Avik Dutt

List of Publications by Year
in descending order

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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	Roadmap on topological photonics. JPhys Photonics, 2022, 4, 032501.	4.6	56
2	Topological dissipation in a time-multiplexed photonic resonator network. Nature Physics, 2022, 18, 442-449.	16.7	58
3	Creating boundaries along a synthetic frequency dimension. Nature Communications, 2022, 13, .	12.8	21
4	Photonic arbitrary linear transformations in the frequency synthetic dimension. , 2021, , .		1
5	Arbitrary control and direct measurement of topological windings of a non-Hermitian band. , 2021, , .		0
6	Dynamic band structure measurement in the synthetic space. Science Advances, 2021, 7, .	10.3	31
7	Experimental Demonstration of Dynamic Band Structure Measurement along a Synthetic Dimension. , 2021, , .		0
8	Generating arbitrary topological windings of a non-Hermitian band. Science, 2021, 371, 1240-1245.	12.6	159
9	Nondissipative non-Hermitian dynamics and exceptional points in coupled optical parametric oscillators. Optica, 2021, 8, 415.	9.3	27
10	Arbitrary linear transformations for photons in the frequency synthetic dimension. Nature Communications, 2021, 12, 2401.	12.8	32
11	Synthetic frequency dimensions in dynamically modulated ring resonators. APL Photonics, 2021, 6, .	5.7	44
12	Nontrivial point-gap topology and non-Hermitian skin effect in photonic crystals. Physical Review B, 2021, 104, .	3.2	40
13	Topological complex-energy braiding of non-Hermitian bands. Nature, 2021, 598, 59-64.	27.8	132
14	Deterministic photonic quantum computation in a synthetic time dimension. Optica, 2021, 8, 1515.	9.3	21
15	A single photonic cavity with two independent physical synthetic dimensions. Science, 2020, 367, 59-64.	12.6	175
16	Integrated Nonreciprocal Photonic Devices With Dynamic Modulation. Proceedings of the IEEE, 2020, 108, 1759-1784.	21.3	35
17	Higher-order topological insulators in synthetic dimensions. Light: Science and Applications, 2020, 9, 131.	16.6	75
18	PT -Symmetric Topological Edge-Gain Effect. Physical Review Letters, 2020, 125, 033603.	7.8	34

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19	Inverse-designed non-reciprocal pulse router for chip-based LiDAR. Nature Photonics, 2020, 14, 369-374.	31.4	145
20	Absence of unidirectionally propagating surface plasmon-polaritons at nonreciprocal metal-dielectric interfaces. Nature Communications, 2020, 11, 674.	12.8	54
21	Frequency-Domain Quantum Interference with Correlated Photons from an Integrated Microresonator. Physical Review Letters, 2020, 124, 143601.	7.8	41
22	Nonreciprocal Devices in Silicon Photonics. Optics and Photonics News, 2020, 31, 38.	0.5	1
23	Creating locally interacting Hamiltonians in the synthetic frequency dimension for photons. Photonics Research, 2020, 8, B8.	7.0	20
24	Constructing an effective Hamiltonian with local interaction in the synthetic space for photons. , 2020, , .		0
25	Experimental band structure spectroscopy along a synthetic dimension. Nature Communications, 2019, 10, 3122.	12.8	95
26	Loss of polarization of elliptically polarized collapsing beams. Physical Review A, 2019, 99, .	2.5	7
27	Experimental Demonstration of Dynamical Input Isolation in Nonadiabatically Modulated Photonic Cavities. ACS Photonics, 2019, 6, 162-169.	6.6	13
28	Experimental Band Structure Spectroscopy along the Synthetic Dimension. , 2019, , .		0
29	Absence of frequency ranges of undirectional propagation in nonreciprocal plasmonics. , 2019, , .		0
30	Pulse shortening in two coupled rings under amplitude modulations with parity-time symmetry. , 2019, , .		0
31	Long-Term Stabilization and Operation of a Soliton Micro-Comb for 9-Days. , 2019, , .		0
32	Broadband High-Resolution Scanning of Soliton Micro-Combs. , 2019, , .		2
33	Broadband enhancement of thermal radiation. Optics Express, 2019, 27, A818.	3.4	0
34	On-chip dual-comb source for spectroscopy. Science Advances, 2018, 4, e1701858.	10.3	256
35	Pulse shortening in an actively mode-locked laser with parity-time symmetry. APL Photonics, 2018, 3, 086103.	5.7	20
36	Parity-Time (PT) symmetric photonic system based on Parametric Gain. , 2018, , .		1

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37	Compact narrow-linewidth integrated laser based on low-loss silicon nitride ring resonator. , 2018, , .		2
38	Quantum interference between transverse spatial waveguide modes. Nature Communications, 2017, 8, 14010.	12.8	57
39	Ultra-low-loss on-chip resonators with sub-milliwatt parametric oscillation threshold. Optica, 2017, 4, 619.	9.3	370
40	Compact narrow-linewidth integrated laser based on a low-loss silicon nitride ring resonator. Optics Letters, 2017, 42, 4541.	3.3	115
41	Dual-comb Spectroscopy using On-chip Mode-locked Frequency Combs. , 2017, , .		2
42	Integrated Graphene Electro-Optic Phase Modulator. , 2017, , .		7
43	Loss of Polarization in Collapsing Beams of Elliptical Polarization. , 2017, , .		0
44	Broadband enhancement of thermal emission. , 2017, , .		0
45	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
46	Tunable squeezing using coupled ring resonators on a silicon nitride chip. Optics Letters, 2016, 41, 223.	3.3	32
47	Generation of Dual Frequency Combs using Cascaded Microring Resonators. , 2016, , .		0
48	On-Chip Optical Squeezing. Physical Review Applied, 2015, 3, .	3.8	165
49	Tunable frequency combs based on dual microring resonators. Optics Express, 2015, 23, 21527.	3.4	94
50	Optical nonlinearities in high-confinement silicon carbide waveguides. Optics Letters, 2015, 40, 4138.	3.3	59
51	Tunable Squeezing Using Coupled Ring Resonators on a Silicon Nitride Chip. , 2015, , .		0
52	Multimode Correlations in Chip-based Frequency Combs. , 2014, , .		0
53	On-chip optical squeezing and quantum correlations. , 2014, , .		0
54	Towards Multicolor Quantum Correlations in On-chip Frequency Combs. , 2014, , .		0

#	Article	IF	Citations
55	Demonstration of Squeezing on chip. , 2013, , .		0
56	Overcoming Si_3N_4 film stress limitations for high quality factor ring resonators. Optics Express, 2013, 21, 22829.	3.4	176
57	Observation of On-Chip Optical Squeezing. , 2013, , .		0
58	Design of Tunable Couplers Using Magnetic Fluid Filled Three-Core Optical Fibers. IEEE Photonics Technology Letters, 2012, 24, 164-166.	2.5	10
59	Splitting of degenerate states in one-dimensional quantum mechanics. European Physical Journal Plus, 2012, 127, 1.	2.6	4
60	Applications of computational nanophotonics in photonic circuits, self assembly, and solar energy. , 2011, , .		0
61	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
62	Light-assisted templated self assembly using photonic crystal slabs. Optics Express, 2011, 19, 11422.	3.4	24
63	Light-assisted templated self assembly using photonic crystal slabs. , 2011, , .		2
64	Light-assisted templated self-assembly using photonic crystal slabs. , 2011, , .		0
65	Modal characteristics of nano-sized air-capillary-core optical fibers. , 2010, , .		0
66	Smooth double barriers in quantum mechanics. American Journal of Physics, 2010, 78, 1352-1360.	0.7	19