Caterina Ciminelli

List of Publications by Year
in descending order

76	1,694	304368	315357
papers	citations	22 h-index	38 g-index

79	79	79	1464
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Photonic technologies for angular velocity sensing. Advances in Optics and Photonics, 2010, 2, 370.	12.1	189
2	Label-free optical resonant sensors for biochemical applications. Progress in Quantum Electronics, 2013, 37, 51-107.	3.5	165
3	High performance InP ring resonator for new generation monolithically integrated optical gyroscopes. Optics Express, 2013, 21, 556.	1.7	108
4	High performance SOI microring resonator for biochemical sensing. Optics and Laser Technology, 2014, 59, 60-67.	2.2	87
5	Phononic and photonic band gap structures: modelling and applications. Physics Procedia, 2010, 3, 357-364.	1.2	77
6	Advances in Gyroscope Technologies. , 2011, , .		63
7	Efficient Chemical Sensing by Coupled Slot SOI Waveguides. Sensors, 2009, 9, 1012-1032.	2.1	61
8	A High-<italic>Q</italic> InP Resonant Angular Velocity Sensor for a Monolithically Integrated Optical Gyroscope. IEEE Photonics Journal, 2016, 8, 1-19.	1.0	56
9	High-Q Spiral Resonator for Optical Gyroscope Applications: Numerical and Experimental Investigation. IEEE Photonics Journal, 2012, 4, 1844-1854.	1.0	52
10	Ultra-high Q/V hybrid cavity for strong light-matter interaction. APL Photonics, 2017, 2, .	3.0	44
11	A new integrated optical angular velocity sensor. , 2005, , .		39
12	Exploring the Limit of Multiplexed Near-Field Optical Trapping. ACS Photonics, 2021, 8, 2060-2066.	3.2	38
13	Low-loss passive waveguides in a generic InP foundry process via local diffusion of zinc. Optics Express, 2015, 23, 25143.	1.7	37
14	Fast light generation through velocity manipulation in two vertically-stacked ring resonators. Optics Express, 2010, 18, 2973.	1.7	35
15	New ultrasensitive resonant photonic platform for label-free biosensing. Optics Express, 2015, 23, 28593.	1.7	35
16	Ultra-Compact Tuneable Notch Filter Using Silicon Photonic Crystal Ring Resonator. Journal of Lightwave Technology, 2019, 37, 2970-2980.	2.7	33
17	Comprehensive mathematical modelling of ultra-high Q grating-assisted ring resonators. Journal of Optics (United Kingdom), 2020, 22, 035802.	1.0	29
18	Design of an ultra-compact graphene-based integrated microphotonic tunable delay line. Optics Express, 2018, 26, 4593.	1.7	28

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19	Optimized Design of Integrated Optical Angular Velocity Sensors Based on a Passive Ring Resonator. Journal of Lightwave Technology, 2009, 27, 2658-2666.	2.7	27
20	Modeling and design of two-dimensional guided-wave photonic band-gap devices. Journal of Lightwave Technology, 2005, 23, 886-901.	2.7	26
21	Monitoring of individual bacteria using electro-photonic traps. Biomedical Optics Express, 2019, 10, 3463.	1.5	25
22	Design of a large bandwidth 2 Ã— 2 interferometric switching cell based on a sub-wavelength grating. Journal of Optics (United Kingdom), 2021, 23, 085801.	1.0	24
23	Three-dimensional modelling of scattering loss in InGaAsP/InP and silica-on-silicon bent waveguides. Journal of the European Optical Society-Rapid Publications, 0, 4, .	0.9	23
24	Photonic and Plasmonic Nanotweezing of Nano- and Microscale Particles. Applied Spectroscopy, 2017, 71, 367-390.	1.2	23
25	Novel Micro-Nano Optoelectronic Biosensor for Label-Free Real-Time Biofilm Monitoring. Biosensors, 2021, 11, 361.	2.3	23
26	Highly Sensitive Refractive Index Sensor Based on Polymer Bragg Grating: A Case Study on Extracellular Vesicles Detection. Biosensors, 2022, 12, 415.	2.3	20
27	Theoretical investigation of indium phosphide buried ring resonators for new angular velocity sensors. Optical Engineering, 2013, 52, 024601.	0.5	19
28	High performance and tunable optical pump-rejection filter for quantum photonic systems. Optics and Laser Technology, 2021, 139, 106978.	2.2	18
29	Fully three-dimensional accurate modeling of scattering loss in optical waveguides. Optical and Quantum Electronics, 2009, 41, 285-298.	1.5	17
30	Measured radiation effects on InGaAsP/InP ring resonators for space applications. Optics Express, 2019, 27, 24434.	1.7	17
31	Nanoscale Optical Trapping by Means of Dielectric Bowtie. Photonics, 2022, 9, 425.	0.9	16
32	Design, fabrication, and preliminary test results of a new InGaAsP/InP high-Q ring resonator for gyro applications. , 2012, , .		15
33	Rigorous model for the design of ultra-high Q-factor resonant cavities. , 2016, , .		15
34	Photonic crystal and photonic wire nano-photonics based on silicon-on-insulator. New Journal of Physics, 2006, 8, 256-256.	1.2	14
35	Chip-Scaled Ka-Band Photonic Linearly Chirped Microwave Waveform Generator. Frontiers in Physics, 2022, 10, .	1.0	14
36	Design of a New Ultracompact Resonant Plasmonic Multi-Analyte Label-Free Biosensing Platform. Sensors, 2017, 17, 1810.	2.1	13

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37	Tunable narrow band add-drop filter design based on apodized long period waveguide grating assisted co-directional coupler. Optics Express, 2022, 30, 28632.	1.7	12
38	System test of an optoelectronic gyroscope based on a high Q -factor InP ring resonator. Optical Engineering, 2014, 53, 127104.	0.5	11
39	Silicon photonic biosensors. IET Optoelectronics, 2019, 13, 48-54.	1.8	11
40	Quality factor and finesse optimization in buried InGaAsP/InP ring resonators. Journal of the European Optical Society-Rapid Publications, 0, 4, .	0.9	10
41	Performance enhancement of nonlinear lithium niobate couplers via double titanium and magnesium diffusion. Physica E: Low-Dimensional Systems and Nanostructures, 1999, 5, 84-97.	1.3	9
42	Modeling and Design of a New Flexible Graphene-on-Silicon Schottky Junction Solar Cell. Electronics (Switzerland), 2016, 5, 73.	1.8	9
43	Integrated Photonic and Plasmonic Resonant Devices for Labelâ€Free Biosensing and Trapping at the Nanoscale. Physica Status Solidi (A) Applications and Materials Science, 2019, 216, 1800561.	0.8	8
44	Exact analysis of cascaded second-order nonlinearity in rotated Ti:LiNbO3 Couplers. Optical and Quantum Electronics, 1999, 31, 655-674.	1.5	7
45	Parametric analysis of 2D guided-wave photonic band gap structures. Optics Express, 2005, 13, 9729.	1.7	7
46	Novel CMOS-Compatible Athermal and Polarization-Insensitive Ring Resonator as Photonic Notch Filter. IEEE Photonics Journal, 2018, 10, 1-11.	1.0	6
47	Role of magnetic skyrmions for the solution of the shortest path problem. Journal of Magnetism and Magnetic Materials, 2021, 532, 167977.	1.0	6
48	Variable oblique incidence for tunability in a two-dimensional photonic-crystal guided-wave filter. Journal of Lightwave Technology, 2006, 24, 470-476.	2.7	5
49	Design of passive ring resonators to be used for sensing applications. Journal of the European Optical Society-Rapid Publications, 0, 4, .	0.9	5
50	Planar photonic gyroscopes for satellite attitude control. , 2017, , .		5
51	Effect of fabrication tolerances on the performance of two-dimensional polymer photonic crystal channel drop filters: a theoretical investigation based on the finite element method. Optical Engineering, 2013, 52, 097104.	0.5	4
52	Optical switching technologies and their applications. , 2001, , .		3
53	High Coupling Efficiency in 2D Guided-Wave Photonic Band Gap Extended Microcavities for Sensing Applications. Current Analytical Chemistry, 2008, 4, 362-370.	0.6	3
54	Investigation of a point-like and plane-wave excitation in 2D photonic bandgap microcavities using Greenâ€™s function method. Optical and Quantum Electronics, 2009, 41, 255-265.	1.5	3

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55	Simulation and fabrication of a new photonic biosensor. , 2010, , .		3
56	Structural polarization conversion in integrated optical vertically stacked ring resonators. Optics and Laser Technology, 2013, 48, 294-301.	2.2	3
57	Integrated Microphotonic Switching Matrices for Flexible and Broadband Telecom Satellite Payloads. , 2019, , .		3
58	A Multi-objective Genetic Algorithm Based Approach to the Optimization of Oligonucleotide Microarray Production Process. Lecture Notes in Computer Science, 2008, , 1039-1046.	1.0	3
59	Optical and Structural Characterization of Z-Cut<tex>$hboxLiNbO_3$</tex>Optical Waveguides Formed in a Mixed Proton Source. Journal of Lightwave Technology, 2004, 22, 820-826.	2.7	2
60	Fast and Accurate Investigation of 2-D Multilayered Photonic Crystals by a 3-D Model Based on the Green's Function. IEEE Journal of Quantum Electronics, 2010, 46, 1549-1560.	1.0	2
61	High performance chirped microwave generator for space applications. , 2021, , .		2
62	PHOTONIC CRYSTALS: TOWARDS A NOVEL GENERATION OF INTEGRATED OPTICAL DEVICES FOR CHEMICAL AND BIOLOGICAL DETECTION. Series in Optics and Photonics, 2009, , 146-172.	0.1	2
63	Guided-wave photonic bandgap filters for space applications. , 2003, , .		1
64	Photonic crystal and photonic wire device structures. , 2005, , .		1
65	Photonic crystal planar waveguide devices exploiting the thermo-optic effect (Keynote Paper). , 2005, 5840, 1.		1
66	Coupled ring resonators: Physical effects and potential applications. , 2012, , .		1
67	Design of a polymer photonic crystal membrane cavity for channel drop filtering in coarse wavelength division multiplexing networks. , 2013, , .		1
68	New microphotonic resonant devices for label-free biosensing. , 2016, , .		1
69	Reliability test procedures for tunable lasers. , 2003, 4944, 83.		0
70	Integrated optofluidic strategies for a system level understanding of pathological states during space flights. , 2009, , .		0
71	Optical sensor for nanoparticles. , 2011, , .		0
72	Modal analysis of a novel nanophotonic plasmon hollow waveguide. , 2012, , .		0

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73	Special Issue on the Third Mediterranean Photonics Conference (MePhoCo2014). IEEE Photonics Journal, 2014, 6, 1-2.	1.0	0
74	Electro-Photonic Chip-Scale Microsystem for Label-Free Single Bacteria Monitoring. Lecture Notes in Electrical Engineering, 2019, , 53-58.	0.3	0
75	Silicon-Based Optical-Pump Rejection Filter for Quantum Circuits. , 2020, , .		0
76	Design of a Label-Free Multiplexed Biosensing Platform Based on an Ultracompact Plasmonic Resonant Cavity. Lecture Notes in Electrical Engineering, 2019, , 263-267.	0.3	0