Mordechai Segev

List of Publications by Year
in descending order

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127	17,908	31976	33894
papers	citations	53 h-index	99 g-index

129	129	129	9283
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Observation of parityâ€“time symmetry in optics. Nature Physics, 2010, 6, 192-195.	16.7	2,860
2	Photonic Floquet topological insulators. Nature, 2013, 496, 196-200.	27.8	2,446
3	Transport and Anderson localization in disordered two-dimensional photonic lattices. Nature, 2007, 446, 52-55.	27.8	1,304
4	Topological insulator laser: Experiments. Science, 2018, 359, .	12.6	949
5	Phase Retrieval with Application to Optical Imaging: A contemporary overview. IEEE Signal Processing Magazine, 2015, 32, 87-109.	5.6	735
6	Topological insulator laser: Theory. Science, 2018, 359, .	12.6	634
7	Anderson localization of light. Nature Photonics, 2013, 7, 197-204.	31.4	589
8	Observation of a Topological Transition in the Bulk of a Non-Hermitian System. Physical Review Letters, 2015, 115, 040402.	7.8	551
9	Experimental Observation of Optical Bound States in the Continuum. Physical Review Letters, 2011, 107, 183901.	7.8	500
10	Edge-Mode Lasing in 1D Topological Active Arrays. Physical Review Letters, 2018, 120, 113901.	7.8	406
11	Long-range interactions between optical solitons. Nature Physics, 2006, 2, 769-774.	16.7	340
12	Strain-induced pseudomagnetic field and photonic Landau levels in dielectric structures. Nature Photonics, 2013, 7, 153-158.	31.4	329
13	Quantum entanglement of the spin and orbital angular momentum of photons using metamaterials. Science, 2018, 361, 1101-1104.	12.6	294
14	Wave and defect dynamics in nonlinear photonic quasicrystals. Nature, 2006, 440, 1166-1169.	27.8	240
15	Modulation Instability of Incoherent Beams in Noninstantaneous Nonlinear Media. Physical Review Letters, 2000, 84, 467-470.	7.8	236
16	Topological Creation and Destruction of Edge States in Photonic Graphene. Physical Review Letters, 2013, 111, 103901.	7.8	228
17	Self-Localized States in Photonic Topological Insulators. Physical Review Letters, 2013, 111, 243905.	7.8	221
18	Highlighting photonics: looking into the next decade. ELight, 2021, 1, .	23.9	218

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19	Photonic topological insulator in synthetic dimensions. Nature, 2019, 567, 356-360.	27.8	215
20	Photonic topological Anderson insulators. Nature, 2018, 560, 461-465.	27.8	205
21	Topological protection of biphoton states. Science, 2018, 362, 568-571.	12.6	203
22	Topological Optical Waveguiding in Silicon and the Transition between Topological and Trivial Defect States. Physical Review Letters, 2016, 116, 163901.	7.8	195
23	Super-resolution and reconstruction of sparse sub-wavelength images. Optics Express, 2009, 17, 23920.	3.4	169
24	Topological aspects of photonic time crystals. Optica, 2018, 5, 1390.	9.3	166
25	Disorder-Enhanced Transport in Photonic Quasicrystals. Science, 2011, 332, 1541-1544.	12.6	158
26	Topological Photonic Quasicrystals: Fractal Topological Spectrum and Protected Transport. Physical Review X, 2016, 6, .	8.9	151
27	Sparsity based sub-wavelength imaging with partially incoherent light via quadratic compressed sensing. Optics Express, 2011, 19, 14807.	3.4	142
28	Nonlinearly Induced<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>P</mml:mi><mml:mi>T</mml:mi></mml:math>Transition in Photonic Systems. Physical Review Letters, 2013, 111, 263901.	7.8	135
29	Composite Multihump Vector Solitons Carrying Topological Charge. Physical Review Letters, 2000, 84, 1164-1167.	7.8	133
30	Optical simulations of gravitational effects in the Newtonâ€“SchrÃ¶dinger system. Nature Physics, 2015, 11, 872-878.	16.7	107
31	Hyper-transport of light and stochastic acceleration by evolving disorder. Nature Physics, 2012, 8, 912-917.	16.7	103
32	Integer and Fractional Angular Momentum Borne on Self-Trapped Necklace-Ring Beams. Physical Review Letters, 2001, 86, 420-423.	7.8	101
33	Loss-proof self-accelerating beams and their use in non-paraxial manipulation of particlesâ€™ trajectories. Nature Communications, 2014, 5, 5189.	12.8	89
34	Topological insulator vertical-cavity laser array. Science, 2021, 373, 1514-1517.	12.6	80
35	Topological protection of photonic path entanglement. Optica, 2016, 3, 925.	9.3	77
36	Eliminating the Transverse Instabilities of Kerr Solitons. Physical Review Letters, 2000, 85, 4888-4891.	7.8	76

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37	Topological photonics: Where do we go from here?. Nanophotonics, 2020, 10, 425-434.	6.0	76
38	Control of light by curved space in nanophotonic structures. Nature Photonics, 2017, 11, 664-670.	31.4	75
39	Imprinting the quantum statistics of photons on free electrons. Science, 2021, 373, eabj7128.	12.6	75
40	Incoherent spatial solitons in effectively instantaneous nonlinear media. Nature Photonics, 2008, 2, 371-376.	31.4	73
41	Self-similarity and fractals in soliton-supporting systems. Physical Review E, 2000, 61, R1048-R1051.	2.1	72
42	Observation of Anderson localization in disordered nanophotonic structures. Science, 2017, 356, 953-956.	12.6	70
43	Amorphous Photonic Lattices: Band Gaps, Effective Mass, and Suppressed Transport. Physical Review Letters, 2011, 106, 193904.	7.8	69
44	Light guiding by artificial gauge fields. Nature Photonics, 2019, 13, 339-345.	31.4	69
45	Topologically protected entangled photonic states. Nanophotonics, 2019, 8, 1327-1335.	6.0	68
46	Photonic Floquet topological insulators in a fractal lattice. Light: Science and Applications, 2020, 9, 128.	16.6	68
47	Self-trapping of â€œnecklace-ringâ€•beams in self-focusing Kerr media. Physical Review E, 2000, 62, 2810-2820.	2.1	64
48	Topological photonics in synthetic dimensions. Advances in Optics and Photonics, 2021, 13, 426.	25.5	60
49	Coupling of diode laser arrays with photorefractive passive phase conjugate mirrors. Applied Physics Letters, 1987, 50, 1397-1399.	3.3	59
50	Observation of branched flow of light. Nature, 2020, 583, 60-65.	27.8	58
51	Amplified emission and lasing in photonic time crystals. Science, 2022, 377, 425-428.	12.6	57
52	Subwavelength Multilayer Dielectrics: Ultrasensitive Transmission and Breakdown of Effective-Medium Theory. Physical Review Letters, 2014, 113, 243901.	7.8	56
53	Disordered Photonic Time Crystals. Physical Review Letters, 2021, 126, 163902.	7.8	56
54	Instability of bosonic topological edge states in the presence of interactions. Physical Review A, 2016, 94, .	2.5	55

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55	Accelerating Self-Imaging: The Airy-Talbot Effect. Physical Review Letters, 2015, 115, 013901.	7.8	52
56	Wavefront shaping through emulated curved space in waveguide settings. Nature Communications, 2016, 7, 10747.	12.8	52
57	Chiral state conversion without encircling an exceptional point. Physical Review A, 2017, 96, .	2.5	52
58	Quantum ÄŒerenkov Radiation: Spectral Cutoffs and the Role of Spin and Orbital Angular Momentum. Physical Review X, 2016, 6, .	8.9	51
59	Cantor Set Fractals from Solitons. Physical Review Letters, 2000, 84, 1902-1905.	7.8	50
60	Self-accelerating Dirac particles and prolonging the lifetime of relativistic fermions. Nature Physics, 2015, 11, 261-267.	16.7	48
61	Fractal photonic topological insulators. Science, 2022, 376, 1114-1119.	12.6	42
62	â€˜Twistedâ€™ electrons. Contemporary Physics, 2018, 59, 126-144.	1.8	40
63	Spontaneous Self-Trapping of Optical Beams in Metastable Paraelectric Crystals. Physical Review Letters, 1999, 83, 1954-1957.	7.8	39
64	Mode-Locked Topological Insulator Laser Utilizing Synthetic Dimensions. Physical Review X, 2020, 10, .	8.9	38
65	Photorefractive waveguides and nonlinear mode coupling effects. Applied Physics Letters, 1989, 54, 684-686.	3.3	37
66	Interactions between two-dimensional composite vector solitons carrying topological charges. Physical Review E, 2001, 63, 066608.	2.1	36
67	Light emission by free electrons in photonic time-crystals. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, .	7.1	35
68	Spatiotemporal photonic crystals. Optica, 2022, 9, 585.	9.3	34
69	Interplay between evanescence and disorder in deep subwavelength photonic structures. Nature Communications, 2016, 7, 12927.	12.8	33
70	Sparsity-based super-resolved coherent diffraction imaging of one-dimensional objects. Nature Communications, 2015, 6, 8209.	12.8	32
71	Super-diffusion in optical realizations of Anderson localization. New Journal of Physics, 2012, 14, 043047.	2.9	31
72	Photorefractive selfâ€defocusing. Applied Physics Letters, 1990, 56, 1086-1088.	3.3	29

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73	Curved-space topological phases in photonic lattices. Physical Review A, 2017, 96, .	2.5	25
74	Coherent metamaterial absorption of two-photon states with 40% efficiency. Physical Review A, 2019, 99, .	2.5	25
75	Optical Control of Thermocapillary Effects in Complex Nanofluids. Physical Review Letters, 2009, 103, 264503.	7.8	24
76	Quantum state tomography with a single measurement setup. Optica, 2017, 4, 993.	9.3	23
77	Identifying Topological Phase Transitions in Experiments Using Manifold Learning. Physical Review Letters, 2020, 125, 127401.	7.8	22
78	Delayed-Action Interaction and Spin-Orbit Coupling between Solitons. Physical Review Letters, 2001, 86, 799-802.	7.8	21
79	Nonlinear Waves in Subwavelength Waveguide Arrays: Evanescent Bands and the â€œPhoenix Solitonâ€• Physical Review Letters, 2009, 102, 163902.	7.8	21
80	Diverging Rabi Oscillations in Subwavelength Photonic Lattices. Physical Review Letters, 2011, 106, 073901.	7.8	21
81	Mode locking and frequency tuning of a laser diode array in an extended cavity with a photorefractive phase conjugate mirror. Applied Physics Letters, 1990, 57, 2523-2525.	3.3	18
82	Sparsity-Based Super Resolution for SEM Images. Nano Letters, 2017, 17, 5437-5445.	9.1	18
83	Observation of Accelerating Wave Packets in Curved Space. Physical Review X, 2018, 8, .	8.9	18
84	Generalized laws of refraction and reflection at interfaces between different photonic artificial gauge fields. Light: Science and Applications, 2020, 9, 200.	16.6	18
85	Grating-Mediated Waveguiding. Physical Review Letters, 2004, 93, 103902.	7.8	17
86	Self-Induced Diffusion in Disordered Nonlinear Photonic Media. Physical Review Letters, 2018, 121, 233901.	7.8	17
87	Sparsity-based Ankylography for Recovering 3D molecular structures from single-shot 2D scattered light intensity. Nature Communications, 2015, 6, 7950.	12.8	12
88	Sparsity-based recovery of three-photon quantum states from two-fold correlations. Optica, 2016, 3, 226.	9.3	11
89	Non-Hermitian Topological Systems. Physics Magazine, 0, 11, .	0.1	11
90	Observation of Anderson localization beyond the spectrum of the disorder. Science Advances, 2022, 8, .	10.3	11

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91	Light-induced ionic polarization in CdZnTe:V semiconductor crystals as a source of giant enhancement of nonlinear effects. Physical Review B, 2009, 79, .	3.2	9
92	Localization by virtual transitions in correlated disorder. Physical Review B, 2019, 100, .	3.2	8
93	Non-diffracting multi-ï»¿electron vortex beams balancing their electronâ€“electron interactions. Nature Communications, 2017, 8, 650.	12.8	7
94	Synthetic-Space Photonic Topological Insulators Utilizing Dynamically Invariant Structure. Physical Review Letters, 2021, 127, 093901.	7.8	7
95	Spatial modulation instability driven by light-enhanced nonlinearities in semiconductor CdZnTe:V crystals. Applied Physics Letters, 2008, 93, .	3.3	6
96	Solitonets: complex networks of interacting fields. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2009, 465, 1093-1101.	2.1	5
97	Incoherent Branched Flow of Light. Physical Review X, 2022, 12, .	8.9	5
98	Topological Lasers. , 2016, , .		4
99	Topological Insulator Laser. , 2018, , .		4
100	Sparsity based super-resolution optical imaging using correlation information. , 2017, , .		3
101	Interaction of light with thin liquid membranes. , 2018, , .		3
102	Topological insulator VCSEL array. , 2020, , .		3
103	Looking into a self-distorting world. Nature Photonics, 2009, 3, 195-197.	31.4	2
104	Mark Stockman: Evangelist for Plasmonics. ACS Photonics, 2021, 8, 683-698.	6.6	2
105	Transport and anderson localization in 2-dimensional photonic lattices. , 2006, , .		1
106	Sparsity-based single-shot sub-wavelength coherent diffractive imaging. , 2012, , .		1
107	Laser Tractor-Beam of 2D Flow in Soap Films. , 2021, , .		1
108	Observation of Anderson localization by virtual transitions. , 2020, , .		1

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109	Coaction of Disorder and PT-symmetry in Deep Subwavelength Multilayers. , 2019, , .		1
110	Light-induced ionic displacement in CdZnTe:V crystals giving rise to crystalline symmetry breaking and giant nonlinearities. , 2006, , .		0
111	Spatial four wave mixing in photonic lattices. , 2006, , .		0
112	Observation of random phase gap solitons in 2D photonic lattices. , 2006, , .		0
113	Nonlinear waves and solitons in photonic lattices. , 2006, , .		0
114	Infinite-range interactions between solitons in highly-nonlocal nonlinear media. , 2006, , .		0
115	Phasons and pure phason strain in nonlinear photonic quasicrystals. , 2007, , .		0
116	Nonlinearity and localization in disordered lattices. , 2007, , .		0
117	Solitons phenomena in highly nonlocal media: From soliton wiring and surface solitons to random-phase solitons and controlling solitons from afar. Conference Proceedings - Lasers and Electro-Optics Society Annual Meeting-LEOS, 2007, , .	0.0	0
118	Accelerating light beams along arbitrary trajectories. , 2011, , .		0
119	Magnetic field effects and Landau solitons in strained photonic graphene. , 2011, , .		0
120	Coherent absorption of two-photon states in metamaterials. , 2017, , .		0
121	A humble leader. Nature Photonics, 2019, 13, 581-582.	31.4	0
122	Topologically robust entangled states in silicon. , 2019, , .		0
123	Topological Photonics. , 2019, , .		0
124	Photonic Topological Insulators Controlled by Nonlocal Nonlinearity in Synthetic Dimensions. , 2021, , .		0
125	Topological insulator vertically-emitting laser array. , 2021, , .		0
126	Topological Insulator Laser. , 2019, , .		0

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127	Branched Flow of Light. Optics and Photonics News, 2020, 31, 32.	0.5	0