Nicolas Riesen

List of Publications by Year
in descending order

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93 papers	2,761 citations	218677 26 h-index	182427 51 g-index
94 all docs	94 docs citations	94 times ranked	2111 citing authors

#	Article	IF	Citations
1	Mode-selective photonic lanterns for space-division multiplexing. Optics Express, 2014, 22, 1036.	3.4	319
2	Geometric requirements for photonic lanterns in space division multiplexing. Optics Express, 2012, 20, 27123.	3.4	187
3	Fluorescent and lasing whispering gallery mode microresonators for sensing applications. Laser and Photonics Reviews, 2017, 11, 1600265.	8.7	156
4	Design of mode-sorting asymmetric Y-junctions. Applied Optics, 2012, 51, 2778.	1.8	127
5	Three-dimensional ultra-broadband integrated tapered mode multiplexers. Laser and Photonics Reviews, 2014, 8, L81-L85.	8.7	122
6	All-fiber mode-group-selective photonic lantern using graded-index multimode fibers. Optics Express, 2015, 23, 224.	3.4	122
7	30Ã—30 MIMO Transmission over 15 Spatial Modes. , 2015, , .		121
8	Single-, Few-, and Multimode Y-Junctions. Journal of Lightwave Technology, 2012, 30, 304-309.	4.6	116
9	Mode-selective couplers for few-mode optical fiber networks. Optics Letters, 2012, 37, 3990.	3.3	113
10	Femtosecond direct-written integrated mode couplers. Optics Express, 2014, 22, 29855.	3.4	85
11	Few-Mode Elliptical-Core Fiber Data Transmission. IEEE Photonics Technology Letters, 2012, 24, 344-346.	2.5	81
12	Long-Haul Transmission Over Few-Mode Fibers With Space-Division Multiplexing. Journal of Lightwave Technology, 2018, 36, 1382-1388.	4.6	80
13	Polymer based whispering gallery mode laser for biosensing applications. Applied Physics Letters, 2015, 106, .	3.3	63
14	Mode division multiplexed optical transmission enabled by allâ€“fiber mode multiplexer. Optics Express, 2014, 22, 14229.	3.4	58
15	On the origins of the green luminescence in the â€œzero-dimensional perovskiteâ€• Cs₄PbBr₆: conclusive results from cathodoluminescence imaging. Nanoscale, 2019, 11, 3925-3932.	5.6	57
16	Tapered Velocity Mode-Selective Couplers. Journal of Lightwave Technology, 2013, 31, 2163-2169.	4.6	52
17	Weakly-Guiding Mode-Selective Fiber Couplers. IEEE Journal of Quantum Electronics, 2012, 48, 941-945.	1.9	51
18	Ultra-Broadband Tapered Mode-Selective Couplers for Few-Mode Optical Fiber Networks. IEEE Photonics Technology Letters, 2013, 25, 2501-2504.	2.5	47

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19	1.2 Pb/s Throughput Transmission Using a 160Âmum Cladding, 4-Core, 3-Mode Fiber. Journal of Lightwave Technology, 2019, 37, 1798-1804.	4.6	45
20	Photonic lantern as mode multiplexer for multimode optical communications. Optical Fiber Technology, 2017, 35, 46-55.	2.7	44
21	Highly efficient valence state switching of samarium in BaFCl:Sm nanocrystals in the deep UV for multilevel optical data storage. Optical Materials Express, 2016, 6, 3097.	3.0	40
22	Mode- and wavelength-division multiplexed transmission using all-fiber mode multiplexer based on mode selective couplers. Optics Express, 2015, 23, 7164.	3.4	39
23	Q-factor limits for far-field detection of whispering gallery modes in active microspheres. Optics Express, 2015, 23, 28896.	3.4	38
24	Towards rewritable multilevel optical data storage in single nanocrystals. Optics Express, 2018, 26, 12266.	3.4	38
25	Dynamic Self-Referencing Approach to Whispering Gallery Mode Biosensing and Its Application to Measurement within Undiluted Serum. Analytical Chemistry, 2016, 88, 4036-4040.	6.5	37
26	Monolithic mode-selective few-mode multicore fiber multiplexers. Scientific Reports, 2017, 7, 6971.	3.3	37
27	Transmission Over 1050-km Few-Mode Fiber Based on Bidirectional Distributed Raman Amplification. Journal of Lightwave Technology, 2016, 34, 1864-1871.	4.6	29
28	Optimization of whispering gallery resonator design for biosensing applications. Optics Express, 2015, 23, 17067.	3.4	28
29	Few-Core Spatial-Mode Multiplexers/Demultiplexers Based on Evanescent Coupling. IEEE Photonics Technology Letters, 2013, 25, 1324-1327.	2.5	26
30	Material candidates for optical frequency comb generation in microspheres. Optics Express, 2015, 23, 14784.	3.4	25
31	Dispersion in silica microbubble resonators. Optics Letters, 2016, 41, 1257.	3.3	25
32	All-fiber 6-mode multiplexers based on fiber mode selective couplers. Optics Express, 2017, 25, 5734.	3.4	25
33	Lasing of whispering gallery modes in optofluidic microcapillaries. Optics Express, 2016, 24, 12466.	3.4	24
34	Photoreduction of Sm³⁺ in Nanocrystalline BaFCl. Journal of Physical Chemistry A, 2015, 119, 6252-6256.	2.5	20
35	Method for predicting whispering gallery mode spectra of spherical microresonators. Optics Express, 2015, 23, 9924.	3.4	20
36	Dispersion analysis of whispering gallery mode microbubble resonators. Optics Express, 2016, 24, 8832.	3.4	20

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37	Mechanochemically prepared SrFCl nanophosphor co-doped with Yb3+ and Er3+ for detecting ionizing radiation by upconversion luminescence. Nanoscale, 2017, 9, 15958-15966.	5.6	20
38	3500-km Mode-Multiplexed Transmission Through a Three-Mode Graded-Index Few-Mode Fiber Link. , 2017, , .		14
39	Unified theory of whispering gallery multilayer microspheres with single dipole or active layer sources. Optics Express, 2017, 25, 6192.	3.4	14
40	Mode-Splitting for Refractive Index Sensing in Fluorescent Whispering Gallery Mode Microspheres with Broken Symmetry. Sensors, 2018, 18, 2987.	3.8	13
41	Efficient Generation of Stable Sm2+ in Nanocrystalline BaLiF3:Sm3+ by UV- and X-Irradiation. Journal of Physical Chemistry C, 2019, 123, 25477-25481.	3.1	11
42	Yb³⁺ and Er³⁺ Codoped BaLiF₃ Nanocrystals for X-ray Dosimetry and Imaging by Upconversion Luminescence. ACS Applied Nano Materials, 2021, 4, 6659-6667.	5.0	11
43	Bandwidth-division in digitally enhanced optical frequency domain reflectometry. Optics Express, 2013, 21, 4017.	3.4	10
44	Mode-Multiplexed 16-QAM Transmission over 2400-km Large-Effective-Area Depressed-Cladding 3-Mode Fiber. , 2018, , .		10
45	Dispersion equalisation in few-mode fibres. Optical and Quantum Electronics, 2011, 42, 577-585.	3.3	9
46	Holey fiber mode-selective couplers. Optics Express, 2015, 23, 18888.	3.4	9
47	Characterization of Mode-Dependent Loss of Laser Inscribed Photonic Lanterns for Space Division Multiplexing Systems. , 2013, , .		9
48	C-Band Mode-Selective Couplers Fabricated by the Femtosecond Laser Direct-Write Technique. , 2015, , .		8
49	Whispering gallery mode excitation using exposed-core fiber. Optics Express, 2021, 29, 23549.	3.4	8
50	Mode-Group-Selective Photonic Lantern based on Integrated 3D Devices Fabricated by Ultrafast Laser Inscription. , 2015, , .		8
51	Data Storage in a Nanocrystalline Mixture Using Room Temperature Frequency-Selective and Multilevel Spectral Hole-Burning. ACS Photonics, 2021, 8, 3078-3084.	6.6	8
52	Towards rewritable multilevel optical data storage in single nanocrystals. Optics Express, 2018, 26, 12266-12276.	3.4	8
53	Mechanochemical preparation of nanocrystalline metal halide phosphors. Journal of Materials Science, 2018, 53, 13643-13659.	3.7	7
54	High Capacity and Long-Haul Transmission with Space-Division Multiplexing. , 2021, , .		7

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55	Transient spectral hole-burning studies of the R2 line in ruby. Chemical Physics Letters, 2009, 475, 10-14.	2.6	6
56	On-chip absorption spectroscopy enabled by graded index fiber tips. Biomedical Optics Express, 2021, 12, 181.	2.9	5
57	Resolving the range ambiguity in OFDR using digital signal processing. Measurement Science and Technology, 2014, 25, 125102.	2.6	4
58	Luminescence and photoionization of X-ray generated Sm²⁺ in coprecipitated CaF₂ nanocrystals. Dalton Transactions, 2021, 50, 16205-16213.	3.3	4
59	Efficient coupling between single mode fibers and glass chip waveguides via graded refractive index fiber tips. Optics Express, 2022, 30, 12294.	3.4	4
60	Design considerations for graded index fiber tip Fabryâ€“Perot interferometers. Measurement Science and Technology, 2021, 32, 055201.	2.6	3
61	Design guidelines for collimating or focusing graded-index fiber tips. Optics Express, 2021, 29, 29982.	3.4	3
62	Photoluminescence of X-ray-Induced Divalent Tm Ions in BaLiF₃:Tm³⁺ Nanocrystals. Journal of Physical Chemistry C, 2021, 125, 21543-21549.	3.1	3
63	Determining the geometric parameters of microbubble resonators from their spectra. Journal of the Optical Society of America B: Optical Physics, 2017, 34, 44.	2.1	3
64	Ultrafast Laser-Written Sub-Components for Space Division Multiplexing. , 2020, , .		3
65	Reversible Mn valence state switching in submicron Î±-Al₂O₃:Mn by soft X-rays and blue light â€“ a potential pathway towards multilevel optical data storage. Physical Chemistry Chemical Physics, 2022, 24, 6155-6162.	2.8	3
66	Caged-Sphere Optofluidic Sensors: Whispering Gallery Resonators in Wicking Microfluidics. Sensors, 2022, 22, 4135.	3.8	3
67	Using whispering gallery mode micro lasers for biosensing within undiluted serum. Proceedings of SPIE, 2016, , .	0.8	2
68	Mode-Dependent Crosstalk Penalty in Few-Mode Multi-Core Fiber Transmission. , 2019, , .		2
69	Lensed GRIN Fiber-Optic Fabry-Perot Interferometers. , 2020, , .		2
70	Spatial Mode Division Multiplexing of Few Mode Fiber. , 2012, , .		1
71	Combining whispering gallery mode lasers and microstructured optical fibers: limitations, applications and perspectives for in-vivo biosensing. MRS Advances, 2016, 1, 2309-2320.	0.9	1
72	Multilevel optical data storage using samarium-doped matlockite nanocrystals. , 2017, , .		1

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73	Two-dimensional mapping of surface scatterers on an optical fiber core using selective mode launching. APL Photonics, 2021, 6, 026105.	5.7	1
74	Elliptical-Aperture Multimode Diversity Reception for Free-Space Optics Communications Under Anisotropic Turbulence. , 2021, , .		1
75	Dispersion equalisation in few-mode fibres. , 2010, , .		0
76	Fabrication of novel integrated components for next-generation optical networks using the femtosecond-laser direct-write technique. , 2014, , .		0
77	Whispering-gallery mode lasers for biosensing: a rationale for reducing the lasing threshold. Proceedings of SPIE, 2015, , .	0.8	0
78	Predicting the whispering gallery mode spectra of microresonators. , 2015, , .		0
79	A Unified Model for Active Multilayer Microsphere Resonators. , 2016, , .		0
80	Optofluidic whispering gallery mode microcapillary lasers for refractive index sensing. Proceedings of SPIE, 2016, , .	0.8	0
81	1.2 Pb/s Transmission Over a <tex>$160 mumathrm{m}$</tex> Cladding, 4-Core, 3-Mode Fiber, Using 368 <tex>$mathrm{C}+mathrm{L}$</tex> band PDM-256-QAM Channels. , 2018, , .		0
82	Graded-index fiber on-chip absorption spectroscopy. , 2021, , .		0
83	On the Fundamental Limits of Far-Field Detection of Active Microsphere Whispering Gallery Modes. , 2015, , .		0
84	Laser Written 3D Lightwave Circuits and Applications. , 2015, , .		0
85	Dispersion Engineering in Whispering Gallery Mode Microbubble Resonators. , 2016, , .		0
86	Integrated Photonics breathing new life into Multimode Optical Fibre Communications. , 2017, , .		0
87	Lasing Microresonators: A New Paradigm for Biosensing Applications. , 2018, , .		0
88	Mode-splitting for refractive index sensing in fluorescent whispering gallery mode resonators with broken symmetry. , 2018, , .		0
89	Rewritable multilevel optical data storage in BaFCl nanocrystals. , 2018, , .		0
90	The True Origins of the Green Luminescence in the â€œZero-dimensionalâ€•Perovskite Cs4PbBr6. , 2019, , .		0

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91	Femtosecond laser written photonics for high speed telecommunications. , 2020, , .		0
92	Determining the geometric parameters of microbubble resonators from their spectra. Journal of the Optical Society of America B: Optical Physics, 2017, 34, 2699.	2.1	0
93	Spin-forbidden near-infrared luminescence from a F₃⁺ colour centre generated upon annealing in mechanochemically prepared nanocrystalline BaLiF₃. Nanoscale, 2022, 14, 3279-3288.	5.6	0