Gianluca Gagliardi

List of Publications by Year
in descending order

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104 papers	2,068 citations	201575 27 h-index	265120 42 g-index
106 all docs	106 docs citations	106 times ranked	1832 citing authors

#	Article	IF	Citations
1	Probing the Ultimate Limit of Fiber-Optic Strain Sensing. Science, 2010, 330, 1081-1084.	6.0	202
2	Cavity-Enhanced Spectroscopy and Sensing. Springer Series in Optical Sciences, 2014, , .	0.5	101
3	Fiber Bragg-grating strain sensor interrogation using laser radio-frequency modulation. Optics Express, 2005, 13, 2377.	1.7	79
4	Isotope analysis of water by means of near infrared dual-wavelength diode laser spectroscopy. Optics Express, 2003, 11, 1566.	1.7	70
5	Direct Sensing in Liquids Using Whisperingâ€Galleryâ€Mode Droplet Resonators. Advanced Optical Materials, 2014, 2, 1155-1159.	3.6	70
6	Mid-infrared fibre-based optical comb. New Journal of Physics, 2006, 8, 262-262.	1.2	68
7	A 3.5-mW continuous-wave difference-frequency source around 3ÂÎ¼m for sub-Doppler molecular spectroscopy. Applied Physics B: Lasers and Optics, 2005, 80, 141-145.	1.1	63
8	Design and test of a laser-based optical-fiber Bragg-grating accelerometer for seismic applications. Measurement Science and Technology, 2008, 19, 085306.	1.4	56
9	Test of the Symmetrization Postulate for Spin-0 Particles. Physical Review Letters, 1996, 76, 2840-2843.	2.9	53
10	Absolute frequency measurement of molecular transitions by a direct link to a comb generated around 3-Âµm. Optics Express, 2008, 16, 8242.	1.7	52
11	High-resolution absolute frequency referenced fiber optic sensor for quasi-static strain sensing. Applied Optics, 2010, 49, 4029.	2.1	52
12	Determination of the 2H/1H, 17O/16O, and 18O/16O isotope ratios in water by means of tunable diode laser spectroscopy at 1.39 Î¼m. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2002, 58, 2389-2396.	2.0	51
13	Fiber Bragg Grating Sensor for Electric Field Measurement in the End Windings of High-Voltage Electric Machines. IEEE Transactions on Industrial Electronics, 2016, 63, 2796-2802.	5.2	51
14	High-precision determination of the 13CO2/12CO2 isotope ratio using a portable 2.008-Î¼m diode-laser spectrometer. Applied Physics B: Lasers and Optics, 2003, 77, 119-124.	1.1	50
15	Localized strain sensing with fiber Bragg-grating ring cavities. Optics Express, 2013, 21, 29435.	1.7	46
16	Optical Fiber Sensing Based on Reflection Laser Spectroscopy. Sensors, 2010, 10, 1823-1845.	2.1	41
17	Musical instrument pickup based on a laser locked to an optical fiber resonator. Optics Express, 2011, 19, 25057.	1.7	37
18	Combining a difference-frequency source with an off-axis high-finesse cavity for trace-gas monitoring around 3 Âµm. Optics Express, 2006, 14, 1304.	1.7	34

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19	Surface plasmon resonance optical cavity enhanced refractive index sensing. Optics Letters, 2013, 38, 1951.	1.7	34
20	Stimulated Brillouin Cavity Optomechanics in Liquid Droplets. Physical Review Letters, 2018, 120, 073902.	2.9	32
21	Two-tone frequency modulation spectroscopy for ambient-air trace gas detection using a portable difference-frequency source around 3ÂĨ¼m. Applied Physics B: Lasers and Optics, 2006, 85, 219-222.	1.1	30
22	Absolute measurement of the S(0) and S(1) lines in the electric quadrupole fundamental band of D2 around 3â€‚Ĩ¼m. Journal of Chemical Physics, 2010, 133, 154317.	1.2	30
23	Frequency-comb-referenced mid-IR sources for next-generation environmental sensors. Applied Physics B: Lasers and Optics, 2011, 102, 255-269.	1.1	29
24	Split-mode fiber Bragg grating sensor for high-resolution static strain measurements. Optics Letters, 2014, 39, 6899.	1.7	29
25	Investigation of refractive index sensing based on Fano resonance in fiber Bragg grating ring resonators. Optics Express, 2015, 23, 14301.	1.7	29
26	A diode-laser-based spectrometer for in-situ measurements of volcanic gases. Applied Physics B: Lasers and Optics, 2004, 78, 235-240.	1.1	28
27	A frequency-modulated quantum-cascade laser for spectroscopy of CH4and N2O isotopomers. Isotopes in Environmental and Health Studies, 2005, 41, 313-321.	0.5	28
28	Loss determination in microsphere resonators by phase-shift cavity ring-down measurements. Optics Express, 2008, 16, 13158.	1.7	28
29	Investigation of fiber Bragg grating based mode-splitting resonant sensors. Optics Express, 2014, 22, 25371.	1.7	27
30	Interrogation of fiber Bragg-grating resonators by polarization-spectroscopy laser-frequency locking. Optics Express, 2007, 15, 3715.	1.7	26
31	Fundamental limits in high-Q droplet microresonators. Scientific Reports, 2017, 7, 41997.	1.6	26
32	High-sensitivity detection of NO 2 using a 740 nm semiconductor diode laser. Applied Physics B: Lasers and Optics, 1997, 64, 487-491.	1.1	22
33	Optical fiber three-axis accelerometer based on lasers locked to Ï€ phase-shifted Bragg gratings. Measurement Science and Technology, 2010, 21, 094010.	1.4	21
34	Trace-gas analysis using diode lasers in the near-IR and long-path techniques. Optics and Lasers in Engineering, 2002, 37, 509-520.	2.0	20
35	Off-axis integrated-cavity-output spectroscopy for trace-gas concentration measurements: modeling and performance. Journal of the Optical Society of America B: Optical Physics, 2006, 23, 1938.	0.9	20
36	Quantitative diode laser absorption spectroscopy near 2 Î¼m with high precision measurements of CO2 concentration. Review of Scientific Instruments, 2001, 72, 4228-4233.	0.6	19

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37	Detecting ionizing radiation with optical fibers down to biomedical doses. Applied Physics Letters, 2013, 103, .	1.5	19
38	Measurement of multi-exponential optical decay processes byÂphase-shift cavity ring-down. Applied Physics B: Lasers and Optics, 2009, 96, 193-200.	1.1	18
39	Liquid Droplet Microresonators. Sensors, 2019, 19, 473.	2.1	18
40	Interrogation of FBG-based strain sensors by means of laser radio-frequency modulation techniques. Journal of Optics, 2006, 8, S507-S513.	1.5	17
41	Chemical and isotopic analysis using diode laser spectroscopy: applications to volcanic gas monitoring. Optics and Lasers in Engineering, 2002, 37, 131-142.	2.0	16
42	Enhanced nanoparticle detection with liquid droplet resonators. European Physical Journal: Special Topics, 2014, 223, 1971-1988.	1.2	16
43	Mode-splitting cloning in birefringent fiber Bragg grating ring resonators. Optics Letters, 2016, 41, 2672.	1.7	16
44	Excitation Mechanisms of Whispering Gallery Modes with Direct Light Scattering. Laser and Photonics Reviews, 2021, 15, 2000528.	4.4	16
45	Sensitive detection of methane and nitrous oxide isotopomers using a continuous wave quantum cascade laser. European Physical Journal D, 2002, 19, 327-331.	0.6	14
46	Evanescent-wave comb spectroscopy of liquids with strongly dispersive optical fiber cavities. Applied Physics Letters, 2013, 102, 201116.	1.5	14
47	Fiber Bragg grating laser sensor with direct radio-frequency readout. Optics Letters, 2016, 41, 1420.	1.7	14
48	Laser-frequency locking to a whispering-gallery-mode cavity by spatial interference of scattered light. Optics Letters, 2016, 41, 650.	1.7	14
49	Phase-shift cavity ring-down spectroscopy on a microsphere resonator by Rayleigh backscattering. Physical Review A, 2013, 87, .	1.0	13
50	Absolute absorption cross-section measurement of a submonolayer film on a silica microresonator. Optica, 2014, 1, 75.	4.8	13
51	Detection of chemicals using a novel fiber-optic sensor element built in fiber loop ring-resonators. Sensors and Actuators B: Chemical, 2015, 206, 327-335.	4.0	13
52	AbsorptionÂdetection using optical waveguide cavities. Canadian Journal of Chemistry, 2010, 88, 401-410.	0.6	11
53	Enhanced spectral response of Ï€-phase shifted fiber Bragg gratings in closed-loop configuration. Optics Letters, 2015, 40, 2124.	1.7	11
54	Progress in a Vacuum Weight Search Experiment. Physics, 2020, 2, 1-13.	0.5	11

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55	Sub-Doppler spectroscopy of H218O at 1.4ÂÎ¼m. Applied Physics B: Lasers and Optics, 2000, 70, 883-888.	1.1	10
56	Super-Resonant Intracavity Coherent Absorption. Scientific Reports, 2016, 6, 28947.	1.6	10
57	Response to Comment on â€œProbing the Ultimate Limit of Fiber-Optic Strain Sensingâ€. Science, 2012, 335, 286-286.	6.0	9
58	Rheology of complex fluids with vibrating fiber-optic sensors. Sensors and Actuators A: Physical, 2017, 264, 219-223.	2.0	9
59	Opto-mechanical oscillator in a nanoliter droplet. Optics Letters, 2018, 43, 3473.	1.7	9
60	Ionizing Radiation Detectors Based on Ge-Doped Optical Fibers Inserted in Resonant Cavities. Sensors, 2015, 15, 4242-4252.	2.1	8
61	Investigation of theb1Î£g+(v=0)â†’3Î£gâ^'(v=0) magnetic-dipole transitions inO218. Physical Review A, 1997, 55, 4597-4600.	1.0	7
62	Fabrication of tapered single mode fiber by chemical etching and used as a chemical sensor based on evanescent field absorption. Proceedings of SPIE, 2010, , .	0.8	7
63	The laser control of the muon gâ^'2 experiment at Fermilab. Journal of Instrumentation, 2018, 13, T02009-T02009.	0.5	7
64	Narrow H218O lines and new absolute frequency references in the near-IR. Journal of Optics, 2000, 2, 310-313.	1.5	6
65	Generation of tunable far-infrared radiation with a quantum cascade laser. Optics Letters, 2002, 27, 521.	1.7	6
66	Light pressure in droplet micro-resonators excited by free-space scattering. Optics Letters, 2021, 46, 3111.	1.7	6
67	Angular-momentum coupling of optical whispering-gallery modes to liquid droplet microresonators. Physical Review A, 2021, 104, .	1.0	6
68	Continuous in situ measurements of volcanic gases with a diode-laser-based spectrometer: CO2 and H2O concentration and soil degassing at Vulcano (Aeolian islands: Italy). Geochemical Transactions, 2007, 8, 5.	1.8	5
69	3-axis accelerometer based on lasers locked to Ï€-shifted fibre Bragg gratings. Proceedings of SPIE, 2009, , .	0.8	5
70	Two-tone frequency-modulation spectroscopy in off-axis cavity. Optics Letters, 2013, 38, 4625.	1.7	5
71	High-sensitivity ring-down evanescent-wave sensing in fiber resonators. Optics Letters, 2014, 39, 5725.	1.7	5
72	Radiation dosimetry with fiber Bragg gratings. , 2014, , .		4

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73	Spectral characterization of integrated acousto-optic tunable filters by means of laser frequency modulation spectroscopy. Applied Optics, 2006, 45, 9176.	2.1	3
74	<title>Cavity-enhanced molecular spectroscopy: a powerful tool to detect trace gases</title>. , 1999, 3821, 90.		2
75	Assessing Soil Respiration by Means of Near-Infrared Diode Laser Spectroscopy. Applied Spectroscopy, 2004, 58, 1051-1056.	1.2	2
76	Chemical microanalysis with cavity-enhanced optical waveguide devices. Proceedings of SPIE, 2011, , .	0.8	2
77	Investigating the resonance spectrum of optical frequency combs in fiber-optic cavities. Optics Express, 2013, 21, 13785.	1.7	2
78	Cavity-enhanced surface-plasmon resonance sensing: modeling and performance. Measurement Science and Technology, 2014, 25, 015205.	1.4	2
79	Fiber-Optic Resonators for Strain-Acoustic Sensing and Chemical Spectroscopy. Springer Series in Optical Sciences, 2014, , 463-484.	0.5	2
80	High-precision measurements of CO 2 concentration in air by means of diode-laser absorption spectroscopy near 2 Î¼m. , 2001, , .		1
81	Ultra-high sensitivity frequency-comb-referenced multi-parametric sensors based on 1-D photonic components. , 2008, , .		1
82	Optical-frequency-comb stabilised lasers for interrogation of fibre-resonator strain sensors. Proceedings of SPIE, 2009, , .	0.8	1
83	Whispering-gallery mode resonator sensors based on liquid droplets. Proceedings of SPIE, 2016, , .	0.8	1
84	Cavity-Enhanced Spectroscopy on Silica Microsphere Resonators. Springer Series in Optical Sciences, 2014, , 351-383.	0.5	1
85	Dielectric Optical Resonators for Mechanical and Chemical Sensing Using Frequency Combs. , 2012, , .		1
86	Real-time monitoring of volcanic emissions with a laser-based fiber spectrometer. , 2004, , .		0
87	High-sensitivity and high-resolution trace gas detection by means of a mW-power DFG spectrometer around 3.2 Î¼m. , 2004, , .		0
88	A 3.5-mW continuous-wave difference-frequency source around 3 ,um for sub-doppler molecular spectroscopy. , 0, , .		0
89	<title>Laser radio-frequency and cavity-enhanced interrogation techniques for strain sensing by fiber Bragg gratings</title>. , 2006, , .		0
90	Mid-infrared frequency synthesizers: novel precise rulers for molecular spectroscopy. , 2007, , .		0

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91	Fiber Bragg-grating (FBG) resonators for high-sensitivity multi-parameter sensing. , 2007, , .		0
92	Laser-frequency locking techniques for high-sensitivity strain measurements by high-birefringence fiber Bragg gratings and resonators. Proceedings of SPIE, 2007, , .	0.8	0
93	Quasi-static strain sensing using molecular spectroscopy. Proceedings of SPIE, 2011, , .	0.8	0
94	Optical-frequency-comb based interrogation of fiber resonators. Proceedings of SPIE, 2011, , .	0.8	0
95	Fiber optic resonator sensors based on comb synthesizers. , 2012, , .		0
96	Optical cavity-enhanced surface plasmon resonance refractive index sensing. , 2013, , .		0
97	Publisher's Note: Phase-shift cavity ring-down spectroscopy on a microsphere resonator by Rayleigh backscattering [Phys. Rev. A87, 053843 (2013)]. Physical Review A, 2013, 87, .	1.0	0
98	Sensitive strain measurements with a fiber Bragg-grating ring resonator. Proceedings of SPIE, 2014, , .	0.8	0
99	Crystalline and liquid whispering gallery mode resonators for laser stabilization and sensing (Invited). , 2017, , .		0
100	Domain-Engineered Ferroelectric Crystals for Nonlinear and Quantum Optics. Springer Series in Materials Science, 2014, , 285-311.	0.4	0
101	Super-resonant coherent absorption sensing. , 2018, , .		0
102	Surface scattering and opto-mechanical effects in droplet microresonators. , 2018, , .		0
103	Optical sensing and optomechanics in liquid droplets. , 2020, , .		0
104	Efficient coupling of free propagating light into Whispering Gallery Modes. EPJ Web of Conferences, 2021, 255, 04002.	0.1	0