

# Alejandro Ortega-Moñux

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/1587452/publications.pdf>

Version: 2024-02-01

132  
papers

3,679  
citations

136950

32  
h-index

138484

58  
g-index

133  
all docs

133  
docs citations

133  
times ranked

2000  
citing authors

#	ARTICLE	IF	CITATIONS
1	Polarization-independent multimode interference coupler with anisotropy-engineered bricked metamaterial. Photonics Research, 2022, 10, A57.	7.0	11
2	Subwavelength-engineered metamaterial devices for integrated photonics. , 2022, , .		1
3	Mode Converter and Multiplexer With a Subwavelength Phase Shifter for Extended Broadband Operation. IEEE Photonics Technology Letters, 2021, 33, 1262-1265.	2.5	7
4	Bricked Subwavelength Gratings: A Tailorable On-chip Metamaterial Topology. Laser and Photonics Reviews, 2021, 15, 2000478.	8.7	18
5	Complex spectral filters in silicon waveguides based on cladding-modulated Bragg gratings. Optics Express, 2021, 29, 15867.	3.4	20
6	High-efficiency conversion from waveguide mode to an on-chip beam using a metamaterial engineered Bragg deflector. Optics Letters, 2021, 46, 2409.	3.3	8
7	Suspended germanium waveguides with subwavelength-grating metamaterial cladding for the mid-infrared band. Optics Express, 2021, 29, 16867.	3.4	21
8	Breaking the Coupling Efficiencyâ€“Bandwidth Tradeâ€“Off in Surface Grating Couplers Using Zeroâ€“Order Radiation. Laser and Photonics Reviews, 2021, 15, 2000542.	8.7	15
9	A review of silicon subwavelength gratings: building break-through devices with anisotropic metamaterials. Nanophotonics, 2021, 10, 2765-2797.	6.0	70
10	Broadband 2â€“â€“ multimode interference coupler for mid-infrared wavelengths. Optics Letters, 2021, 46, 5300.	3.3	7
11	Low-loss off-axis curved waveguide grating demultiplexer. Optics Letters, 2021, 46, 4821.	3.3	3
12	Building high-performance integrated optical devices using subwavelength grating metamaterials -INVITED. EPJ Web of Conferences, 2021, 255, 01001.	0.3	0
13	Bricked patterning: a new concept to enhance the capabilities of subwavelength grating waveguides. , 2021, , .		0
14	Dual-Band Polarization-Independent Subwavelength Grating Coupler for Wavelength Demultiplexing. IEEE Photonics Technology Letters, 2020, 32, 1163-1166.	2.5	19
15	Dispersion-engineered nanophotonic devices based on subwavelength metamaterial waveguides. , 2020, , .		1
16	Experimental demonstration of a broadband mode converter and multiplexer based on subwavelength grating waveguides. Optics and Laser Technology, 2020, 129, 106297.	4.6	25
17	Experimental demonstration of metamaterial anisotropy engineering for broadband on-chip polarization beam splitting. Optics Express, 2020, 28, 16385.	3.4	31
18	Narrowband Bragg filters based on subwavelength grating waveguides for silicon photonic sensing. Optics Express, 2020, 28, 37971.	3.4	22

#	ARTICLE	IF	CITATIONS
19	Polarization splitting directional coupler using tilted subwavelength gratings. Optics Letters, 2020, 45, 3398.	3.3	26
20	Perfectly vertical surface grating couplers using subwavelength engineering for increased feature sizes. Optics Letters, 2020, 45, 3701.	3.3	34
21	Ultra-broadband nanophotonic phase shifter based on subwavelength metamaterial waveguides. Photonics Research, 2020, 8, 359.	7.0	28
22	Perfectly vertical silicon-on-insulator grating couplers with low broadband back-reflection and increased feature sizes. , 2020, , .		0
23	A broadband polarization splitter directional coupler based on tilted subwavelength grating metamaterials. , 2020, , .		0
24	An Ultracompact GRINâ€­Lensâ€­Based Spot Size Converter using Subwavelength Grating Metamaterials. Laser and Photonics Reviews, 2019, 13, 1900172.	8.7	47
25	Zero-Birefringence Silicon Waveguides Based on Tilted Subwavelength Metamaterials. IEEE Photonics Journal, 2019, 11, 1-8.	2.0	14
26	Design of a Broadband Polarization Splitter Based on Anisotropy-Engineered Tilted Subwavelength Gratings. IEEE Photonics Journal, 2019, 11, 1-8.	2.0	34
27	Suspended Silicon Integrated Platform for the Long-Wavelength Mid-Infrared Band. , 2019, , .		0
28	[INVITED] Subwavelength structures for silicon photonics biosensing. Optics and Laser Technology, 2019, 109, 437-448.	4.6	79
29	Midâ€­infrared suspended waveguide platform and building blocks. IET Optoelectronics, 2019, 13, 55-61.	3.3	21
30	Fundamental limit of detection of photonic biosensors with coherent phase read-out. Optics Express, 2019, 27, 12616.	3.4	33
31	Distributed Bragg deflector coupler for on-chip shaping of optical beams. Optics Express, 2019, 27, 33180.	3.4	17
32	Bragg filter bandwidth engineering in subwavelength grating metamaterial waveguides. Optics Letters, 2019, 44, 1043.	3.3	41
33	Reaping the benefits of machine learning pattern recognition in nanophotonic component design. , 2019, , .		1
34	Designing polarization management devices by tilting subwavelength grating. , 2019, , .		0
35	Diffraction sidewall grating coupler: towards 2D free-space optics on chip. , 2019, , .		0
36	Ultra-Broadband Mode Converter and Multiplexer Based on Sub-Wavelength Structures. IEEE Photonics Journal, 2018, 10, 1-10.	2.0	65

#	ARTICLE	IF	CITATIONS
37	Designing Anisotropy with Waveguide Subwavelength Structures. , 2018, , .		1
38	Tilted subwavelength gratings: controlling anisotropy in metamaterial nanophotonic waveguides. Optics Letters, 2018, 43, 4691.	3.3	60
39	Design of narrowband Bragg spectral filters in subwavelength grating metamaterial waveguides. Optics Express, 2018, 26, 179.	3.4	74
40	Subwavelength-Grating Metamaterial Structures for Silicon Photonic Devices. Proceedings of the IEEE, 2018, 106, 2144-2157.	21.3	155
41	Subwavelength metamaterial engineering for silicon photonics. , 2017, , .		1
42	Broadband high-efficiency zero-order surface grating coupler for the near- and mid-infrared wavelength ranges. , 2017, , .		2
43	Disorder effects in subwavelength grating metamaterial waveguides. Optics Express, 2017, 25, 12222.	3.4	31
44	Integrated mode converter for mode division multiplexing. , 2016, , .		1
45	Silicon-on-insulator integrated tunable polarization controller (Conference Presentation). , 2016, , .		0
46	Single-etch subwavelength engineered fiber-chip grating couplers for 13 Åµm datacom wavelength band. Optics Express, 2016, 24, 12893.	3.4	38
47	Broadband fiber-chip zero-order surface grating coupler with 04â€™%â€™dB efficiency. Optics Letters, 2016, 41, 3013.	3.3	46
48	Controlling leakage losses in subwavelength grating silicon metamaterial waveguides. Optics Letters, 2016, 41, 3443.	3.3	60
49	Ultraâ€™broadband nanophotonic beamsplitter using an anisotropic subâ€™wavelength metamaterial. Laser and Photonics Reviews, 2016, 10, 1039-1046.	8.7	148
50	Fiber-chip edge coupler with large mode size for silicon photonic wire waveguides. Optics Express, 2016, 24, 5026.	3.4	104
51	Sub-wavelength cladding mid-infrared devices. , 2015, , .		0
52	Colorless devices and reception techniques for polarization multiplexed communications. , 2015, , .		0
53	First experimental demonstration of high-directionality fiber-chip grating coupler with interleaved trenches. , 2015, , .		0
54	Waveguide subâ€™wavelength structures: a review of principles and applications. Laser and Photonics Reviews, 2015, 9, 25-49.	8.7	475

#	ARTICLE	IF	CITATIONS
55	Mode filtering in periodic waveguides by means of band gap engineering. , 2015, , .		2
56	Group IV mid-infrared photonics. , 2015, , .		0
57	A subwavelength structured multimode interference coupler for the 3-4 micrometers mid-infrared band. Proceedings of SPIE, 2015, , .	0.8	0
58	Fiber-chip edge coupler with large mode size for silicon photonic wire waveguides. , 2015, , .		3
59	Calibrated Monolithically Integrated 90 $\circ$ $\times$ Downconverter for Colorless Operation in the C+L Band. IEEE Photonics Journal, 2015, 7, 1-10.	2.0	2
60	High-directionality fiber-chip grating coupler with interleaved trenches and subwavelength index-matching structure. Optics Letters, 2015, 40, 4190.	3.3	89
61	Subwavelength index engineered surface grating coupler with sub-decibel efficiency for 220-nm silicon-on-insulator waveguides. Optics Express, 2015, 23, 22628.	3.4	106
62	High-efficiency fully etched fiber-chip grating couplers with subwavelength structures for datacom and telecom applications. Proceedings of SPIE, 2015, , .	0.8	1
63	Add/Drop Mode-Division Multiplexer Based on a Mach-Zehnder Interferometer and Periodic Waveguides. IEEE Photonics Journal, 2015, 7, 1-7.	2.0	15
64	Monolithic integrated InP receiver chip for coherent phase sensitive detection in the C- and L-band for colorless WDM applications. , 2014, , .		2
65	Silicon-on-insulator single channel-extraction filter for DWDM applications. , 2014, , .		2
66	High-efficiency subwavelength-engineered surface grating couplers in SOI and DSOI. , 2014, , .		0
67	Polarization-beam-splitter-less integrated dual-polarization coherent receiver. Optics Letters, 2014, 39, 4400.	3.3	6
68	Evanescent field waveguide sensing with subwavelength grating structures in silicon-on-insulator. Optics Letters, 2014, 39, 4442.	3.3	143
69	Fiber-chip grating coupler based on interleaved trenches with directionality exceeding 95%. Optics Letters, 2014, 39, 5351.	3.3	61
70	Recent Advances in Silicon Waveguide Devices Using Sub-Wavelength Gratings. IEEE Journal of Selected Topics in Quantum Electronics, 2014, 20, 279-291.	2.9	77
71	Suspended SOI waveguide with sub-wavelength grating cladding for mid-infrared. Optics Letters, 2014, 39, 5661.	3.3	108
72	Subwavelength metastructures for dispersion engineering in planar waveguide devices. , 2014, , .		0

#	ARTICLE	IF	CITATIONS
73	Integrated Polarization Beam Splitter for 100/400 GE Polarization Multiplexed Coherent Optical Communications. Journal of Lightwave Technology, 2014, 32, 361-368.	4.6	27
74	Dual-Mode Coupled-Resonator Integrated Optical Filters. IEEE Photonics Technology Letters, 2014, 26, 929-932.	2.5	10
75	Silicon photonic integration with subwavelength gratings. , 2014, , .		0
76	Wideband Slot-Coupled Butler Matrix. IEEE Microwave and Wireless Components Letters, 2014, 24, 848-850.	3.2	15
77	Butler matrix based six-port passive junction. , 2014, , .		10
78	High-efficiency single etch step apodized surface grating coupler using subwavelength structure. Laser and Photonics Reviews, 2014, 8, L93.	8.7	68
79	Silicon-on-insulator polarization controller with relaxed fabrication tolerances. , 2014, , .		1
80	SWG dispersion engineering for ultra-broadband photonic devices. , 2013, , .		0
81	Engineering the optical properties of silicon using sub-wavelength structures. , 2013, , .		0
82	An ultra-compact multimode interference coupler with a subwavelength grating slot. Laser and Photonics Reviews, 2013, 7, L12.	8.7	29
83	A general approach for robust integrated polarization rotators. , 2013, , .		2
84	Wavelength independent multimode interference coupler. Optics Express, 2013, 21, 7033.	3.4	128
85	Integrated polarization beam splitter with relaxed fabrication tolerances. Optics Express, 2013, 21, 14146.	3.4	77
86	Colorless monolithically integrated 120° downconverter. Optics Express, 2013, 21, 23048.	3.4	10
87	Re-inventing multimode interference couplers using subwavelength gratings. , 2013, , .		0
88	HIGH PERFORMANCE MULTI-SECTION CORRUGATED SLOT-COUPLED DIRECTIONAL COUPLERS. Progress in Electromagnetics Research, 2013, 134, 437-454.	4.4	13
89	Photonic Integrated Dual-Mode Filters Realized with Ring Resonators Loaded by Bragg Gratings. , 2013, , .		0
90	Polarization-independent grating coupler for micrometric silicon rib waveguides. Optics Letters, 2012, 37, 3663.	3.3	19

#	ARTICLE	IF	CITATIONS
91	High-performance monolithically integrated 120° downconverter with relaxed hardware constraints. Optics Express, 2012, 20, 5725.	3.4	31
92	Enhanced monolithically integrated coherent 120° downconverter with high fabrication yield. Optics Express, 2012, 20, 23013.	3.4	9
93	Highly tolerant tunable waveguide polarization rotator scheme. Optics Letters, 2012, 37, 3534.	3.3	18
94	Polarization rotator for InP rib waveguide. Optics Letters, 2012, 37, 335.	3.3	30
95	Ultracompact polarization converter with a dual subwavelength trench built in a silicon-on-insulator waveguide. Optics Letters, 2012, 37, 365.	3.3	92
96	Multi-port technology for microwave and optical communications. , 2012, , .		2
97	Diffraction and subwavelength grating couplers for microphotonic waveguides. , 2012, , .		0
98	Compact broadband directional coupler. , 2012, , .		1
99	Grating couplers in thick rib SOI waveguides for TE and TM polarizations. , 2012, , .		0
100	New concepts in silicon component design using subwavelength structures. , 2012, , .		2
101	Ultra-Compact Polarization Mode Converter Implemented in a Dual-Trench Silicon-On-Insulator Waveguide. , 2012, , .		0
102	Single etch grating couplers for mass fabrication with DUV lithography. Optical and Quantum Electronics, 2012, 44, 521-526.	3.3	27
103	Grating couplers for thick SOI rib waveguides. Optical and Quantum Electronics, 2012, 44, 535-540.	3.3	7
104	Development of a Fourier-transform waveguide spectrometer for space applications. Optical and Quantum Electronics, 2012, 44, 549-556.	3.3	17
105	FOURIER BASED COMBINED TECHNIQUES TO DESIGN NOVEL SUB-WAVELENGTH OPTICAL INTEGRATED DEVICES. Progress in Electromagnetics Research, 2012, 123, 447-465.	4.4	64
106	Subwavelength structures in SOI waveguides. , 2011, , .		0
107	Recent advances in Fourier-transform waveguide spectrometers. , 2011, , .		1
108	High-Performance Multimode Interference Coupler in Silicon Waveguides With Subwavelength Structures. IEEE Photonics Technology Letters, 2011, 23, 1406-1408.	2.5	57

#	ARTICLE	IF	CITATIONS
109	Nonlinear wide-angle beam propagation method using complex Jacobi iteration in the Fourier domain. Journal of the Optical Society of America B: Optical Physics, 2011, 28, 2142.	2.1	3
110	High-performance 90° hybrid based on a silicon-on-insulator multimode interference coupler. Optics Letters, 2011, 36, 178.	3.3	78
111	Single-etch grating coupler for micrometric silicon rib waveguides. Optics Letters, 2011, 36, 2647.	3.3	32
112	SIGNAL CONSTELLATION DISTORTION AND BER DEGRADATION DUE TO HARDWARE IMPAIRMENTS IN SIX-PORT RECEIVERS WITH ANALOG I/Q GENERATION. Progress in Electromagnetics Research, 2011, 121, 225-247.	4.4	23
113	Improved coupling to integrated spatial heterodyne spectrometers with applications to space. , 2011, , .		2
114	Design of an optimized grating coupler for thick SOI rib waveguides. , 2011, , .		0
115	High performance multimode interference couplers for coherent communications in silicon. , 2011, , .		2
116	Efficient fiber-to-chip grating coupler for micrometric SOI rib waveguides. Optics Express, 2010, 18, 15189.	3.4	55
117	Athermal InP-based 90°-hybrid Rx OEICs with pin-PDs &gt;60 GHz for coherent DP-QPSK photoreceivers. , 2010, , .		4
118	Detecting spurious reflections in integrated photonic devices. , 2009, , .		0
119	Integrated Optical Six-Port Reflectometer in Silicon on Insulator. Journal of Lightwave Technology, 2009, 27, 5405-5409.	4.6	9
120	Characterization of integrated photonic devices with minimum phase technique. Optics Express, 2009, 17, 8349.	3.4	19
121	Improving Multimode Interference Couplers Performance Through Index Profile Engineering. Journal of Lightwave Technology, 2009, 27, 1307-1314.	4.6	13
122	Compact High-Performance Multimode Interference Couplers in Silicon-on-Insulator. IEEE Photonics Technology Letters, 2009, 21, 1600-1602.	2.5	21
123	Index profile engineering of multimode interference couplers. , 2009, , .		0
124	2-D Extension of Spectrum-Splitting Fast-Fourier-Based Mode Solvers. IEEE Photonics Technology Letters, 2008, 20, 1205-1207.	2.5	1
125	Fourier decomposition methods for passive photonic device characterization. Proceedings of SPIE, 2008, , .	0.8	0
126	A Design Procedure for High-Performance, Rib-Waveguide-Based Multimode Interference Couplers in Silicon-on-Insulator. Journal of Lightwave Technology, 2008, 26, 2928-2936.	4.6	51



#	ARTICLE	IF	CITATIONS
127	Accurate Analysis of Photonic Crystal Fibers by Means of the Fast-Fourier-Based Mode Solver. IEEE Photonics Technology Letters, 2007, 19, 414-416.	2.5	9
128	Fabrication Tolerance Analysis of Bent Single-Mode Rib Waveguides on SOI. Optical and Quantum Electronics, 2007, 38, 921-932.	3.3	6
129	Enhanced accuracy in fast-Fourier-based methods for full-vector modal analysis of dielectric waveguides. IEEE Photonics Technology Letters, 2006, 18, 1128-1130.	2.5	13
130	3D-Scalar Fourier Eigenvector Expansion Method (Fourier-EEM) for analyzing optical waveguide discontinuities. Optical and Quantum Electronics, 2005, 37, 213-228.	3.3	14
131	Planar lightwave circuit six-port technique for optical measurements and characterizations. Journal of Lightwave Technology, 2005, 23, 2148-2157.	4.6	16
132	Adaptive Hermite-Gauss decomposition method to analyze optical dielectric waveguides. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2003, 20, 557.	1.5	9