

# 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	Spin-forbidden near-infrared luminescence from a $F^{3+}$ colour centre generated upon annealing in mechanochemically prepared nanocrystalline $BaLiF_3$ . <i>Nanoscale</i> , 2022, 14, 3279-3288.	5.6	0
2	Reversible Mn valence state switching in submicron $Al_2O_3:Mn$ by soft X-rays and blue light – a potential pathway towards multilevel optical data storage. <i>Physical Chemistry Chemical Physics</i> , 2022, 24, 6155-6162.	2.8	3
3	Efficient coupling between single mode fibers and glass chip waveguides via graded refractive index fiber tips. <i>Optics Express</i> , 2022, 30, 12294.	3.4	4
4	Caged-Sphere Optofluidic Sensors: Whispering Gallery Resonators in Wicking Microfluidics. <i>Sensors</i> , 2022, 22, 4135.	3.8	3
5	Graded-index fiber on-chip absorption spectroscopy. , 2021, , .		0
6	Two-dimensional mapping of surface scatterers on an optical fiber core using selective mode launching. <i>APL Photonics</i> , 2021, 6, 026105.	5.7	1
7	Design considerations for graded index fiber tip Fabry-Perot interferometers. <i>Measurement Science and Technology</i> , 2021, 32, 055201.	2.6	3
8	$Yb^{3+}$ and $Er^{3+}$ Codoped $BaLiF_3$ Nanocrystals for X-ray Dosimetry and Imaging by Upconversion Luminescence. <i>ACS Applied Nano Materials</i> , 2021, 4, 6659-6667.	5.0	11
9	Whispering gallery mode excitation using exposed-core fiber. <i>Optics Express</i> , 2021, 29, 23549.	3.4	8
10	Design guidelines for collimating or focusing graded-index fiber tips. <i>Optics Express</i> , 2021, 29, 29982.	3.4	3
11	Photoluminescence of X-ray-Induced Divalent Tm Ions in $BaLiF_3:Tm^{2+}$ Nanocrystals. <i>Journal of Physical Chemistry C</i> , 2021, 125, 21543-21549.	3.1	3
12	On-chip absorption spectroscopy enabled by graded index fiber tips. <i>Biomedical Optics Express</i> , 2021, 12, 181.	2.9	5
13	Luminescence and photoionization of X-ray generated $Sm^{2+}$ in coprecipitated $CaF_2$ nanocrystals. <i>Dalton Transactions</i> , 2021, 50, 16205-16213.	3.3	4
14	Data Storage in a Nanocrystalline Mixture Using Room Temperature Frequency-Selective and Multilevel Spectral Hole-Burning. <i>ACS Photonics</i> , 2021, 8, 3078-3084.	6.6	8
15	High Capacity and Long-Haul Transmission with Space-Division Multiplexing. , 2021, , .		7
16	Elliptical-Aperture Multimode Diversity Reception for Free-Space Optics Communications Under Anisotropic Turbulence. , 2021, , .		1
17	Lensed GRIN Fiber-Optic Fabry-Perot Interferometers. , 2020, , .		2
18	Ultrafast Laser-Written Sub-Components for Space Division Multiplexing. , 2020, , .		3

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19	Femtosecond laser written photonics for high speed telecommunications. , 2020, , .		0
20	Efficient Generation of Stable Sm <sup>2+</sup> in Nanocrystalline BaLiF <sub>3</sub> :Sm <sup>3+</sup> by UV- and X-Irradiation. Journal of Physical Chemistry C, 2019, 123, 25477-25481.	3.1	11
21	On the origins of the green luminescence in the "zero-dimensional perovskite" Cs <sub>4</sub> PbBr <sub>6</sub> : conclusive results from cathodoluminescence imaging. Nanoscale, 2019, 11, 3925-3932.	5.6	57
22	1.2 Pb/s Throughput Transmission Using a 160 $\mu\text{m}$ Cladding, 4-Core, 3-Mode Fiber. Journal of Lightwave Technology, 2019, 37, 1798-1804.	4.6	45
23	Mode-Dependent Crosstalk Penalty in Few-Mode Multi-Core Fiber Transmission. , 2019, , .		2
24	The True Origins of the Green Luminescence in the "Zero-dimensional" Perovskite Cs <sub>4</sub> PbBr <sub>6</sub> . , 2019, , .		0
25	Long-Haul Transmission Over Few-Mode Fibers With Space-Division Multiplexing. Journal of Lightwave Technology, 2018, 36, 1382-1388.	4.6	80
26	1.2 Pb/s Transmission Over a $160 \mu\text{m}$ Cladding, 4-Core, 3-Mode Fiber, Using 368 $\text{C}+\text{L}$ band PDM-256-QAM Channels. , 2018, , .		0
27	Mode-Splitting for Refractive Index Sensing in Fluorescent Whispering Gallery Mode Microspheres with Broken Symmetry. Sensors, 2018, 18, 2987.	3.8	13
28	Mechanochemical preparation of nanocrystalline metal halide phosphors. Journal of Materials Science, 2018, 53, 13643-13659.	3.7	7
29	Towards rewritable multilevel optical data storage in single nanocrystals. Optics Express, 2018, 26, 12266.	3.4	38
30	Mode-Multiplexed 16-QAM Transmission over 2400-km Large-Effective-Area Depressed-Cladding 3-Mode Fiber. , 2018, , .		10
31	Lasing Microresonators: A New Paradigm for Biosensing Applications. , 2018, , .		0
32	Mode-splitting for refractive index sensing in fluorescent whispering gallery mode resonators with broken symmetry. , 2018, , .		0
33	Rewritable multilevel optical data storage in BaFCl nanocrystals. , 2018, , .		0
34	Towards rewritable multilevel optical data storage in single nanocrystals. Optics Express, 2018, 26, 12266-12276.	3.4	8
35	Fluorescent and lasing whispering gallery mode microresonators for sensing applications. Laser and Photonics Reviews, 2017, 11, 1600265.	8.7	156
36	Mechanochemically prepared SrFCl nanophosphor co-doped with Yb <sup>3+</sup> and Er <sup>3+</sup> for detecting ionizing radiation by upconversion luminescence. Nanoscale, 2017, 9, 15958-15966.	5.6	20

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37	Monolithic mode-selective few-mode multicore fiber multiplexers. Scientific Reports, 2017, 7, 6971.	3.3	37
38	Photonic lantern as mode multiplexer for multimode optical communications. Optical Fiber Technology, 2017, 35, 46-55.	2.7	44
39	Multilevel optical data storage using samarium-doped matlockite nanocrystals. , 2017, , .		1
40	3500-km Mode-Multiplexed Transmission Through a Three-Mode Graded-Index Few-Mode Fiber Link. , 2017, , .		14
41	All-fiber 6-mode multiplexers based on fiber mode selective couplers. Optics Express, 2017, 25, 5734.	3.4	25
42	Unified theory of whispering gallery multilayer microspheres with single dipole or active layer sources. Optics Express, 2017, 25, 6192.	3.4	14
43	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
44	Integrated Photonics breathing new life into Multimode Optical Fibre Communications. , 2017, , .		0
45	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
46	A Unified Model for Active Multilayer Microsphere Resonators. , 2016, , .		0
47	Optofluidic whispering gallery mode microcapillary lasers for refractive index sensing. Proceedings of SPIE, 2016, , .	0.8	0
48	Using whispering gallery mode micro lasers for biosensing within undiluted serum. Proceedings of SPIE, 2016, , .	0.8	2
49	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
50	Dispersion analysis of whispering gallery mode microbubble resonators. Optics Express, 2016, 24, 8832.	3.4	20
51	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
52	Lasing of whispering gallery modes in optofluidic microcapillaries. Optics Express, 2016, 24, 12466.	3.4	24
53	Transmission Over 1050-km Few-Mode Fiber Based on Bidirectional Distributed Raman Amplification. Journal of Lightwave Technology, 2016, 34, 1864-1871.	4.6	29
54	Dispersion in silica microbubble resonators. Optics Letters, 2016, 41, 1257.	3.3	25

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55	Dynamic Self-Referencing Approach to Whispering Gallery Mode Biosensing and Its Application to Measurement within Undiluted Serum. <i>Analytical Chemistry</i> , 2016, 88, 4036-4040.	6.5	37
56	Dispersion Engineering in Whispering Gallery Mode Microbubble Resonators. , 2016, , .		0
57	C-Band Mode-Selective Couplers Fabricated by the Femtosecond Laser Direct-Write Technique. , 2015, , .		8
58	Q-factor limits for far-field detection of whispering gallery modes in active microspheres. <i>Optics Express</i> , 2015, 23, 28896.	3.4	38
59	All-fiber mode-group-selective photonic lantern using graded-index multimode fibers. <i>Optics Express</i> , 2015, 23, 224.	3.4	122
60	Photoreduction of Sm <sup>3+</sup> in Nanocrystalline BaFCl. <i>Journal of Physical Chemistry A</i> , 2015, 119, 6252-6256.	2.5	20
61	Polymer based whispering gallery mode laser for biosensing applications. <i>Applied Physics Letters</i> , 2015, 106, .	3.3	63
62	Whispering-gallery mode lasers for biosensing: a rationale for reducing the lasing threshold. <i>Proceedings of SPIE</i> , 2015, , .	0.8	0
63	Predicting the whispering gallery mode spectra of microresonators. , 2015, , .		0
64	Mode- and wavelength-division multiplexed transmission using all-fiber mode multiplexer based on mode selective couplers. <i>Optics Express</i> , 2015, 23, 7164.	3.4	39
65	Method for predicting whispering gallery mode spectra of spherical microresonators. <i>Optics Express</i> , 2015, 23, 9924.	3.4	20
66	Material candidates for optical frequency comb generation in microspheres. <i>Optics Express</i> , 2015, 23, 14784.	3.4	25
67	Optimization of whispering gallery resonator design for biosensing applications. <i>Optics Express</i> , 2015, 23, 17067.	3.4	28
68	Holey fiber mode-selective couplers. <i>Optics Express</i> , 2015, 23, 18888.	3.4	9
69	30Å—30 MIMO Transmission over 15 Spatial Modes. , 2015, , .		121
70	Mode-Group-Selective Photonic Lantern based on Integrated 3D Devices Fabricated by Ultrafast Laser Inscription. , 2015, , .		8
71	On the Fundamental Limits of Far-Field Detection of Active Microsphere Whispering Gallery Modes. , 2015, , .		0
72	Laser Written 3D Lightwave Circuits and Applications. , 2015, , .		0

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73	Resolving the range ambiguity in OFDR using digital signal processing. Measurement Science and Technology, 2014, 25, 125102.	2.6	4
74	Femtosecond direct-written integrated mode couplers. Optics Express, 2014, 22, 29855.	3.4	85
75	Three-dimensional ultra-broadband integrated tapered mode multiplexers. Laser and Photonics Reviews, 2014, 8, L81-L85.	8.7	122
76	Fabrication of novel integrated components for next-generation optical networks using the femtosecond-laser direct-write technique. , 2014, , .		0
77	Mode division multiplexed optical transmission enabled by all-fiber mode multiplexer. Optics Express, 2014, 22, 14229.	3.4	58
78	Mode-selective photonic lanterns for space-division multiplexing. Optics Express, 2014, 22, 1036.	3.4	319
79	Tapered Velocity Mode-Selective Couplers. Journal of Lightwave Technology, 2013, 31, 2163-2169.	4.6	52
80	Few-Core Spatial-Mode Multiplexers/Demultiplexers Based on Evanescent Coupling. IEEE Photonics Technology Letters, 2013, 25, 1324-1327.	2.5	26
81	Ultra-Broadband Tapered Mode-Selective Couplers for Few-Mode Optical Fiber Networks. IEEE Photonics Technology Letters, 2013, 25, 2501-2504.	2.5	47
82	Bandwidth-division in digitally enhanced optical frequency domain reflectometry. Optics Express, 2013, 21, 4017.	3.4	10
83	Characterization of Mode-Dependent Loss of Laser Inscribed Photonic Lanterns for Space Division Multiplexing Systems. , 2013, , .		9
84	Mode-selective couplers for few-mode optical fiber networks. Optics Letters, 2012, 37, 3990.	3.3	113
85	Geometric requirements for photonic lanterns in space division multiplexing. Optics Express, 2012, 20, 27123.	3.4	187
86	Spatial Mode Division Multiplexing of Few Mode Fiber. , 2012, , .		1
87	Weakly-Guiding Mode-Selective Fiber Couplers. IEEE Journal of Quantum Electronics, 2012, 48, 941-945.	1.9	51
88	Design of mode-sorting asymmetric Y-junctions. Applied Optics, 2012, 51, 2778.	1.8	127
89	Few-Mode Elliptical-Core Fiber Data Transmission. IEEE Photonics Technology Letters, 2012, 24, 344-346.	2.5	81
90	Single-, Few-, and Multimode Y-Junctions. Journal of Lightwave Technology, 2012, 30, 304-309.	4.6	116

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91	Dispersion equalisation in few-mode fibres. Optical and Quantum Electronics, 2011, 42, 577-585.	3.3	9
92	Dispersion equalisation in few-mode fibres. , 2010, , .		0
93	Transient spectral hole-burning studies of the R2 line in ruby. Chemical Physics Letters, 2009, 475, 10-14.	2.6	6