

# Cosimo Lacava

## List of Publications by Year in descending order

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Version: 2024-02-01

68  
papers

1,510  
citations

361296

20  
h-index

302012

39  
g-index

69  
all docs

69  
docs citations

69  
times ranked

1776  
citing authors

#	ARTICLE	IF	CITATIONS
1	Coupling strategies for silicon photonics integrated chips [Invited]. Photonics Research, 2019, 7, 201.	3.4	333
2	High-efficiency grating-couplers: demonstration of a new design strategy. Scientific Reports, 2017, 7, 16670.	1.6	146
3	Roadmap on all-optical processing. Journal of Optics (United Kingdom), 2019, 21, 063001.	1.0	128
4	Si-rich Silicon Nitride for Nonlinear Signal Processing Applications. Scientific Reports, 2017, 7, 22.	1.6	111
5	Fibre-optic metadvice for all-optical signal modulation based on coherent absorption. Nature Communications, 2018, 9, 182.	5.8	73
6	Material and optical properties of low-temperature NH <sub>3</sub> -free PECVD SiN <sub>x</sub> layers for photonic applications. Journal Physics D: Applied Physics, 2017, 50, 025106.	1.3	71
7	Frequency comb generation in a silicon ring resonator modulator. Optics Express, 2018, 26, 790.	1.7	55
8	Nonlinear properties of AlGaAs waveguides in continuous wave operation regime. Optics Express, 2014, 22, 5291.	1.7	41
9	Silicon Nitride Photonics for the Near-Infrared. IEEE Journal of Selected Topics in Quantum Electronics, 2020, 26, 1-13.	1.9	40
10	Integrated nonlinear Mach Zehnder for 40 Gbit/s all-optical switching. Optics Express, 2013, 21, 21587.	1.7	34
11	Nonlinear Silicon Photonic Signal Processing Devices for Future Optical Networks. Applied Sciences (Switzerland), 2017, 7, 103.	1.3	34
12	Ultra-high four wave mixing efficiency in slot waveguides with silicon nanocrystals. Applied Physics Letters, 2011, 99, .	1.5	31
13	Tunable Q-factor silicon microring resonators for ultra-low power parametric processes. Optics Letters, 2015, 40, 1274.	1.7	31
14	WDM Transmission With In-Line Amplification at 1.3 $\mu\text{m}$ Using a Bi-Doped Fiber Amplifier. Journal of Lightwave Technology, 2019, 37, 1826-1830.	2.7	29
15	Roadmap on multimode photonics. Journal of Optics (United Kingdom), 2022, 24, 083001.	1.0	27
16	Low TPA and free-carrier effects in silicon nanocrystal-based horizontal slot waveguides. Optics Express, 2012, 20, 23838.	1.7	23
17	Experimental Demonstration of Dual O+C-Band WDM Transmission Over 50-km SSMF With Direct Detection. Journal of Lightwave Technology, 2020, 38, 2278-2284.	2.7	23
18	Nonlinear characterization of hydrogenated amorphous silicon waveguides and analysis of carrier dynamics. Applied Physics Letters, 2013, 103, .	1.5	22

#	ARTICLE	IF	CITATIONS
19	Ultra-Compact Amorphous Silicon Waveguide for Wavelength Conversion. IEEE Photonics Technology Letters, 2016, 28, 410-413.	1.3	21
20	Low-Loss Micro-Resonator Filters Fabricated in Silicon by CMOS-Compatible Lithographic Techniques: Design and Characterization. Applied Sciences (Switzerland), 2017, 7, 174.	1.3	21
21	Intermodal Bragg-Scattering Four Wave Mixing in Silicon Waveguides. Journal of Lightwave Technology, 2019, 37, 1680-1685.	2.7	19
22	Intermodal frequency generation in silicon-rich silicon nitride waveguides. Photonics Research, 2019, 7, 615.	3.4	19
23	Experimental comparison of direct detection Nyquist SSB transmission based on silicon dual-drive and IQ Mach-Zehnder modulators with electrical packaging. Optics Express, 2017, 25, 19332.	1.7	17
24	Picosecond all-optical switching and dark pulse generation in a fibre-optic network using a plasmonic metamaterial absorber. Applied Physics Letters, 2018, 113, .	1.5	15
25	A Review of Capabilities and Scope for Hybrid Integration Offered by Silicon-Nitride-Based Photonic Integrated Circuits. Sensors, 2022, 22, 4227.	2.1	15
26	Co-design of a differential transimpedance amplifier and balanced photodetector for a sub-pJ/bit silicon photonics receiver. Optics Express, 2020, 28, 14038.	1.7	14
27	Wavelength conversion of complex modulation formats in a compact SiGe waveguide. Optics Express, 2017, 25, 3252.	1.7	13
28	Supercontinuum generation in tantalum pentoxide waveguides for pump wavelengths in the 900nm to 1500nm spectral region. Optics Express, 2020, 28, 32173.	1.7	12
29	Apodized silicon photonic grating couplers for mode-order conversion. Photonics Research, 2019, 7, 1036.	3.4	11
30	Group-velocity dispersion in SOI-based channel waveguides with reduced-height. Optics Express, 2017, 25, 9761.	1.7	10
31	High-Speed DD Transmission Using a Silicon Receiver Co-Integrated With a 28-nm CMOS Gain-Tunable Fully-Differential TIA. Journal of Lightwave Technology, 2021, 39, 1138-1147.	2.7	10
32	Design and characterization of low-loss 2D grating couplers for silicon photonics integrated circuits. Proceedings of SPIE, 2016, , .	0.8	7
33	Cryptography in coherent optical information networks using dissipative metamaterial gates. APL Photonics, 2019, 4, 046102.	3.0	7
34	Si-rich Si nitride waveguides for optical transmissions and toward wavelength conversion around 2µm. Applied Optics, 2019, 58, 5165.	0.9	6
35	ML-Assisted Equalization for 50-Gb/s O-Band CWDM Transmission Over 100-km SMF. IEEE Journal of Selected Topics in Quantum Electronics, 2022, 28, 1-10.	1.9	6
36	496 Gb/s direct detection DMT transmission over 40 km single mode fibre using an electrically packaged silicon photonic modulator. Optics Express, 2017, 25, 29798.	1.7	4

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37	4-Level Alternate-Mark-Inversion for Reach Extension in the O-Band Spectral Region. Journal of Lightwave Technology, 2021, 39, 2847-2853.	2.7	4
38	High-speed multi-layer coded adaptive LACO-OFDM and its experimental verification. OSA Continuum, 2020, 3, 2614.	1.8	4
39	Polarization Control in Integrated Silicon Waveguides Using Semiconductor Nanowires. Nanomaterials, 2022, 12, 2438.	1.9	4
40	Reduced nonlinearities in 100-nm high SOI waveguides. Proceedings of SPIE, 2016, , .	0.8	3
41	Strategies for wideband light generation in nonlinear multimode integrated waveguides. Physical Review A, 2021, 103, .	1.0	3
42	Spectrally Efficient DMT Transmission over 40 km SMF Using an Electrically Packaged Silicon Photonic Intensity Modulator. , 2017, , .		2
43	Ultra Wide-Band Inductive Peaking VCO with Cascode Noise Reduction. , 2018, , .		2
44	Performance of 2D-Grating couplers designed through full 3D-FDTD numerical simulations. , 2014, , .		1
45	Ultra-low power Four Wave Mixing wavelength conversion in silicon micro-ring resonators with tunable Q-factor. , 2014, , .		1
46	Silicon photonic Mach Zehnder modulators for next-generation short-reach optical communication networks. , 2016, , .		1
47	Low-Temperature NH3-Free Silicon Nitride Platforms for Integrated Photonics. , 2018, , .		1
48	Spectral Difference Interferometry for the Characterization of Optical Media. Laser and Photonics Reviews, 2019, 13, 1900007.	4.4	1
49	Nonlinear control of coherent absorption and its optical signal processing applications. APL Photonics, 2019, 4, 106109.	3.0	1
50	Flexible Scheme for Measuring Chromatic Dispersion Based on Interference of Frequency Tones. , 2017, , .		1
51	Silicon Photonic Modulators for High Speed Optical Analog Links. , 2017, , .		1
52	Beyond 100-Gb/s Direct-detection Transmission using an Optical Receiver Co-integrated with a 28-nm CMOS Gain-tunable Fully-differential TIA. , 2020, , .		1
53	Four-wave-mixing efficiency and conversion bandwidth in silicon-nanocrystals slot waveguides fabricated by PECVD. , 2011, , .		0
54	40 GHz nonlinear all optical switching in a Mach-Zehnder interferometer integrated device. , 2013, , .		0

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55	Four wave mixing efficiency in hydrogenated amorphous silicon waveguides. , 2013, , .		0
56	Silicon micro-ring resonators with tunable Q-factor for ultra-low power parametric signal generation. , 2013, , .		0
57	Tailoring of dispersion in silicon vertical slot waveguides. , 2013, , .		0
58	Advanced nonlinear signal processing in silicon-based waveguides. , 2015, , .		0
59	Ultra-low-power silicon photonics wavelength converter for phase-encoded telecommunication signals. Proceedings of SPIE, 2016, , .	0.8	0
60	Tunable index back end of line platform for enhanced integrated photonics. , 2017, , .		0
61	Group IV Compounds Modulators and Mid Index Waveguides for Enhanced CMOS Photonics. , 2018, , .		0
62	Silicon Photonics Wavelength Converter based on Inter-Modal Four Wave Mixing Bragg Scattering. , 2018, , .		0
63	Si and Si-Rich Silicon-Nitride Waveguides for Optical Transmissions and Nonlinear Applications Around $2\frac{1}{4}\mu\text{m}$ . , 2019, , .		0
64	Reflector-less Grating-Coupler with a -0.9 dB Efficiency Realized in 260-nm Silicon-On-Insulator Platform. , 2017, , .		0
65	A Fiberized Metamaterial Device for Ultrafast Control of Coherent Optical Signals. , 2018, , .		0
66	Measurement of Optical Pulsewidth in the Picosecond Regime Using a Non-linear Fiber and Power Meter. , 2019, , .		0
67	Technique for the measurement of picosecond optical pulses using a non-linear fiber loop mirror and an optical power meter. Optics Express, 2019, 27, 6377.	1.7	0
68	Apodized silicon photonic grating couplers for mode-order conversion: publisher's note. Photonics Research, 2019, 7, 1221.	3.4	0