Avik Dutt

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/5298169/publications.pdf

Version: 2024-02-01

66 papers	2,759 citations	218677 26 h-index	302126 39 g-index
67 all docs	67 docs citations	67 times ranked	2640 citing authors

#	Article	IF	Citations
1	Ultra-low-loss on-chip resonators with sub-milliwatt parametric oscillation threshold. Optica, 2017, 4, 619.	9.3	370
2	On-chip dual-comb source for spectroscopy. Science Advances, 2018, 4, e1701858.	10.3	256
3	Overcoming Si_3N_4 film stress limitations for high quality factor ring resonators. Optics Express, 2013, 21, 22829.	3.4	176
4	A single photonic cavity with two independent physical synthetic dimensions. Science, 2020, 367, 59-64.	12.6	175
5	On-Chip Optical Squeezing. Physical Review Applied, 2015, 3, .	3.8	165
6	Generating arbitrary topological windings of a non-Hermitian band. Science, 2021, 371, 1240-1245.	12.6	159
7	Inverse-designed non-reciprocal pulse router for chip-based LiDAR. Nature Photonics, 2020, 14, 369-374.	31.4	145
8	Topological complex-energy braiding of non-Hermitian bands. Nature, 2021, 598, 59-64.	27.8	132
9	Compact narrow-linewidth integrated laser based on a low-loss silicon nitride ring resonator. Optics Letters, 2017, 42, 4541.	3.3	115
10	Experimental band structure spectroscopy along a synthetic dimension. Nature Communications, 2019, 10, 3122.	12.8	95
11	Tunable frequency combs based on dual microring resonators. Optics Express, 2015, 23, 21527.	3.4	94
12	Higher-order topological insulators in synthetic dimensions. Light: Science and Applications, 2020, 9, 131.	16.6	75
13	Optical nonlinearities in high-confinement silicon carbide waveguides. Optics Letters, 2015, 40, 4138.	3.3	59
14	Topological dissipation in a time-multiplexed photonic resonator network. Nature Physics, 2022, 18, 442-449.	16.7	58
15	Quantum interference between transverse spatial waveguide modes. Nature Communications, 2017, 8, 14010.	12.8	57
16	Roadmap on topological photonics. JPhys Photonics, 2022, 4, 032501.	4.6	56
17	Absence of unidirectionally propagating surface plasmon-polaritons at nonreciprocal metal-dielectric interfaces. Nature Communications, 2020, 11, 674.	12.8	54
18	Synthetic frequency dimensions in dynamically modulated ring resonators. APL Photonics, 2021, 6, .	5.7	44

#	Article	IF	Citations
19	Frequency-Domain Quantum Interference with Correlated Photons from an Integrated Microresonator. Physical Review Letters, 2020, 124, 143601.	7.8	41
20	Nontrivial point-gap topology and non-Hermitian skin effect in photonic crystals. Physical Review B, 2021, 104, .	3.2	40
21	Integrated Nonreciprocal Photonic Devices With Dynamic Modulation. Proceedings of the IEEE, 2020, 108, 1759-1784.	21.3	35
22	PT -Symmetric Topological Edge-Gain Effect. Physical Review Letters, 2020, 125, 033603.	7.8	34
23	Tunable squeezing using coupled ring resonators on a silicon nitride chip. Optics Letters, 2016, 41, 223.	3.3	32
24	Arbitrary linear transformations for photons in the frequency synthetic dimension. Nature Communications, 2021, 12, 2401.	12.8	32
25	Dynamic band structure measurement in the synthetic space. Science Advances, 2021, 7, .	10.3	31
26	Nondissipative non-Hermitian dynamics and exceptional points in coupled optical parametric oscillators. Optica, 2021, 8, 415.	9.3	27
27	Light-assisted templated self assembly using photonic crystal slabs. Optics Express, 2011, 19, 11422.	3.4	24
28	Capillary optical fibers: design and applications for attaining a large effective mode area. Journal of the Optical Society of America B: Optical Physics, 2011, 28, 1431.	2.1	21
29	Deterministic photonic quantum computation in a synthetic time dimension. Optica, 2021, 8, 1515.	9.3	21
30	Creating boundaries along a synthetic frequency dimension. Nature Communications, 2022, 13, .	12.8	21
31	Pulse shortening in an actively mode-locked laser with parity-time symmetry. APL Photonics, 2018, 3, 086103.	5.7	20
32	Creating locally interacting Hamiltonians in the synthetic frequency dimension for photons. Photonics Research, 2020, 8, B8.	7.0	20
33	Smooth double barriers in quantum mechanics. American Journal of Physics, 2010, 78, 1352-1360.	0.7	19
34	Experimental Demonstration of Dynamical Input Isolation in Nonadiabatically Modulated Photonic Cavities. ACS Photonics, 2019, 6, 162-169.	6.6	13
35	Design of Tunable Couplers Using Magnetic Fluid Filled Three-Core Optical Fibers. IEEE Photonics Technology Letters, 2012, 24, 164-166.	2.5	10
36	Loss of polarization of elliptically polarized collapsing beams. Physical Review A, 2019, 99, .	2.5	7

#	Article	IF	Citations
37	Integrated Graphene Electro-Optic Phase Modulator. , 2017, , .		7
38	Splitting of degenerate states in one-dimensional quantum mechanics. European Physical Journal Plus, 2012, 127, 1.	2.6	4
39	On-chip broadband ultra-compact optical couplers and polarization splitters based on off-centered and non-symmetric slotted Si-wire waveguides. Journal of Optics (United Kingdom), 2016, 18, 105801.	2.2	4
40	Light-assisted templated self assembly using photonic crystal slabs. , 2011, , .		2
41	Dual-comb Spectroscopy using On-chip Mode-locked Frequency Combs. , 2017, , .		2
42	Compact narrow-linewidth integrated laser based on low-loss silicon nitride ring resonator. , 2018, , .		2
43	Broadband High-Resolution Scanning of Soliton Micro-Combs. , 2019, , .		2
44	Photonic arbitrary linear transformations in the frequency synthetic dimension. , 2021, , .		1
45	Parity-Time (PT) symmetric photonic system based on Parametric Gain. , 2018, , .		1
46	Nonreciprocal Devices in Silicon Photonics. Optics and Photonics News, 2020, 31, 38.	0.5	1
47	Modal characteristics of nano-sized air-capillary-core optical fibers. , 2010, , .		0
48	Applications of computational nanophotonics in photonic circuits, self assembly, and solar energy. , 2011, , .		0
49	Demonstration of Squeezing on chip. , 2013, , .		0
50	Observation of On-Chip Optical Squeezing. , 2013, , .		0
51	Multimode Correlations in Chip-based Frequency Combs. , 2014, , .		0
52	Arbitrary control and direct measurement of topological windings of a non-Hermitian band. , 2021, , .		0
53	Experimental Demonstration of Dynamic Band Structure Measurement along a Synthetic Dimension. , 2021, , .		0
54	Light-assisted templated self-assembly using photonic crystal slabs. , 2011, , .		0

#	Article	IF	Citations
55	On-chip optical squeezing and quantum correlations. , 2014, , .		0
56	Towards Multicolor Quantum Correlations in On-chip Frequency Combs. , 2014, , .		0
57	Tunable Squeezing Using Coupled Ring Resonators on a Silicon Nitride Chip. , 2015, , .		0
58	Generation of Dual Frequency Combs using Cascaded Microring Resonators. , 2016, , .		0
59	Loss of Polarization in Collapsing Beams of Elliptical Polarization. , 2017, , .		0
60	Broadband enhancement of thermal emission. , 2017, , .		0
61	Experimental Band Structure Spectroscopy along the Synthetic Dimension. , 2019, , .		0
62	Absence of frequency ranges of undirectional propagation in nonreciprocal plasmonics. , 2019, , .		0
63	Pulse shortening in two coupled rings under amplitude modulations with parity-time symmetry. , 2019, , .		0
64	Long-Term Stabilization and Operation of a Soliton Micro-Comb for 9-Days. , 2019, , .		0
65	Broadband enhancement of thermal radiation. Optics Express, 2019, 27, A818.	3.4	0
66	Constructing an effective Hamiltonian with local interaction in the synthetic space for photons. , 2020, , .		0