

Henri Benisty

List of Publications by Year in descending order

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121
papers

3,791
citations

126708

33
h-index

133063

59
g-index

122
all docs

122
docs citations

122
times ranked

2567
citing authors

#	ARTICLE	IF	CITATIONS
1	Radiation losses of waveguide-based two-dimensional photonic crystals: Positive role of the substrate. <i>Applied Physics Letters</i> , 2000, 76, 532-534.	1.5	204
2	Implementation of PT symmetric devices using plasmonics: principle and applications. <i>Optics Express</i> , 2011, 19, 18004.	1.7	191
3	Photonic-crystal GaN light-emitting diodes with tailored guided modes distribution. <i>Applied Physics Letters</i> , 2006, 88, 061124.	1.5	189
4	Low-loss channel waveguides with two-dimensional photonic crystal boundaries. <i>Applied Physics Letters</i> , 2000, 77, 2813-2815.	1.5	176
5	Miniband transmission in a photonic crystal coupled-resonator optical waveguide. <i>Optics Letters</i> , 2001, 26, 1019.	1.7	167
6	Photonic bands in two-dimensionally patterned multimode GaN waveguides for light extraction. <i>Applied Physics Letters</i> , 2005, 87, 101107.	1.5	154
7	Reduced electron-phonon relaxation rates in quantum-box systems: Theoretical analysis. <i>Physical Review B</i> , 1995, 51, 13281-13293.	1.1	140
8	Photonic crystal laser lift-off GaN light-emitting diodes. <i>Applied Physics Letters</i> , 2006, 88, 133514.	1.5	124
9	Optimization of Light-Diffracting Photonic-Crystals for High Extraction Efficiency LEDs. <i>Journal of Display Technology</i> , 2007, 3, 133-148.	1.3	121
10	Switching using PT symmetry in plasmonic systems: positive role of the losses. <i>Optics Express</i> , 2013, 21, 21651.	1.7	119
11	Coupled-mode theory and propagation losses in photonic crystal waveguides. <i>Optics Express</i> , 2003, 11, 1490.	1.7	106
12	GaAs photonic crystal cavity with ultrahigh Q: microwatt nonlinearity at 155 μm . <i>Optics Letters</i> , 2008, 33, 1908.	1.7	97
13	Coupled guide and cavity in a two-dimensional photonic crystal. <i>Applied Physics Letters</i> , 2001, 78, 1487-1489.	1.5	96
14	Submicrometer 3D structures fabrication enabled by one-photon absorption direct laser writing. <i>Optics Express</i> , 2013, 21, 20964.	1.7	92
15	Spontaneous Emission Enhancement of Quantum Dots in a Photonic Crystal Wire. <i>Physical Review Letters</i> , 2005, 95, 183901.	2.9	82
16	Radiation losses in planar photonic crystals: two-dimensional representation of hole depth and shape by an imaginary dielectric constant. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2003, 20, 469.	0.9	79
17	Toward ultrahigh-efficiency aluminum oxide microcavity light-emitting diodes: guided mode extraction by photonic crystals. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2002, 8, 238-247.	1.9	71
18	Photonic crystal light-emitting sources. <i>Reports on Progress in Physics</i> , 2012, 75, 126501.	8.1	71

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19	Omnidirectional and compact guided light extraction from Archimedean photonic lattices. Applied Physics Letters, 2003, 83, 1283-1285.	1.5	65
20	Fast factorization rule and plane-wave expansion method for two-dimensional photonic crystals with arbitrary hole-shape. Physical Review B, 2006, 73, .	1.1	60
21	Models and measurements for the transmission of submicron-width waveguide bends defined in two-dimensional photonic crystals. IEEE Journal of Quantum Electronics, 2002, 38, 770-785.	1.0	52
22	Resonant and nonresonant transmission through waveguide bends in a planar photonic crystal. Applied Physics Letters, 2001, 79, 2514-2516.	1.5	50
23	Achievement of ultrahigh quality factors in GaAs photonic crystal membrane nanocavity. Applied Physics Letters, 2006, 89, 221104.	1.5	48
24	Transverse periodic P symmetry for modal demultiplexing in optical waveguides. Physical Review A, 2015, 91, .	1.0	46
25	Performance of waveguide-based two-dimensional photonic-crystal mirrors studied with Fabry-Perot resonators. IEEE Journal of Quantum Electronics, 2001, 37, 237-243.	1.0	45
26	Improved 60° bend transmission of submicron-width waveguides defined in two-dimensional photonic crystals. Journal of Lightwave Technology, 2002, 20, 1198-1203.	2.7	44
27	Finite-depth and intrinsic losses in vertically etched two-dimensional photonic crystals. Optical and Quantum Electronics, 2002, 34, 205-215.	1.5	44
28	GaN light-emitting diodes with Archimedean lattice photonic crystals. Applied Physics Letters, 2006, 88, 073510.	1.5	43
29	Enhanced transmission through photonic-crystal-based bent waveguides by bend engineering. Applied Physics Letters, 2001, 79, 3579-3581.	1.5	41
30	Compact wavelength monitoring by lateral outcoupling in wedged photonic crystal multimode waveguides. Applied Physics Letters, 2005, 86, 101107.	1.5	40
31	General recipe for flatbands in photonic crystal waveguides. Optics Express, 2009, 17, 14634.	1.7	40
32	Healing Near-PT-Symmetric Structures to Restore Their Characteristic Singularities: Analysis and Examples. Journal of Lightwave Technology, 2012, 30, 2675-2683.	2.7	39
33	Time-domain 2D modeling of slab-waveguide based photonic-crystal devices in the presence of radiation losses. Microwave and Optical Technology Letters, 2002, 34, 387-393.	0.9	37
34	Using optical PT-symmetry for switching applications. Photonics and Nanostructures - Fundamentals and Applications, 2014, 12, 305-311.	1.0	37
35	Nanophotonic Polarization Diversity Demultiplexer Chip. Journal of Lightwave Technology, 2009, 27, 417-425.	2.7	34
36	Transmission properties of two-dimensional photonic crystal channel waveguides. Optical and Quantum Electronics, 2002, 34, 171-181.	1.5	32

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37	Topological edge modes with π symmetry in a quasiperiodic structure. Physical Review A, 2017, 96, .	1.0	32
38	Ultrabroad acoustical limiting in nonlinear metamaterials due to adaptive-broadening band-gap effect. Physical Review B, 2020, 101, .	1.1	31
39	Graphene nanoribbons: Photonic crystal waveguide analogy and minigap stripes. Physical Review B, 2009, 79, .	1.1	28
40	High efficiency quasi-monochromatic infrared emitter. Applied Physics Letters, 2014, 104, 081101.	1.5	26
41	Innovative integrated system for real-time measurement of hybridization and melting on standard format microarrays. BioTechniques, 2008, 44, 913-920.	0.8	25
42	Enhanced gain measurement at mode singularities in InP-based photonic crystal waveguides. Optics Express, 2004, 12, 1569.	1.7	24
43	Sensor-integrated fluorescent microarray for ultrahigh sensitivity direct-imaging bioassays: Role of a high rejection of excitation light. Applied Physics Letters, 2007, 91, 083901.	1.5	24
44	Photonic crystals in two-dimensions based on semiconductors: fabrication, physics and technology. Applied Surface Science, 2000, 164, 205-218.	3.1	23
45	Directionally dependent confinement in photonic-crystal microcavities. Journal of the Optical Society of America B: Optical Physics, 2000, 17, 2043.	0.9	22
46	Title is missing!. Optical and Quantum Electronics, 2002, 34, 79-89.	1.5	22
47	Photonic-Crystal Demultiplexer With Improved Crosstalk by Second-Order Cavity Filtering. Journal of Lightwave Technology, 2010, 28, 1201-1208.	2.7	22
48	Investigation of Extracting Photonic Crystal Lattices for Guided Modes of GaAs-Based Heterostructures. IEEE Journal of Quantum Electronics, 2008, 44, 777-789.	1.0	20
49	Cascaded photonic crystal guides and cavities: spectral studies and their impact on integrated optics design. IEEE Journal of Quantum Electronics, 2002, 38, 816-824.	1.0	19
50	Compact and fault-tolerant photonic crystal add drop filter. Optics Letters, 2003, 28, 2246.	1.7	18
51	Integration of grating couplers with a compact photonic crystal demultiplexer on an InP membrane. Optics Letters, 2008, 33, 884.	1.7	18
52	Analysis and Optimization of Compact Demultiplexer Monitor Based on Photonic-Crystal Waveguide. Journal of Lightwave Technology, 2007, 25, 2385-2394.	2.7	17
53	Photonic crystal patterning of luminescent sol-gel films for light extraction. Nanotechnology, 2011, 22, 365701.	1.3	17
54	Two-mode fringes in planar photonic crystal waveguides with constrictions: a probe that is sensitive to propagation losses. Journal of the Optical Society of America B: Optical Physics, 2002, 19, 2403.	0.9	16

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55	Spontaneous emission in GaN/InGaN photonic crystal nanopillars. <i>Optics Express</i> , 2007, 15, 17991.	1.7	14
56	Microsecond switchable thermal antenna. <i>Journal of Applied Physics</i> , 2014, 116, 034306.	1.1	14
57	Advances in Photonic Crystals. <i>Physica Status Solidi (B): Basic Research</i> , 2000, 221, 93-99.	0.7	13
58	Optimal $\mathcal{P}\mathcal{T}$ -symmetric switch features exceptional point. <i>Scientific Reports</i> , 2017, 7, 13299.	1.6	13
59	New designs to confine light. <i>Nature Physics</i> , 2005, 1, 9-10.	6.5	12
60	Photonic crystals. <i>Progress in Optics</i> , 2006, 49, 177-313.	0.4	12
61	Tailoring Spectral Properties of Binary $\mathcal{P}\mathcal{T}$ -Symmetric Gratings by Duty-Cycle Methods. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2016, 22, 35-41.	1.9	12
62	Extraction Length Determination in Patterned Luminescent Sol-Gel Films. <i>Advanced Optical Materials</i> , 2014, 2, 81-87.	3.6	11
63	Advances in 2D semiconductor photonic crystals. <i>Synthetic Metals</i> , 2001, 116, 449-452.	2.1	10
64	Single-material coupling-tolerant semi-planar microresonator using Littrow diffraction. <i>Photonics and Nanostructures - Fundamentals and Applications</i> , 2009, 7, 115-127.	1.0	10
65	Emission control in broad periodic waveguides and critical coupling. <i>Photonics and Nanostructures - Fundamentals and Applications</i> , 2010, 8, 210-217.	1.0	10
66	High aspect ratio submicrometer two-dimensional structures fabricated by one-photon absorption direct laser writing. <i>Microsystem Technologies</i> , 2014, 20, 2097-2102.	1.2	10
67	A Synergy Approach to Enhance Upconversion Luminescence Emission of Rare Earth Nanophosphors with Million-Fold Enhancement Factor. <i>Crystals</i> , 2021, 11, 1187.	1.0	10
68	Photonic crystals and the real world of optical telecommunications. <i>Annales Des Telecommunications/Annals of Telecommunications</i> , 2003, 58, 1197.	1.6	9
69	Progress in the control of the light-matter interaction in semiconductors. <i>Solid State Communications</i> , 2005, 135, 627-637.	0.9	9
70	Impact of Lithographic Grid Irregularity Assessed on Photonic Crystal Device Selectivity. <i>IEEE Photonics Technology Letters</i> , 2007, 19, 282-284.	1.3	9
71	Dark-field hyperlens exploiting a planar fan of tips. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2012, 29, 2595.	0.9	9
72	Recent results and latest views on microcavity LEDs. , 2004, 5366, 1.		8

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73	Spontaneous emission enhancement at a photonic wire miniband edge. <i>Optics Letters</i> , 2005, 30, 2113.	1.7	7
74	Detection of biological macromolecules on a biochip dedicated to UV specific absorption. <i>Biosensors and Bioelectronics</i> , 2009, 24, 1585-1591.	5.3	7
75	“Peak tracking chip” for label-free optical detection of bio-molecular interaction and bulk sensing. <i>Analyst</i> , 2012, 137, 4785.	1.7	7
76	Simple wealth distribution model causing inequality-induced crisis without external shocks. <i>Physical Review E</i> , 2017, 95, 052307.	0.8	7
77	Spontaneous Emission and Coupled-Mode Theory in Multimode 1-D Systems With Contradirectional Coupling. <i>IEEE Journal of Quantum Electronics</i> , 2011, 47, 204-212.	1.0	6
78	Ultra Wide Hybrid III-V on Silicon Tunable Laser. , 2018, , .		6
79	Electrically injected parity-time symmetric distributed feedback laser diodes (DFB) for telecom applications. <i>Nanophotonics</i> , 2021, 10, 1309-1317.	2.9	6
80	Microcavities in Ecole Polytechnique F�d�rale de Lausanne, Ecole Polytechnique (France) and elsewhere: past, present and future. <i>Physica Status Solidi (B): Basic Research</i> , 2005, 242, 2345-2356.	0.7	5
81	Quantitative analysis of enhanced light irradiance in waveguide-based fluorescent microarrays. <i>Biosensors and Bioelectronics</i> , 2009, 24, 2281-2284.	5.3	5
82	Real time hybridization studies by resonant waveguide gratings using nanopattern imaging for Single Nucleotide Polymorphism detection. <i>Biomedical Microdevices</i> , 2014, 16, 287-299.	1.4	5
83	Oxide-Free Bonding of III-V-Based Material on Silicon and Nano-Structuration of the Hybrid Waveguide for Advanced Optical Functions. <i>Photonics</i> , 2015, 2, 1054-1064.	0.9	5
84	Two-dimensional photonic crystals: new feasible confined optical systems. <i>Comptes Rendus Physique</i> , 2002, 3, 89-102.	0.3	4
85	Low-loss photonic crystal and monolithic InP integration: bands, bends, lasers, and filters. , 2004, 5360, 119.		4
86	Influence of emissivity tailoring on radiative membranes thermal behavior for gas sensing applications. <i>Sensors and Actuators B: Chemical</i> , 2015, 213, 53-58.	4.0	4
87	Metallic metasurface as a directional and monochromatic thermal emitter. , 2015, , .		4
88	Positive role of the long luminescence lifetime of upconversion nanophosphors on resonant surfaces for ultra-compact filter-free bio-assays. <i>Biomedical Optics Express</i> , 2021, 12, 1.	1.5	4
89	Omnidirectional light extraction in GaN LEDs using an Archimedean tiling photonic crystal. , 2006, 6115, 343.		3
90	Restoring robust binary switching operation and exceptional point using long-period grating-assisted parity-time symmetric couplers. <i>Journal Physics D: Applied Physics</i> , 2019, 52, 255103.	1.3	3

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91	Elaboration and characterization of nanoporous SU-8 template using PMMA as porogen. Journal of Porous Materials, 2021, 28, 813-823.	1.3	3
92	Parity-time Symmetric gratings in 1550 nm Distributed-Feedback lasers diodes: insight on device design rules. Journal of the Optical Society of America B: Optical Physics, 0, , .	0.9	3
93	Littrow resonators and the critical coupling concept. , 2010, , .		2
94	Low-index nanopatterned barrier for hybrid oxide-free III-V silicon conductive bonding. Optics Express, 2014, 22, 23333.	1.7	2
95	Configuration barrier towards parity-time symmetry in randomly connected mesoscopic sets on a graph. European Physical Journal B, 2020, 93, 1.	0.6	2
96	Toward real-world devices in InP-based PCs. , 2004, 5360, 77.		1
97	High efficiency LEDs by photonic crystal-assisted extraction. , 2006, , .		1
98	Towards portable, real-time, integrated fluorescence microarray diagnostics tools. Irbm, 2007, 28, 216-223.	3.7	1
99	Using PT-symmetry in plasmonic systems for switching and dynamic memory applications. , 2013, , .		1
100	Characterization of photonic crystal coupling to and from guided light by absorbance. Journal of Nanophotonics, 2014, 8, 083992.	0.4	1
101	Optimization of a radiative membrane for gas sensing applications. Proceedings of SPIE, 2014, , .	0.8	1
102	Flat-Format Lens-Free Imaging Using an Organic Sensor With Guided Illumination and Application to Fingerprints. IEEE Journal of Selected Topics in Quantum Electronics, 2016, 22, 126-133.	1.9	1
103	Active functional devices using parity-time symmetry optics (Conference Presentation). , 2017, , .		1
104	Evolutionary behaviour of "inflating" random real matrices for economy or biology: stasis statistics of vector iterations upon growth. Journal of Physics Complexity, 2022, 3, 025006.	0.9	1
105	Microcavities in Ecole Polytechnique FÃ©dÃ©rale de Lausanne, Ecole Polytechnique (France) and Elsewhere: Past, Present and Future. , 0, , 287-302.		0
106	Waveguide-excited fluorescence microarray. , 2008, , .		0
107	Design of specific biochips for contrast enhancement of UV biological absorption. Proceedings of SPIE, 2008, , .	0.8	0
108	Broad Periodic Waveguides : Simultaneous Slow Light of Multiple Modes. , 2009, , .		0

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109	UV imaging of biochips based on resonant grating. Proceedings of SPIE, 2010, , .	0.8	0
110	Broad periodic waveguides with critically coupled modes for open resonator operation. , 2011, , .		0
111	Resonators liberated from dispersion: Broad periodic waveguides operating at the Littrow regime. , 2013, , .		0
112	Characterization of the guided light/photonic crystal coupling by absorbance. Proceedings of SPIE, 2013, , .	0.8	0
113	Hybrid silicon photonics using oxide-free bonding and nanostructured effective materials. , 2014, , .		0
114	PT symmetry based functional devices for integrated optics. , 2014, , .		0
115	PT-symmetry of multimode waveguides: A tool for multichannel communication. , 2015, , .		0
116	Switching and dynamic memory applications using nonuniform system of coupled waveguides with local parity-time symmetry. , 2015, , .		0
117	Resonant spatial tracking using nanostructured resonant waveguide grating for multispectral sensing by imaging. Proceedings of SPIE, 2016, , .	0.8	0
118	Local parity-time symmetry functional devices for integrated optics. , 2016, , .		0
119	Optimal Switching Operation of PT-Symmetric Dimmers with Nonuniform Gain/Loss and Coupling Profiles. , 2018, , .		0
120	Parity-time symmetry optics for modal selection in transverse and longitudinal waves (Conference) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50		
121	SystÃ"me de diagnostic Ã partir de l'optimisation optique de biopuces Ã fluorescence. , 2022, , 17-23.	0.1	0