

Daniele Melati

List of Publications by Year in descending order

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Version: 2024-02-01

71
papers

1,233
citations

471509

17
h-index

361022

35
g-index

72
all docs

72
docs citations

72
times ranked

1183
citing authors

#	ARTICLE	IF	CITATIONS
1	Mid-infrared Fourier-transform spectrometer based on metamaterial lateral cladding suspended silicon waveguides. Optics Letters, 2022, 47, 810.	3.3	9
2	Athermal echelle grating and tunable echelle grating demultiplexers using a Mach-Zehnder interferometer launch structure. Optics Express, 2022, 30, 14202.	3.4	3
3	Design of Compact and Efficient Silicon Photonic Micro Antennas With Perfectly Vertical Emission. IEEE Journal of Selected Topics in Quantum Electronics, 2021, 27, 1-10.	2.9	24
4	Compact and highly-efficient broadband surface grating antenna on a silicon platform. Optics Express, 2021, 29, 7003.	3.4	24
5	Efficient Bloch mode calculation of periodic systems with arbitrary geometry and open boundary conditions in the complex wavevector domain. Optics Express, 2021, 29, 26233.	3.4	1
6	Performance Variability Analysis of Photonic Circuits With Many Correlated Parameters. Journal of Lightwave Technology, 2021, 39, 4737-4744.	4.6	8
7	Anti-reflection subwavelength gratings for InP-based waveguide facets. Optics Letters, 2021, 46, 3701.	3.3	4
8	Metamaterial-Engineered Silicon Beam Splitter Fabricated with Deep UV Immersion Lithography. Nanomaterials, 2021, 11, 2949.	4.1	9
9	Dimensionality reduction for the on-chip integration of advanced photonic devices and functionalities. , 2021, , .		0
10	Machine learning pattern recognition in integrated silicon photonics design. , 2020, , .		0
11	Integrated Photonic Ring Resonator Correlation Filters For Remote HCN Sensing. , 2020, , .		0
12	Design of compact silicon antennas based on high directionality gratings. , 2020, , .		1
13	Efficient Variability Analysis of Photonic Circuits by Stochastic Parametric Building Blocks. IEEE Journal of Selected Topics in Quantum Electronics, 2020, 26, 1-8.	2.9	7
14	Photonic temperature and wavelength metrology by spectral pattern recognition. Optics Express, 2020, 28, 17409.	3.4	5
15	Perfectly vertical surface grating couplers using subwavelength engineering for increased feature sizes. Optics Letters, 2020, 45, 3701.	3.3	34
16	Highly efficient optical antenna with small beam divergence in silicon waveguides. Optics Letters, 2020, 45, 5668.	3.3	24
17	Design of multi-parameter photonic devices using machine learning pattern recognition. , 2020, , .		3
18	Efficient silicon photonic micro-antenna for waveguide-to-free-space coupling. , 2020, , .		0

#	ARTICLE	IF	CITATIONS
19	Perfectly vertical silicon-on-insulator grating couplers with low broadband back-reflection and increased feature sizes. , 2020, , .		0
20	Spectrum-free integrated photonic remote molecular identification and sensing. Optics Express, 2020, 28, 27951.	3.4	8
21	Compact and Low Crosstalk Echelle Grating Demultiplexer on Silicon-On-Insulator Technology. Electronics (Switzerland), 2019, 8, 687.	3.1	23
22	Mapping the global design space of nanophotonic components using machine learning pattern recognition. Nature Communications, 2019, 10, 4775.	12.8	105
23	Uncertainty aware design of photonic integrated circuits in presence of correlated manufacturing uncertainties. AIP Conference Proceedings, 2019, , .	0.4	0
24	Prediction of thermal variation in InP and GaAs material for photonic integrated waveguides. AIP Conference Proceedings, 2019, , .	0.4	0
25	Machine learning design of subwavelength integrated photonic devices. , 2019, , .		0
26	Exoplanetary Atmosphere Spectroscopy using Silicon Waveguide Ring Resonators. , 2019, , .		0
27	Empirical model for the temperature dependence of silicon refractive index from O to C band based on waveguide measurements. Optics Express, 2019, 27, 27229.	3.4	18
28	Bragg filter bandwidth engineering in subwavelength grating metamaterial waveguides. Optics Letters, 2019, 44, 1043.	3.3	41
29	Performance robustness analysis in machine-assisted design of photonic devices. , 2019, , .		1
30	Temperature-insensitive echelle wavelength demultiplexer on standard silicon-on-insulator platform. , 2019, , .		0
31	Reaping the benefits of machine learning pattern recognition in nanophotonic component design. , 2019, , .		1
32	Navigating through complex photonic design space using machine learning methods. , 2019, , .		0
33	Wideband Integrated Optical Delay Line Based on a Continuously Tunable Mach-Zehnder Interferometer. IEEE Journal of Selected Topics in Quantum Electronics, 2018, 24, 1-8.	2.9	24
34	Cascaded Mach-Zehnder Architectures for Photonic Integrated Delay Lines. IEEE Photonics Technology Letters, 2018, 30, 1830-1833.	2.5	18
35	Wideband continuously tunable integrated delay line based on cascaded Mach-Zehnder. , 2018, , .		1
36	Subwavelength Silicon Photonic Metamaterial Waveguide Devices. , 2018, , .		1

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37	Stochastic process design kits for photonic circuits based on polynomial chaos augmented macro-modelling. Optics Express, 2018, 26, 5894.	3.4	18
38	Athermal echelle grating filter in silicon-on-insulator using a temperature-synchronized input. Optics Express, 2018, 26, 28651.	3.4	14
39	Genetic algorithm and polynomial chaos modelling for performance optimization of photonic circuits under manufacturing variability. , 2018, , .		5
40	On-chip continuously tunable optical delay line based on cascaded Mach-Zehnder interferometers. , 2018, , .		3
41	A polynomial-chaos-expansion-based building block approach for stochastic analysis of photonic circuits. , 2018, , .		2
42	Uncertainty quantification and stochastic modelling of photonic device from experimental data through polynomial chaos expansion. , 2018, , .		2
43	Stochastic simulation and robust design optimization of integrated photonic filters. Nanophotonics, 2017, 6, 299-308.	6.0	29
44	Sensitivity Analysis and Uncertainty Mitigation of Photonic Integrated Circuits. Journal of Lightwave Technology, 2017, 35, 3713-3721.	4.6	20
45	An Improved Model to Predict the Temperature Dependence of Refractive Index of InP-based Compounds. Wireless Personal Communications, 2017, 95, 607-615.	2.7	1
46	Integrated all-optical MIMO demultiplexer for 8-channel MDM-WDM transmission. , 2017, , .		1
47	Tuning and locking of integrated optical filters and circuits. , 2017, , .		0
48	Stochastic photonics: Tools and approaches for the analysis and optimization of integrated circuits. , 2017, , .		1
49	Integrated all-optical MIMO demultiplexer for mode- and wavelength-division-multiplexed transmission. Optics Letters, 2017, 42, 342.	3.3	34
50	Subwavelength grating metamaterial waveguides for silicon photonic integrated circuits. , 2017, , .		0
51	Stochastic simulation and sensitivity analysis of photonic circuit through Morris and Sobol method. , 2017, , .		2
52	Wavelength and composition dependence of the thermo-optic coefficient for InGaAsP-based integrated waveguides. Journal of Applied Physics, 2016, 120, .	2.5	13
53	Reconfigurable photonic integrated mode (de)multiplexer for SDM fiber transmission. Optics Express, 2016, 24, 12625.	3.4	57
54	An improved model to predict thermo-optic coefficient in InGaAsP waveguides. , 2016, , .		4

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55	Waveguide-Based Technique for Wafer-Level Measurement of Phase and Group Effective Refractive Indices. <i>Journal of Lightwave Technology</i> , 2016, 34, 1293-1299.	4.6	11
56	ContactLess Integrated Photonic Probe: Concept, Technology and Applications. , 2016, , .		2
57	Integrated Indium-Phosphide-Based Mode Multiplexer and Demultiplexer for Reconfigurable Mode Division Multiplexing Transmission. , 2016, , .		0
58	Stochastic Optimization of Photonic Circuits by Combined Generalized Polynomial Chaos Model. , 2016, , .		0
59	ContactLess Integrated Photonic Probe for light monitoring in indium phosphide-based devices. <i>IET Optoelectronics</i> , 2015, 9, 146-150.	3.3	10
60	Rethinking the surface of optical waveguides. <i>Proceedings of SPIE</i> , 2015, , .	0.8	0
61	Statistical Process Design Kits: analysis of fabrication tolerances in integrated photonic circuits. , 2015, , .		5
62	An introduction to InP-based generic integration technology. <i>Semiconductor Science and Technology</i> , 2014, 29, 083001.	2.0	422
63	A unified approach for radiative losses and backscattering in optical waveguides. <i>Journal of Optics (United Kingdom)</i> , 2014, 16, 055502.	2.2	36
64	Multimode Interference Couplers With Reduced Parasitic Reflections. <i>IEEE Photonics Technology Letters</i> , 2014, 26, 408-410.	2.5	20
65	Real photonic waveguides: guiding light through imperfections. <i>Advances in Optics and Photonics</i> , 2014, 6, 156.	25.5	72
66	Optical radiative crosstalk in integrated photonic waveguides. <i>Optics Letters</i> , 2014, 39, 3982.	3.3	15
67	Optical crosstalk on Rx/Tx photonic integration platform. , 2014, , .		0
68	Point Reflector Optical Waveguides for on-wafer process qualification. , 2014, , .		0
69	Modeling reflections induced by waveguide transitions. <i>Optical and Quantum Electronics</i> , 2013, 45, 309-316.	3.3	2
70	Building block based design of photonic integrated circuits for generic photonic foundries. , 2012, , .		2
71	Validation of the Building-Block-Based Approach for the Design of Photonic Integrated Circuits. <i>Journal of Lightwave Technology</i> , 2012, 30, 3610-3616.	4.6	31