

Jan Wiersig

List of Publications by Citations

Source: <https://exaly.com/author-pdf/8504580/jan-wiersig-publications-by-citations.pdf>

Version: 2024-04-24

This document has been generated based on the publications and citations recorded by exaly.com. For the latest version of this publication list, visit the link given above.

The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

152
papers

6,079
citations

36
h-index

75
g-index

177
ext. papers

7,511
ext. citations

4.7
avg, IF

6.68
L-index

#	Paper	IF	Citations
152	Exceptional points enhance sensing in an optical microcavity. <i>Nature</i> , 2017 , 548, 192-196	50.4	685
151	Enhancing the Sensitivity of Frequency and Energy Splitting Detection by Using Exceptional Points: Application to Microcavity Sensors for Single-Particle Detection. <i>Physical Review Letters</i> , 2014 , 112,	7.4	374
150	Dielectric microcavities: Model systems for wave chaos and non-Hermitian physics. <i>Reviews of Modern Physics</i> , 2015 , 87, 61-111	40.5	363
149	Chiral modes and directional lasing at exceptional points. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016 , 113, 6845-50	11.5	257
148	Combining directional light output and ultralow loss in deformed microdisks. <i>Physical Review Letters</i> , 2008 , 100, 033901	7.4	245
147	Boundary element method for resonances in dielectric microcavities. <i>Journal of Optics</i> , 2003 , 5, 53-60		211
146	Hexagonal dielectric resonators and microcrystal lasers. <i>Physical Review A</i> , 2003 , 67,	2.6	197
145	Sensors operating at exceptional points: General theory. <i>Physical Review A</i> , 2016 , 93,	2.6	175
144	Formation of long-lived, scarlike modes near avoided resonance crossings in optical microcavities. <i>Physical Review Letters</i> , 2006 , 97, 253901	7.4	169
143	Direct observation of correlations between individual photon emission events of a microcavity laser. <i>Nature</i> , 2009 , 460, 245-9	50.4	167
142	Photon statistics of semiconductor microcavity lasers. <i>Physical Review Letters</i> , 2007 , 98, 043906	7.4	167
141	Chaos-assisted broadband momentum transformation in optical microresonators. <i>Science</i> , 2017 , 358, 344-347	33.3	159
140	Whispering-gallery mode resonators for highly unidirectional laser action. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010 , 107, 22407-12	11.5	151
139	Unidirectional light emission from high-Q modes in optical microcavities. <i>Physical Review A</i> , 2006 , 73,	2.6	143
138	Semiconductor model for quantum-dot-based microcavity lasers. <i>Physical Review A</i> , 2007 , 75,	2.6	125
137	Asymmetric scattering and nonorthogonal mode patterns in optical microspirals. <i>Physical Review A</i> , 2008 , 78,	2.6	110
136	Directional laser emission from a wavelength-scale chaotic microcavity. <i>Physical Review Letters</i> , 2010 , 105, 103902	7.4	105

135	Structure of whispering-gallery modes in optical microdisks perturbed by nanoparticles. <i>Physical Review A</i> , 2011 , 84,	2.6	99
134	Directional emission and universal far-field behavior from semiconductor lasers with limaçon-shaped microcavity. <i>Applied Physics Letters</i> , 2009 , 94, 251101	3.4	81
133	Giant photon bunching, superradiant pulse emission and excitation trapping in quantum-dot nanolasers. <i>Nature Communications</i> , 2016 , 7, 11540	17.4	78
132	Goos-Hänchen shift and localization of optical modes in deformed microcavities. <i>Physical Review E</i> , 2008 , 78, 016201	2.4	62
131	Nonorthogonal pairs of copropagating optical modes in deformed microdisk cavities. <i>Physical Review A</i> , 2011 , 84,	2.6	60
130	Spectral correlation in incommensurate multiwalled carbon nanotubes. <i>Physical Review Letters</i> , 2003 , 90, 026601	7.4	60
129	Ray-wave correspondence in limaçon-shaped semiconductor microcavities. <i>Physical Review A</i> , 2009 , 80,	2.6	49
128	Fractal Weyl law for chaotic microcavities: Fresnel's laws imply multifractal scattering. <i>Physical Review E</i> , 2008 , 77, 036205	2.4	49
127	Sub- and Superradiance in Nanolasers. <i>Physical Review Applied</i> , 2015 , 4,	4.3	47
126	Luminescence of a semiconductor quantum dot system. <i>European Physical Journal B</i> , 2006 , 50, 411-418	1.2	47
125	Elliptic Quantum Billiard. <i>Annals of Physics</i> , 1997 , 260, 50-90	2.5	45
124	Quality-factor enhancement of supermodes in coupled microdisks. <i>Optics Letters</i> , 2011 , 36, 1317-9	3	43
123	Review of exceptional point-based sensors. <i>Photonics Research</i> , 2020 , 8, 1457	6	42
122	Intensity fluctuations in bimodal micropillar lasers enhanced by quantum-dot gain competition. <i>Physical Review A</i> , 2013 , 87,	2.6	41
121	Confined optical modes in monolithic II-VI pillar microcavities. <i>Applied Physics Letters</i> , 2006 , 88, 051101	3.4	40
120	Quality factors and dynamical tunneling in annular microcavities. <i>Physical Review A</i> , 2009 , 79,	2.6	39
119	Rotating optical microcavities with broken chiral symmetry. <i>Physical Review Letters</i> , 2015 , 114, 053903	7.4	38
118	Directional whispering gallery mode emission from Limaçon-shaped electrically pumped quantum dot micropillar lasers. <i>Applied Physics Letters</i> , 2012 , 101, 021116	3.4	37

117	Local chirality of optical resonances in ultrasmall resonators. <i>Physical Review Letters</i> , 2012 , 108, 253902	7.4	37
116	Radiative emission dynamics of quantum dots in a single cavity micropillar. <i>Physical Review B</i> , 2006 , 74,	3.3	33
115	Expectation value based equation-of-motion approach for open quantum systems: A general formalism. <i>Physical Review B</i> , 2014 , 89,	3.3	31
114	Chiral and nonorthogonal eigenstate pairs in open quantum systems with weak backscattering between counterpropagating traveling waves. <i>Physical Review A</i> , 2014 , 89,	2.6	30
113	Formation of long-lived resonances in hexagonal cavities by strong coupling of superscar modes. <i>Physical Review A</i> , 2013 , 88,	2.6	30
112	Systematic study of carrier correlations in the electron-hole recombination dynamics of quantum dots. <i>Physical Review B</i> , 2007 , 76,	3.3	29
111	Pair of Exceptional Points in a Microdisk Cavity under an Extremely Weak Deformation. <i>Physical Review Letters</i> , 2018 , 120, 093902	7.4	28
110	MULTISTABILITY AND NONSMOOTH BIFURCATIONS IN THE QUASIPERIODICALLY FORCED CIRCLE MAP. <i>International Journal of Bifurcation and Chaos in Applied Sciences and Engineering</i> , 2001 , 11, 3085-3105	7.4	28
109	Devil's Staircase in the Magnetoresistance of a Periodic Array of Scatterers. <i>Physical Review Letters</i> , 2001 , 87,	7.4	28
108	Correlated photon pairs from single (In,Ga)As/GaAs quantum dots in pillar microcavities. <i>Journal of Applied Physics</i> , 2005 , 97, 023101	2.5	26
107	Non-Hermitian-transport effects in coupled-resonator optical waveguides. <i>Physical Review A</i> , 2014 , 90,	2.6	24
106	Lasing properties of InP/(Ga _{0.51} In _{0.49})P quantum dots in microdisk cavities. <i>Physical Review B</i> , 2011 , 83,	3.3	24
105	Deformed microcavity quantum cascade lasers with directional emission. <i>New Journal of Physics</i> , 2009 , 11, 125018	2.9	23
104	Wavelength-scale deformed microdisk lasers. <i>Physical Review A</i> , 2011 , 84,	2.6	23
103	Current rectification by spontaneous symmetry breaking in coupled nanomechanical shuttles. <i>Physical Review Letters</i> , 2006 , 97, 216804	7.4	23
102	Mode selection in electrically driven quantum dot microring cavities. <i>Optics Express</i> , 2013 , 21, 15951-8	3.3	22
101	Interplay of Goos-Hänchen shift and boundary curvature in deformed microdisks. <i>Physical Review E</i> , 2010 , 82, 026202	2.4	22
100	Green laser emission from monolithic II-VI-based pillar microcavities near room temperature. <i>Applied Physics Letters</i> , 2008 , 92, 031101	3.4	22

99	Influence of the spontaneous optical emission factor on the first-order coherence of a semiconductor microcavity laser. <i>Physical Review B</i> , 2008 , 78,	3.3	22
98	Spectral properties of quantized barrier billiards. <i>Physical Review E</i> , 2002 , 65, 046217	2.4	22
97	Leaking billiards. <i>Physical Review E</i> , 2007 , 75, 046204	2.4	21
96	Frobenius-Perron eigenstates in deformed microdisk cavities: non-Hermitian physics and asymmetric backscattering in ray dynamics. <i>New Journal of Physics</i> , 2016 , 18, 015005	2.9	21
95	Exploring the Photon-Number Distribution of Bimodal Microlasers with a Transition Edge Sensor. <i>Physical Review Applied</i> , 2018 , 9,	4.3	21
94	Exceptional points of third-order in a layered optical microdisk cavity. <i>New Journal of Physics</i> , 2018 , 20, 083016	2.9	20
93	Perturbative approach to optical microdisks with a local boundary deformation. <i>Physical Review A</i> , 2012 , 85,	2.6	20
92	Enhanced correlated photon pair emission from a pillar microcavity. <i>New Journal of Physics</i> , 2004 , 6, 91-919	1.2	20
91	Resonant modes in monolithic nitride pillar microcavities. <i>European Physical Journal B</i> , 2005 , 48, 291-294	1.2	20
90	Prospects and fundamental limits in exceptional point-based sensing. <i>Nature Communications</i> , 2020 , 11, 2454	17.4	19
89	Whispering gallery modes formed by partial barriers in ultrasmall deformed microdisks. <i>Physical Review E</i> , 2011 , 84, 035202	2.4	19
88	Light emission of a scarlike mode with assistance of quasiperiodicity. <i>Physical Review A</i> , 2011 , 84,	2.6	18
87	Lifetime statistics in chaotic dielectric microresonators. <i>Physical Review A</i> , 2009 , 79,	2.6	18
86	Singular continuous spectra in a pseudointegrable billiard. <i>Physical Review E</i> , 2000 , 62, R21-4	2.4	18
85	Robustness of exceptional-point-based sensors against parametric noise: The role of Hamiltonian and Liouvillian degeneracies. <i>Physical Review A</i> , 2020 , 101,	2.6	17
84	Transporting the Optical Chirality through the Dynamical Barriers in Optical Microcavities. <i>Laser and Photonics Reviews</i> , 2018 , 12, 1800027	8.3	17
83	Equation-of-motion technique for finite-size quantum-dot systems: Cluster expansion method. <i>Physical Review B</i> , 2013 , 87,	3.3	17
82	Properties and prospects of blue-green emitting III-V based monolithic microcavities. <i>Physica Status Solidi (B): Basic Research</i> , 2009 , 246, 255-271	1.3	17

81	Ray-wave correspondence in an unstable quasistadium laser resonator. <i>Physical Review A</i> , 2006 , 73,	2.6	17
80	Unidirectional light emission from low-index polymer microlasers. <i>Applied Physics Letters</i> , 2015 , 106, 101107	3.4	16
79	Controlling multimode coupling by boundary-wave scattering. <i>Physical Review A</i> , 2013 , 88,	2.6	16
78	Measurement of the Goos-Hänchen shift in a microwave cavity. <i>New Journal of Physics</i> , 2011 , 13, 023013	2.9	16
77	Discrete breathers in ac-driven nanoelectromechanical shuttle arrays. <i>Applied Physics Letters</i> , 2008 , 93, 222110	3.4	16
76	Marginally unstable periodic orbits in semiclassical mushroom billiards. <i>Physical Review Letters</i> , 2009 , 103, 154101	7.4	15
75	Quantum-classical correspondence in polygonal billiards. <i>Physical Review E</i> , 2001 , 64, 026212	2.4	15
74	Q spoiling in deformed optical microdisks due to resonance-assisted tunneling. <i>Physical Review E</i> , 2016 , 94, 022202	2.4	15
73	High-order exceptional points of counterpropagating waves in weakly deformed microdisk cavities. <i>Physical Review A</i> , 2019 , 100,	2.6	14
72	Pump-Power-Driven Mode Switching in a Microcavity Device and Its Relation to Bose-Einstein Condensation. <i>Physical Review X</i> , 2017 , 7,	9.1	14
71	Output characteristics of pulsed and continuous-wave-excited quantum-dot microcavity lasers. <i>Physical Review Letters</i> , 2008 , 101, 067401	7.4	14
70	Perturbation theory for asymmetric deformed microdisk cavities. <i>Physical Review A</i> , 2016 , 94,	2.6	13
69	Spontaneous T-symmetry breaking and exceptional points in cavity quantum electrodynamics systems. <i>Science Bulletin</i> , 2018 , 63, 1096-1100	10.6	13
68	Perturbative analysis of whispering-gallery modes in limaçon-shaped microcavities. <i>Physical Review A</i> , 2014 , 89,	2.6	13
67	Triaxial Ellipsoidal Quantum Billiards. <i>Annals of Physics</i> , 1999 , 276, 64-110	2.5	13
66	Unconventional collective normal-mode coupling in quantum-dot-based bimodal microlasers. <i>Physical Review A</i> , 2015 , 91,	2.6	12
65	Exceptional points by coupling of modes with different angular momenta in deformed microdisks: A perturbative analysis. <i>Physical Review A</i> , 2018 , 98,	2.6	11
64	Non-Hermitian degeneracies of internal-external mode pairs in dielectric microdisks. <i>Photonics Research</i> , 2019 , 7, 464	6	11

63	Computation of the coherence time of quantum-dot microcavity lasers including photon-barrier and photon-photon correlations. <i>Physica Status Solidi (B): Basic Research</i> , 2011 , 248, 883-886	1.3	10
62	Spherical Pendulum, Actions, and Spin. <i>The Journal of Physical Chemistry</i> , 1996 , 100, 19124-19135		10
61	Strong mode coupling in InP quantum dot-based GaInP microdisk cavity dimers. <i>New Journal of Physics</i> , 2013 , 15, 013060	2.9	9
60	Reciprocal transmissions and asymmetric modal distributions in waveguide-coupled spiral-shaped microdisk resonators: comment. <i>Optics Express</i> , 2008 , 16, 5874-5; discussion 5876-7	3.3	9
59	Superthermal photon bunching in terms of simple probability distributions. <i>Physical Review A</i> , 2018 , 97,	2.6	9
58	Frequency splittings in deformed optical microdisk cavities. <i>Physical Review A</i> , 2017 , 96,	2.6	8
57	Pseudointegrable Andreev billiard. <i>Physical Review E</i> , 2002 , 65, 036221	2.4	8
56	Decay suppression of spontaneous emission of a single emitter in a high-Q cavity at exceptional points. <i>Physical Review Research</i> , 2020 , 2,	3.9	8
55	Semiclassical evaluation of frequency splittings in coupled optical microdisks. <i>Optics Express</i> , 2013 , 21, 24240-53	3.3	7
54	Expectation value based cluster expansion. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2013 , 10, 1242-1245		7
53	Microscopic theory of first-order coherence in microcavity lasers based on semiconductor quantum dots. <i>Physical Review B</i> , 2010 , 82,	3.3	7
52	Optomechanical probes of resonances in amplifying microresonators. <i>Physical Review A</i> , 2004 , 70,	2.6	7
51	Nonorthogonality constraints in open quantum and wave systems. <i>Physical Review Research</i> , 2019 , 1,	3.9	7
50	Inverse problem for light emission from weakly deformed microdisk cavities. <i>Physical Review A</i> , 2016 , 94,	2.6	6
49	Optical microdisk cavities with rough sidewalls: A perturbative approach based on weak boundary deformations. <i>Physical Review A</i> , 2017 , 95,	2.6	6
48	Effect of direct dissipative coupling of two competing modes on intensity fluctuations in a quantum-dot-microcavity laser. <i>Physical Review A</i> , 2016 , 94,	2.6	6
47	Regular-Orbit-Engineered Chaotic Photon Transport in Mixed Phase Space. <i>Physical Review Letters</i> , 2019 , 123, 173903	7.4	5
46	Computer-aided cluster expansion: An efficient algebraic approach for open quantum many-particle systems. <i>Computer Physics Communications</i> , 2017 , 212, 210-219	4.2	5

45	Quality-factor enhancement of optical modes mediated by strong coupling in micron-size semiconductor disks. <i>Physica Status Solidi (B): Basic Research</i> , 2012 , 249, 925-928	1.3	5
44	Electromagnetic modes in cavities made of negative-index metamaterials. <i>Physical Review A</i> , 2010 , 81,	2.6	5
43	Low-rank perturbations and the spectral statistics of pseudointegrable billiards. <i>Physical Review E</i> , 2003 , 68, 065205	2.4	5
42	Energy Surfaces of Ellipsoidal Billiards. <i>Zeitschrift Fur Naturforschung - Section A Journal of Physical Sciences</i> , 1996 , 51, 219-241	1.4	5
41	Bimodal behavior of microlasers investigated with a two-channel photon-number-resolving transition-edge sensor system. <i>Physical Review Research</i> , 2021 , 3,	3.9	5
40	Physics and Applications of High- μ Micro- and Nanolasers. <i>Advanced Optical Materials</i> , 2021 , 9, 2100415	8.1	5
39	Non-Hermitian scattering on a tight-binding lattice. <i>Physical Review A</i> , 2020 , 102,	2.6	4
38	Nonlinear dynamical tunneling of optical whispering gallery modes in the presence of a Kerr nonlinearity. <i>Physical Review A</i> , 2016 , 94,	2.6	4
37	Separatrix modes in weakly deformed microdisk cavities. <i>Optics Express</i> , 2017 , 25, 8048-8062	3.3	4
36	Strong photon bunching in a quantum-dot-based two-mode microcavity laser. <i>Physica Status Solidi (B): Basic Research</i> , 2013 , 250, 1777-1780	1.3	4
35	Evanescent wave approach to diffractive phenomena in convex billiards with corners. <i>Physical Review E</i> , 2003 , 67, 046221	2.4	4
34	Fine structure of mode-locked regions of the quasi-periodically forced circle map. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1999 , 257, 65-69	2.3	4
33	Determination of the full statistics of quantum observables using the maximum-entropy method. <i>Physical Review A</i> , 2018 , 98,	2.6	4
32	Corrected perturbation theory for transverse-electric whispering-gallery modes in deformed microdisks. <i>Physical Review A</i> , 2019 , 99,	2.6	3
31	Robust lasing of modes localized on marginally unstable periodic orbits. <i>Physical Review A</i> , 2020 , 101,	2.6	3
30	Adiabatic formation of high-Qmodes by suppression of chaotic diffusion in deformed microdiscs. <i>New Journal of Physics</i> , 2013 , 15, 113058	2.9	3
29	On the way to InGaN quantum dots embedded into monolithic nitride cavities. <i>Physica Status Solidi (B): Basic Research</i> , 2007 , 244, 1806-1809	1.3	3
28	Efficient coupling into confined optical modes of ZnSe-based pillar microcavities. <i>Physica Status Solidi (B): Basic Research</i> , 2006 , 243, 844-848	1.3	3

27	Mode-locking in a periodic array of scatterers. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2002 , 12, 256-259	3	3
26	Chaotic-To-Regular Tunneling: Transporting the Optical Chirality through the Dynamical Barriers in Optical Microcavities (Laser Photonics Rev. 12(10)/2018). <i>Laser and Photonics Reviews</i> , 2018 , 12, 1870045	8.3	3
25	Emission properties of ZnSe-based pillar microcavities at elevated temperatures. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2009 , 6, 508-511		2
24	Wide-Bandgap Quantum Dot Based Microcavity VCSEL Structures 2008 , 29-41		2
23	Laser theory for semiconductor quantum dots in microcavities. <i>Superlattices and Microstructures</i> , 2008 , 43, 470-473	2.8	2
22	Crack free monolithic nitride vertical-cavity surface-emitting laser structures and pillar microcavities. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2006 , 203, 1749-1753	1.6	2
21	Spectral properties of incommensurate double-walled carbon nanotubes. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2004 , 22, 666-669	3	2
20	ELLIPSOIDAL BILLIARDS WITH ISOTROPIC HARMONIC POTENTIALS. <i>International Journal of Bifurcation and Chaos in Applied Sciences and Engineering</i> , 2000 , 10, 2075-2098	2	2
19	Resonance Zones in Action Space. <i>Zeitschrift Fur Naturforschung - Section A Journal of Physical Sciences</i> , 2001 , 56, 537-556	1.4	2
18	Role of nonorthogonality of energy eigenstates in quantum systems with localized losses. <i>Physical Review A</i> , 2018 , 98,	2.6	2
17	Microstar cavities: An alternative concept for the confinement of light. <i>Physical Review Research</i> , 2020 , 2,	3.9	1
16	Review on unidirectional light emission from ultralow-loss modes in deformed microdisks 2012 , 109-152		1
15	Non-Hermitian Effects Due to Asymmetric Backscattering of Light in Whispering-Gallery Microcavities. <i>Springer Tracts in Modern Physics</i> , 2018 , 155-184	0.1	1
14	Regulated Photon Transport in Chaotic Microcavities by Tailoring Phase Space.. <i>Physical Review Letters</i> , 2021 , 127, 273902	7.4	1
13	Morphology of wetting-layer states in a simple quantum-dot wetting-layer model. <i>Journal of Physics Condensed Matter</i> , 2020 , 32, 075301	1.8	
12	Coherence properties and dynamical photon correlations of quantum-dot-based microcavity lasers. <i>Physica Status Solidi (B): Basic Research</i> , 2009 , 246, 273-276	1.3	
11	Coherence length of high- β semiconductor microcavity lasers. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2009 , 6, 568-571		
10	Ultrafast intensity correlation measurements of quantum dot microcavity lasers. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2009 , 6, 399-402		

- 9 Deformed wavelength-scale microdisk lasers with quantum dot emitters **2012**, 225-251
- 8 Quantum Statistical Properties of the Light Emission from Quantum Dots in Microcavities. *Nanoscience and Technology*, **2009**, 1-30 0.6
- 7 Microscopic theory of quantum dot luminescence spectra. *Physica Status Solidi C: Current Topics in Solid State Physics*, **2006**, 3, 2385-2388
- 6 Microscopic Lasers Based on the Molecular Sieve AlPO₄₋₅ **2003**, 584-617
- 5 Resonance-assisted Tunneling in Weakly Deformed Microdisk Cavities **2020**, 315-358
- 4 Emission Characteristics, Photon Statistics and Coherence Properties of high- β Semiconductor Micropillar Lasers **2008**, 3-15
- 3 Intrinsic Non-Exponential Decay of Time-Resolved Photoluminescence from Semiconductor Quantum Dots. *Advances in Solid State Physics*, 91-102
- 2 Weakly deformed optical microdisks: A third-order perturbation theory for transverse-magnetic modes. *Journal of Physics Communications*, **2020**, 4, 105020 1.2
- 1 Free-Standing ZnSe-Based Microdisk Resonators: Influence of Edge Roughness on the Optical Quality and Reducing Degradation with Supported Geometry. *Physica Status Solidi (B): Basic Research*, 2100249 1.3