	27
110	Compact and Versatile QEPAS-Based Sensor Box for Simultaneous Detection of Methane and Infrared Absorber Gas Molecules in Ambient Air. <i>Frontiers in Environmental Chemistry</i> , 0, 3, .	0.7	7