

# Francesco Dell'Olio

## List of Publications by Year in descending order

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Version: 2024-02-01

90  
papers

2,411  
citations

236612

25  
h-index

223531

46  
g-index

92  
all docs

92  
docs citations

92  
times ranked

2106  
citing authors

#	ARTICLE	IF	CITATIONS
1	Optical sensing by optimized silicon slot waveguides. <i>Optics Express</i> , 2007, 15, 4977.	1.7	321
2	Photonic technologies for angular velocity sensing. <i>Advances in Optics and Photonics</i> , 2010, 2, 370.	12.1	189
3	Label-free optical resonant sensors for biochemical applications. <i>Progress in Quantum Electronics</i> , 2013, 37, 51-107.	3.5	165
4	Guided-Wave Optical Biosensors. <i>Sensors</i> , 2007, 7, 508-536.	2.1	132
5	High performance InP ring resonator for new generation monolithically integrated optical gyroscopes. <i>Optics Express</i> , 2013, 21, 556.	1.7	108
6	Ammonia Optical Sensing by Microring Resonators. <i>Sensors</i> , 2007, 7, 2741-2749.	2.1	97
7	Recent advances in miniaturized optical gyroscopes. <i>Journal of the European Optical Society-Rapid Publications</i> , 0, 9, .	0.9	89
8	High performance SOI microring resonator for biochemical sensing. <i>Optics and Laser Technology</i> , 2014, 59, 60-67.	2.2	87
9	Phononic and photonic band gap structures: modelling and applications. <i>Physics Procedia</i> , 2010, 3, 357-364.	1.2	77
10	Strongly resonant silicon slot metasurfaces with symmetry-protected bound states in the continuum. <i>Optics Express</i> , 2021, 29, 10374.	1.7	67
11	Advances in Gyroscope Technologies. , 2011, , .		63
12	Efficient Chemical Sensing by Coupled Slot SOI Waveguides. <i>Sensors</i> , 2009, 9, 1012-1032.	2.1	61
13	A High- <i>Q</i> InP Resonant Angular Velocity Sensor for a Monolithically Integrated Optical Gyroscope. <i>IEEE Photonics Journal</i> , 2016, 8, 1-19.	1.0	56
14	Electromagnetic field photonic sensors. <i>Progress in Quantum Electronics</i> , 2006, 30, 45-73.	3.5	55
15	High-Q Spiral Resonator for Optical Gyroscope Applications: Numerical and Experimental Investigation. <i>IEEE Photonics Journal</i> , 2012, 4, 1844-1854.	1.0	52
16	Ultra-high <i>Q/V</i> hybrid cavity for strong light-matter interaction. <i>APL Photonics</i> , 2017, 2, .	3.0	44
17	Fast light generation through velocity manipulation in two vertically-stacked ring resonators. <i>Optics Express</i> , 2010, 18, 2973.	1.7	35
18	New ultrasensitive resonant photonic platform for label-free biosensing. <i>Optics Express</i> , 2015, 23, 28593.	1.7	35

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19	Rigorous design of an ultra-high Q/V photonic/plasmonic cavity to be used in biosensing applications. Optics and Laser Technology, 2016, 77, 151-161.	2.2	34
20	Analogue of electromagnetically induced transparency in square slotted silicon metasurfaces supporting bound states in the continuum. Optics Express, 2022, 30, 4615.	1.7	34
21	Scaling and Optimization of MOS Optical Modulators in Nanometer SOI Waveguides. IEEE Nanotechnology Magazine, 2008, 7, 401-408.	1.1	33
22	Ultra-Compact Tuneable Notch Filter Using Silicon Photonic Crystal Ring Resonator. Journal of Lightwave Technology, 2019, 37, 2970-2980.	2.7	33
23	Design of an Optical Trapping Device Based on an Ultra-High Q/V Resonant Structure. IEEE Photonics Journal, 2014, 6, 1-16.	1.0	31
24	Resonant Graphene-Based Tunable Optical Delay Line. IEEE Photonics Journal, 2015, 7, 1-9.	1.0	31
25	Comprehensive mathematical modelling of ultra-high Q grating-assisted ring resonators. Journal of Optics (United Kingdom), 2020, 22, 035802.	1.0	29
26	Graphene-based fine-tunable optical delay line for optical beamforming in phased-array antennas. Applied Optics, 2016, 55, 4342.	2.1	28
27	Design of an ultra-compact graphene-based integrated microphotonic tunable delay line. Optics Express, 2018, 26, 4593.	1.7	28
28	Monitoring of individual bacteria using electro-photonic traps. Biomedical Optics Express, 2019, 10, 3463.	1.5	25
29	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
30	Photonic and Plasmonic Nanotweezing of Nano- and Microscale Particles. Applied Spectroscopy, 2017, 71, 367-390.	1.2	23
31	Theoretical investigation of indium phosphide buried ring resonators for new angular velocity sensors. Optical Engineering, 2013, 52, 024601.	0.5	19
32	Fully three-dimensional accurate modeling of scattering loss in optical waveguides. Optical and Quantum Electronics, 2009, 41, 285-298.	1.5	17
33	Measured radiation effects on InGaAsP/InP ring resonators for space applications. Optics Express, 2019, 27, 24434.	1.7	17
34	Design, fabrication, and preliminary test results of a new InGaAsP/InP high-Q ring resonator for gyro applications. , 2012, , .		15
35	Rigorous model for the design of ultra-high Q-factor resonant cavities. , 2016, , .		15
36	Numerical and experimental investigation of an optical high-Q spiral resonator gyroscope. , 2012, , .		13

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37	Design of a New Ultracompact Resonant Plasmonic Multi-Analyte Label-Free Biosensing Platform. Sensors, 2017, 17, 1810.	2.1	13
38	All-Dielectric Metasurface Based on Complementary Split-Ring Resonators for Refractive Index Sensing. Photonics, 2022, 9, 130.	0.9	13
39	Theoretical investigation on the scale factor of a triple ring cavity to be used in frequency sensitive resonant gyroscopes. Journal of the European Optical Society-Rapid Publications, 0, 8, .	0.9	12
40	System test of an optoelectronic gyroscope based on a high Q -factor InP ring resonator. Optical Engineering, 2014, 53, 127104.	0.5	11
41	New microwave photonic filter based on a ring resonator including a photonic crystal structure. , 2017, , .		11
42	Silicon photonic biosensors. IET Optoelectronics, 2019, 13, 48-54.	1.8	11
43	Quality factor and finesse optimization in buried InGaAsP/InP ring resonators. Journal of the European Optical Society-Rapid Publications, 0, 4, .	0.9	10
44	New miniaturized exhaled nitric oxide sensor based on a high Q/V mid-infrared 1D photonic crystal cavity. Applied Optics, 2015, 54, 2208.	0.9	10
45	Photonic Technologies for Liquid Biopsies: Recent Advances and Open Research Challenges. Laser and Photonics Reviews, 2021, 15, .	4.4	10
46	Modeling and Design of a New Flexible Graphene-on-Silicon Schottky Junction Solar Cell. Electronics (Switzerland), 2016, 5, 73.	1.8	9
47	Design of a high-performance optical tweezer for nanoparticle trapping. Applied Physics A: Materials Science and Processing, 2016, 122, 1.	1.1	8
48	Integrated Photonic and Plasmonic Resonant Devices for Label-Free Biosensing and Trapping at the Nanoscale. Physica Status Solidi (A) Applications and Materials Science, 2019, 216, 1800561.	0.8	8
49	Resonant optical gyro: Monolithic vs. hybrid integration. , 2013, , .		7
50	Ultralow Loss and High Extinction Ratio TM-Pass Polarizer in Silicon Photonics. IEEE Photonics Journal, 2020, 12, 1-11.	1.0	7
51	Multiplexed Liquid Biopsy and Tumor Imaging Using Surface-Enhanced Raman Scattering. Biosensors, 2021, 11, 449.	2.3	7
52	Novel CMOS-Compatible Athermal and Polarization-Insensitive Ring Resonator as Photonic Notch Filter. IEEE Photonics Journal, 2018, 10, 1-11.	1.0	6
53	Sensitivity Analysis of Rib Waveguides for Integrated Optical Sensors. , 2007, , .		5
54	Micro-racetrack coupled-resonator optical waveguides in silicon photonic wires. Journal of Optics, 2008, 10, 064003.	1.5	5

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55	Planar photonic gyroscopes for satellite attitude control. , 2017, , .		5
56	Low-Cost Wireless Wearable System for Posture Monitoring. Electronics (Switzerland), 2021, 10, 2569.	1.8	5
57	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
58	Backscattering noise control in the readout circuit of innovative optoelectronic resonant gyroscopes. , 2014, , .		3
59	Design of a new photonic/plasmonic microcavity allowing a strong light-matter interaction. , 2014, , .		3
60	Novel graphene-based photonic devices for efficient light control and manipulation. , 2015, , .		3
61	Liquid Biopsies: Photonic Technologies for Liquid Biopsies: Recent Advances and Open Research Challenges (Laser Photonics Rev. 15(1)/2021). Laser and Photonics Reviews, 2021, 15, 2170012.	4.4	3
62	Modeling and design of a microdisk photonic sensor for biological applications. , 2007, , .		2
63	Simulation of a high speed interferometer optical modulator in polymer materials. Journal of Computational Electronics, 2007, 6, 297-300.	1.3	2
64	Multiple ring resonators in optical gyroscopes. , 2012, , .		2
65	Resonant nanoplasmonic platform for fast and early diagnosis of cardiovascular diseases. , 2016, , .		2
66	Light manipulation in resonant photonic devices. , 2010, , .		1
67	Coupled ring resonators: Physical effects and potential applications. , 2012, , .		1
68	Design of a polymer photonic crystal membrane cavity for channel drop filtering in coarse wavelength division multiplexing networks. , 2013, , .		1
69	Experimental countermeasures to reduce the backscattering noise in an InP hybrid optical gyroscope. , 2014, , .		1
70	Hybrid photonic-plasmonic microcavities for Q/V ratio enhancement. , 2014, , .		1
71	Optoelectronic gyroscope based on a high-Q InGaAsP/InP ring resonator: Preliminary results of the system test. , 2014, , .		1
72	Out-of-resonance measurement scheme for ring resonator gyroscopes. , 2015, , .		1

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73	New microphotonic resonant devices for label-free biosensing. , 2016, , .		1
74	Photonic, plasmonic and hybrid nanotweezers for single nanoparticle trapping and manipulation. , 2017, , .		1
75	Graphene/Silicon Schottky Junction Solar Cells. , 2018, , .		1
76	Integrated Microphotonic Tuneable Delay Lines for Beam Steering in Phased Array Antennas. , 2018, , .		1
77	Microphotronics-Based Architectures of Mini-SAR Payloads. , 2019, , .		1
78	Study of photonic resonant angular velocity sensors as alternative gyro technology. , 2017, , .		1
79	TM-Pass Polarizer for Ultradense High-Performance Photonic Integrated Circuits. , 2020, , .		1
80	Surface Sensitivity Optimization of a Microring Resonator for Biochemical Sensing. , 2006, , .		0
81	Hollow core waveguides for optical chemical sensing. , 2007, , .		0
82	Silicon waveguides for the mid-infrared wavelength region. Proceedings of SPIE, 2008, , .	0.8	0
83	Modal analysis of a novel nanophotonic plasmon hollow waveguide. , 2012, , .		0
84	Design of a lithium niobate 2D E-field photonic probe. , 2012, , .		0
85	Modelling and design of an electrically-pumped DFB laser based on an erbium-doped silicon-rich silicon oxide layer embedded in a slot waveguide. , 2014, , .		0
86	Silicon electro-optically tunable delay line. , 2018, , .		0
87	Electro-Photonic Chip-Scale Microsystem for Label-Free Single Bacteria Monitoring. Lecture Notes in Electrical Engineering, 2019, , 53-58.	0.3	0
88	Design and optimization of a fiber optic data link for new generation on-board SAR processing architectures. , 2017, , .		0
89	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
90	Indirectly-coupled optical resonators for anti-parity-time-symmetric gyroscopes. , 2022, , .		0