

Stefan Rotter

List of Publications by Year in Descending Order

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

126
papers

6,152
citations

36
h-index

77
g-index

161
ext. papers

7,343
ext. citations

10.1
avg, IF

6.27
L-index

#	Paper	IF	Citations
126	Chiral and degenerate perfect absorption on exceptional surfaces.. <i>Nature Communications</i> , 2022 , 13, 599	16.7	3
125	Topological modes in a laser cavity through exceptional state transfer.. <i>Science</i> , 2022 , 375, 884-888	31.9	0
124	Observation of chiral state transfer without encircling an exceptional point.. <i>Nature</i> , 2022 , 605, 256-261	47.1	0
123	Transforming Space with Non-Hermitian Dielectrics.. <i>Physical Review Letters</i> , 2022 , 128, 183901	7.3	
122	Mean path length invariance in wave-scattering beyond the diffusive regime. <i>Communications Physics</i> , 2021 , 4,	5.2	3
121	Scattering invariant modes of light in complex media. <i>Nature Photonics</i> , 2021 , 15, 431-434	33.2	5
120	Maximum information states for coherent scattering measurements. <i>Nature Physics</i> , 2021 , 17, 564-568	15.8	8
119	Light Confinement by Local Index Tailoring in Inhomogeneous Dielectrics. <i>Laser and Photonics Reviews</i> , 2021 , 15, 2100115	6.4	
118	Speckle Engineering through Singular Value Decomposition of the Transmission Matrix. <i>Physical Review Letters</i> , 2021 , 127, 093903	7.3	0
117	Invariance Property of the Fisher Information in Scattering Media.. <i>Physical Review Letters</i> , 2021 , 127, 233201	7.3	1
116	Optimal Control of Coherent Light Scattering for Binary Decision Problems.. <i>Physical Review Letters</i> , 2021 , 127, 253902	7.3	1
115	Periodic Cavity State Revivals from Atomic Frequency Combs. <i>Physical Review Letters</i> , 2021 , 127, 180402	7.3	
114	Reconfigurable symmetry-broken laser in a symmetric microcavity. <i>Nature Communications</i> , 2020 , 11, 1136	16.7	12
113	Optimal wave fields for micromanipulation in complex scattering environments. <i>Nature Photonics</i> , 2020 , 14, 149-153	33.2	16
112	Encircling exceptional points as a non-Hermitian extension of rapid adiabatic passage. <i>Physical Review A</i> , 2020 , 102,	2.6	5
111	All-optical adaptive control of quantum cascade random lasers. <i>Nature Communications</i> , 2020 , 11, 5530	16.7	7
110	Shape-preserving beam transmission through non-Hermitian disordered lattices. <i>Physical Review A</i> , 2020 , 102,	2.6	6

109	Echo Trains in Pulsed Electron Spin Resonance of a Strongly Coupled Spin Ensemble. <i>Physical Review Letters</i> , 2020 , 125, 137701	7.3	4
108	Scattering-free channels of invisibility across non-Hermitian media. <i>Optica</i> , 2020 , 7, 619	8.4	8
107	Emergence of PT-symmetry breaking in open quantum systems. <i>SciPost Physics</i> , 2020 , 9,	6	9
106	Shaping the branched flow of light through disordered media. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019 , 116, 13260-13265	11	8
105	Scattering-free pulse propagation through invisible non-Hermitian media. <i>Physical Review B</i> , 2019 , 99,	3.3	12
104	Perfectly Absorbing Exceptional Points and Chiral Absorbers. <i>Physical Review Letters</i> , 2019 , 122, 093901	7.3	40
103	Random anti-lasing through coherent perfect absorption in a disordered medium. <i>Nature</i> , 2019 , 567, 351-355	47.1	45
102	Parity-time symmetry and exceptional points in photonics. <i>Nature Materials</i> , 2019 , 18, 783-798	26.4	377
101	Critical phenomena and nonlinear dynamics in a spin ensemble strongly coupled to a cavity. I. Semiclassical approach. <i>Physical Review A</i> , 2019 , 100,	2.6	7
100	Critical phenomena and nonlinear dynamics in a spin ensemble strongly coupled to a cavity. II. Semiclassical-to-quantum boundary. <i>Physical Review A</i> , 2019 , 100,	2.6	9
99	Angular Memory Effect of Transmission Eigenchannels. <i>Physical Review Letters</i> , 2019 , 123, 203901	7.3	9
98	In situ realization of particlelike scattering states in a microwave cavity. <i>Physical Review A</i> , 2018 , 97,	2.6	9
97	Non-Hermitian physics and PT symmetry. <i>Nature Physics</i> , 2018 , 14, 11-19	15.8	776
96	A phonon laser operating at an exceptional point. <i>Nature Photonics</i> , 2018 , 12, 479-484	33.2	131
95	Constant-Intensity Waves in Non-Hermitian Media. <i>Springer Tracts in Modern Physics</i> , 2018 , 535-555	0.1	0
94	Variational Renormalization Group for Dissipative Spin-Cavity Systems: Periodic Pulses of Nonclassical Photons from Mesoscopic Spin Ensembles. <i>Physical Review Letters</i> , 2018 , 121, 133601	7.3	7
93	Ring quantum cascade lasers with twisted wavefronts. <i>Scientific Reports</i> , 2018 , 8, 7998	4.7	6
92	A Classical View of Quantum Time Crystals. <i>Physics Magazine</i> , 2018 , 11,	1.1	1

91	3D-printed phase waveplates for THz beam shaping. <i>Applied Physics Letters</i> , 2018 , 112, 221104	3.3	18
90	Constant-pressure sound waves in non-Hermitian disordered media. <i>Nature Physics</i> , 2018 , 14, 942-947	15.8	47
89	Symmetry, stability, and computation of degenerate lasing modes. <i>Physical Review A</i> , 2017 , 95,	2.6	3
88	Light fields in complex media: Mesoscopic scattering meets wave control. <i>Reviews of Modern Physics</i> , 2017 , 89,	39.4	231
87	Optimal control of non-Markovian dynamics in a single-mode cavity strongly coupled to an inhomogeneously broadened spin ensemble. <i>Physical Review A</i> , 2017 , 96,	2.6	3
86	Wave propagation through disordered media without backscattering and intensity variations. <i>Light: Science and Applications</i> , 2017 , 6, e17035	16.1	38
85	Optical physics: A laser model for cosmology. <i>Nature</i> , 2017 , 549, 163-164	47.1	
84	Focusing inside Disordered Media with the Generalized Wigner-Smith Operator. <i>Physical Review Letters</i> , 2017 , 119, 033903	7.3	25
83	Ultralong relaxation times in bistable hybrid quantum systems. <i>Science Advances</i> , 2017 , 3, e1701626	13.8	25
82	Observation of mean path length invariance in light-scattering media. <i>Science</i> , 2017 , 358, 765-768	31.9	39
81	Coherent Coupling of Remote Spin Ensembles via a Cavity Bus. <i>Physical Review Letters</i> , 2017 , 118, 1405023	2.3	30
80	Spectral hole burning and its application in microwave photonics. <i>Nature Photonics</i> , 2017 , 11, 36-39	33.2	29
79	Super- and Anti-Principal-Modes in Multimode Waveguides. <i>Physical Review X</i> , 2017 , 7,	8.9	7
78	Unidirectional zero reflection as gauged parity-time symmetry. <i>New Journal of Physics</i> , 2017 , 19, 123041	2.9	14
77	Wave control in non-Hermitian disordered media 2017 ,		1
76	Principal modes in multimode fibers: exploring the crossover from weak to strong mode coupling. <i>Optics Express</i> , 2017 , 25, 2709-2724	3.2	26
75	Non-Hermitian focusing deep inside strongly disordered scattering media 2017 ,		1
74	Non-Hermitian invisibility based on constant-intensity waves 2017 ,		1

73	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	244
72	Random lasers for broadband directional emission. <i>Optica</i> , 2016 , 3, 1035	8.4	60
71	$\mathcal{P}\mathcal{T}$ -symmetry breaking in the steady state of microscopic gainless systems. <i>New Journal of Physics</i> , 2016 , 18, 095003	2.9	46
70	Transport through graphene nanoribbons: Suppression of transverse quantization by symmetry breaking. <i>Physica Status Solidi (B): Basic Research</i> , 2016 , 253, 2366-2372	1.3	2
69	Effective $\mathcal{P}\mathcal{T}$ -symmetric metasurfaces for subwavelength amplified sensing. <i>New Journal of Physics</i> , 2016 , 18, 085004	2.9	12
68	Sustained photon pulse revivals from inhomogeneously broadened spin ensembles. <i>Laser and Photonics Reviews</i> , 2016 , 10, 1023-1030	6.4	14
67	Constant Intensity Supermodes in Non-Hermitian Lattices. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2016 , 22, 42-47	3.6	9
66	Modulational instability in a $\mathcal{P}\mathcal{T}$ -symmetric vector nonlinear Schrödinger system. <i>Physica D: Nonlinear Phenomena</i> , 2016 , 336, 53-61	3.2	6
65	Diffusive to quasi-ballistic random laser: incoherent and coherent models. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2016 , 33, 1888	1.7	1
64	Particlelike wave packets in complex scattering systems. <i>Physical Review B</i> , 2016 , 94,	3.3	14
63	Interaction-induced mode switching in steady-state microlasers. <i>Optics Express</i> , 2016 , 24, 41-54	3.2	9
62	Spatiotemporal Control of Light Transmission through a Multimode Fiber with Strong Mode Coupling. <i>Physical Review Letters</i> , 2016 , 117, 053901	7.3	47
61	Twofold $\mathcal{P}\mathcal{T}$ symmetry in doubly exponential optical lattices. <i>Physical Review A</i> , 2016 , 93,	2.6	9
60	Dynamically encircling an exceptional point for asymmetric mode switching. <i>Nature</i> , 2016 , 537, 76-79	47.1	397
59	Random Lasing with Systematic Threshold Behavior in Films of CdSe/CdS Core/Thick-Shell Colloidal Quantum Dots. <i>ACS Nano</i> , 2015 , 9, 9792-801	16.3	39
58	Hybrid Quantum Systems with Collectively Coupled Spin States: Suppression of Decoherence through Spectral Hole Burning. <i>Physical Review Letters</i> , 2015 , 115, 033601	7.3	15
57	Constant-intensity waves and their modulation instability in non-Hermitian potentials. <i>Nature Communications</i> , 2015 , 6, 7257	16.7	76
56	Parity-time symmetry from stacking purely dielectric and magnetic slabs. <i>Physical Review A</i> , 2015 , 91,	2.6	31

55	Steady-state ab initio laser theory for fully or nearly degenerate cavity modes. <i>Physical Review A</i> , 2015 , 92,	2.6	10
54	General description of quasiadiabatic dynamical phenomena near exceptional points. <i>Physical Review A</i> , 2015 , 92,	2.6	109
53	Analytical study of quantum-feedback-enhanced Rabi oscillations. <i>Physical Review A</i> , 2015 , 92,	2.6	20
52	Percolating states in the topological Anderson insulator. <i>Physical Review B</i> , 2015 , 91,	3.3	8
51	Smooth Optimal Quantum Control for Robust Solid-State Spin Magnetometry. <i>Physical Review Letters</i> , 2015 , 115, 190801	7.3	41
50	Invariance property of wave scattering through disordered media. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014 , 111, 17765-70	11	34
49	Vectorial velocity filter for ultracold neutrons based on a surface-disordered mirror system. <i>Physical Review E</i> , 2014 , 89, 032907	2.4	2
48	Route from spontaneous decay to complex multimode dynamics in cavity QED. <i>Physical Review A</i> , 2014 , 89,	2.6	24
47	Gravity resonance spectroscopy constrains dark energy and dark matter scenarios. <i>Physical Review Letters</i> , 2014 , 112, 151105	7.3	106
46	Double-layered nanoparticle stacks for surface enhanced infrared absorption spectroscopy. <i>Nanoscale</i> , 2014 , 6, 127-31	7.5	21
45	Non-Markovian dynamics of a single-mode cavity strongly coupled to an inhomogeneously broadened spin ensemble. <i>Physical Review A</i> , 2014 , 90,	2.6	26
44	Reversing the pump dependence of a laser at an exceptional point. <i>Nature Communications</i> , 2014 , 5, 4034	16.7	298
43	Protecting a spin ensemble against decoherence in the strong-coupling regime of cavity QED. <i>Nature Physics</i> , 2014 , 10, 720-724	15.8	87
42	Loss-induced suppression and revival of lasing. <i>Science</i> , 2014 , 346, 328-32	31.9	530
41	Scalable numerical approach for the steady-state ab initio laser theory. <i>Physical Review A</i> , 2014 , 90,	2.6	34
40	Reflection resonances in surface-disordered waveguides: strong higher-order effects of the disorder. <i>New Journal of Physics</i> , 2014 , 16, 053026	2.9	3
39	The single-channel regime of transport through random media. <i>Nature Communications</i> , 2014 , 5, 3488	16.7	40
38	Pump-controlled directional light emission from random lasers. <i>Physical Review Letters</i> , 2013 , 111, 023902	7.5	75

37	Breaking of PT Symmetry in Bounded and Unbounded Scattering Systems. <i>Physical Review X</i> , 2013 , 3,	8.9	53
36	Topological insulator in the presence of spatially correlated disorder. <i>Physical Review B</i> , 2013 , 88,	3.3	20
35	Coherent transport through graphene nanoribbons in the presence of edge disorder. <i>New Journal of Physics</i> , 2012 , 14, 123006	2.9	45
34	Pump-induced exceptional points in lasers. <i>Physical Review Letters</i> , 2012 , 108, 173901	7.3	310
33	Surface scattering and band gaps in rough waveguides and nanowires. <i>Physical Review B</i> , 2012 , 86,	3.3	9
32	Disorder scattering in graphene nanoribbons. <i>Physica Status Solidi (B): Basic Research</i> , 2011 , 248, 2598-2603		10
31	Unconventional modes in lasers with spatially varying gain and loss. <i>Physical Review A</i> , 2011 , 84,	2.6	79
30	Cavity QED with magnetically coupled collective spin states. <i>Physical Review Letters</i> , 2011 , 107, 060502	7.3	221
29	Generating particlelike scattering states in wave transport. <i>Physical Review Letters</i> , 2011 , 106, 120602	7.3	31
28	Transport through open quantum dots: Making semiclassics quantitative. <i>Physical Review B</i> , 2010 , 81,	3.3	11
27	Transition to Landau levels in graphene quantum dots. <i>Physical Review B</i> , 2010 , 81,	3.3	36
26	Probing decoherence through Fano resonances. <i>Physical Review Letters</i> , 2010 , 105, 056801	7.3	49
25	Nanowires with surface disorder: Giant localization length and dynamical tunneling in the presence of directed chaos. <i>Physical Review B</i> , 2009 , 80,	3.3	9
24	Strong-coupling limit of a Kondo spin coupled to a mesoscopic quantum dot: Effective Hamiltonian in the presence of exchange correlations. <i>Physical Review B</i> , 2009 , 80,	3.3	1
23	Ab initio self-consistent laser theory and random lasers. <i>Nonlinearity</i> , 2009 , 22, C1-C18	1.7	40
22	Strong interactions in multimode random lasers. <i>Science</i> , 2008 , 320, 643-6	31.9	295
21	Decreasing excitation gap in Andreev billiards by disorder scattering. <i>Europhysics Letters</i> , 2008 , 82, 47006.5		3
20	Diffractive paths for weak localization in quantum billiards. <i>Physical Review B</i> , 2008 , 77,	3.3	11

19	Staggered repulsion of transmission eigenvalues in symmetric open mesoscopic systems. <i>Physical Review B</i> , 2008 , 78,	3.3	8
18	Interacting quantum dot coupled to a kondo spin: a universal Hamiltonian study. <i>Physical Review Letters</i> , 2008 , 100, 166601	7.3	4
17	Statistics of transmission eigenvalues in two-dimensional quantum cavities: Ballistic versus stochastic scattering. <i>Physical Review B</i> , 2007 , 75,	3.3	10
16	Chladni figures in Andreev billiards. <i>European Physical Journal: Special Topics</i> , 2007 , 145, 245-254	2.2	1
15	Shot noise in transport through quantum dots: Clean versus disordered samples. <i>Journal of Computational Electronics</i> , 2007 , 6, 109-111	1.8	
14	Nanowires with surface disorder: giant localization lengths and quantum-to-classical crossover. <i>Physical Review Letters</i> , 2006 , 97, 116804	7.3	30
13	Transport in chaotic quantum dots: Effects of spatial symmetries which interchange the leads. <i>Physical Review B</i> , 2006 , 73,	3.3	14
12	Non-retracing orbits in Andreev billiards. <i>Physical Review B</i> , 2006 , 73,	3.3	4
11	Comment on Dynamic range of nanotube- and nanowire-based electromechanical systems [Appl. Phys. Lett. 86, 223105 (2005)]. <i>Applied Physics Letters</i> , 2006 , 88, 036101	3.3	4
10	A Modular Method for the Efficient Calculation of Ballistic Transport Through Quantum Billiards. <i>Lecture Notes in Computer Science</i> , 2006 , 586-593	0.8	1
9	Simulation of electron transport through a quantum dot with soft walls. <i>Physical Review B</i> , 2005 , 72,	3.3	26
8	Shot noise in the chaotic-to-regular crossover regime. <i>Physical Review Letters</i> , 2005 , 94, 216801	7.3	29
7	Pseudopath semiclassical approximation to transport through open quantum billiards: Dyson equation for diffractive scattering. <i>Physical Review E</i> , 2005 , 72, 036223	2.4	13
6	Bound states in Andreev billiards with soft walls. <i>Physical Review B</i> , 2005 , 72,	3.3	8
5	Fano resonances and decoherence in transport through quantum dots. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2005 , 29, 325-333	2.9	11
4	Tunable Fano resonances in transport through microwave billiards. <i>Physical Review E</i> , 2004 , 69, 046208	2.4	42
3	Ballistic quantum transport at high energies and high magnetic fields. <i>Physical Review B</i> , 2003 , 68,	3.3	43
2	Semiclassical theory for transmission through open billiards: convergence towards quantum transport. <i>Physical Review E</i> , 2003 , 67, 016206	2.4	18

- 1 Modular recursive Green's function method for ballistic quantum transport. *Physical Review B*, **2000**, 62, 1950-1960 33 85