

Elena A Ostrovskaya

List of Publications by Year in descending order

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126
papers

5,868
citations

66343

42
h-index

76900

74
g-index

131
all docs

131
docs citations

131
times ranked

3151
citing authors

#	ARTICLE	IF	CITATIONS
1	Observation of non-Hermitian degeneracies in a chaotic exciton-polariton billiard. <i>Nature</i> , 2015, 526, 554-558.	27.8	422
2	Observation of Discrete Vortex Solitons in Optically Induced Photonic Lattices. <i>Physical Review Letters</i> , 2004, 92, 123903.	7.8	418
3	Spatial solitons in optically induced gratings. <i>Optics Letters</i> , 2003, 28, 710.	3.3	352
4	Bose-Einstein condensates in optical lattices: Band-gap structure and solitons. <i>Physical Review A</i> , 2003, 67, .	2.5	235
5	Angular momenta and spin-orbit interaction of nonparaxial light in free space. <i>Physical Review A</i> , 2010, 82, .	2.5	232
6	Spin-to-orbital angular momentum conversion in focusing, scattering, and imaging systems. <i>Optics Express</i> , 2011, 19, 26132.	3.4	210
7	Optical Nanoprobing via Spin-Orbit Interaction of Light. <i>Physical Review Letters</i> , 2010, 104, 253601.	7.8	204
8	Matter-Wave Gap Solitons in Atomic Band-Gap Structures. <i>Physical Review Letters</i> , 2003, 90, 160407.	7.8	173
9	Coupled-mode theory for Bose-Einstein condensates. <i>Physical Review A</i> , 2000, 61, .	2.5	160
10	Exciton-polariton trapping and potential landscape engineering. <i>Reports on Progress in Physics</i> , 2017, 80, 016503.	20.1	157
11	Observation of Dipole-Mode Vector Solitons. <i>Physical Review Letters</i> , 2000, 85, 1424-1427.	7.8	125
12	Stability of Multihump Optical Solitons. <i>Physical Review Letters</i> , 1999, 83, 296-299.	7.8	124
13	Dipole-Mode Vector Solitons. <i>Physical Review Letters</i> , 2000, 85, 82-85.	7.8	120
14	Self-Trapped Nonlinear Matter Waves in Periodic Potentials. <i>Physical Review Letters</i> , 2006, 96, 040401.	7.8	107
15	Dynamics and stability of dark solitons in exciton-polariton condensates. <i>Physical Review B</i> , 2014, 89, .	3.2	102
16	Matter-Wave Gap Vortices in Optical Lattices. <i>Physical Review Letters</i> , 2004, 93, 160405.	7.8	95
17	Creation of Orbital Angular Momentum States with Chiral Polaritonic Lenses. <i>Physical Review Letters</i> , 2014, 113, 200404.	7.8	89
18	Photonic crystals for matter waves: Bose-Einstein condensates in optical lattices. <i>Optics Express</i> , 2004, 12, 19.	3.4	81

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19	Multicomponent gap solitons in spinor Bose-Einstein condensates. <i>Physical Review A</i> , 2007, 75, .	2.5	77
20	Modulational instability of spinor condensates. <i>Physical Review A</i> , 2001, 64, .	2.5	75
21	Dissipative solitons and vortices in polariton Bose-Einstein condensates. <i>Physical Review A</i> , 2012, 86, .	2.5	70
22	Interaction between vector solitons and solitonic gluons. <i>Optics Letters</i> , 1999, 24, 327.	3.3	69
23	Direct measurement of polariton-polariton interaction strength in the Thomas-Fermi regime of exciton-polariton condensation. <i>Physical Review B</i> , 2019, 100, .	3.2	65
24	Self-Localization of Polariton Condensates in Periodic Potentials. <i>Physical Review Letters</i> , 2013, 110, 170407.	7.8	63
25	Chiral Modes at Exceptional Points in Exciton-Polariton Quantum Fluids. <i>Physical Review Letters</i> , 2018, 120, 065301.	7.8	59
26	A polariton condensate in a photonic crystal potential landscape. <i>New Journal of Physics</i> , 2015, 17, 023001.	2.9	58
27	Dynamics of Matter-Wave Solitons in a Ratchet Potential. <i>Physical Review Letters</i> , 2008, 101, 150403.	7.8	55
28	Multipole composite spatial solitons: theory and experiment. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2002, 19, 586.	2.1	54
29	Optical Vortices Folding and Twisting Waves of Light. <i>Optics and Photonics News</i> , 2001, 12, 24.	0.5	53
30	Size effects in optical second-harmonic generation by metallic nanocrystals and semiconductor quantum dots: The role of quantum chaotic dynamics. <i>Physical Review B</i> , 1995, 51, 17591-17599.	3.2	52
31	Dispersion control for matter waves and gap solitons in optical superlattices. <i>Physical Review A</i> , 2005, 71, .	2.5	51
32	Instability-induced formation and nonequilibrium dynamics of phase defects in polariton condensates. <i>Physical Review B</i> , 2015, 91, .	3.2	51
33	Observation of bosonic condensation in a hybrid monolayer MoSe ₂ -GaAs microcavity. <i>Nature Communications</i> , 2018, 9, 3286.	12.8	49
34	Ultrathin Ga ₂ O ₃ Glass: A Large-Scale Passivation and Protection Material for Monolayer WS ₂ . <i>Advanced Materials</i> , 2021, 33, e2005732.	21.0	49
35	Composite Band-Gap Solitons in Nonlinear Optically Induced Lattices. <i>Physical Review Letters</i> , 2003, 91, 153902.	7.8	48
36	Direct measurement of a non-Hermitian topological invariant in a hybrid light-matter system. <i>Science Advances</i> , 2021, 7, eabj8905.	10.3	48

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37	Linear and nonlinear waveguides induced by optical vortex solitons. <i>Optics Letters</i> , 2000, 25, 660.	3.3	47
38	Collective state transitions of exciton-polaritons loaded into a periodic potential. <i>Physical Review B</i> , 2016, 93, .	3.2	45
39	Vector solitons in (2 + 1) dimensions. <i>Optics Letters</i> , 2000, 25, 643.	3.3	44
40	Stability and spatial coherence of nonresonantly pumped exciton-polariton condensates. <i>Physical Review B</i> , 2014, 90, .	3.2	44
41	Observation of quantum depletion in a non-equilibrium exciton-polariton condensate. <i>Nature Communications</i> , 2020, 11, 429.	12.8	44
42	Multipole spatial vector solitons. <i>Optics Letters</i> , 2001, 26, 435.	3.3	43
43	Existence and stability of coupled atomic-molecular Bose-Einstein condensates. <i>Physical Review A</i> , 2001, 65, .	2.5	42
44	Single-shot condensation of exciton polaritons and the hole burning effect. <i>Nature Communications</i> , 2018, 9, 2944.	12.8	40
45	Nonreciprocal Transport of Exciton Polaritons in a Non-Hermitian Chain. <i>Physical Review Letters</i> , 2020, 125, 123902.	7.8	40
46	Generation of Spin-Wave Envelope Dark Solitons. <i>Physical Review Letters</i> , 1999, 82, 2583-2586.	7.8	37
47	Quantum computation with diatomic bits in optical lattices. <i>Physical Review A</i> , 2005, 72, .	2.5	37
48	Dipole-mode vector solitons in anisotropic nonlocal self-focusing media. <i>Optics Letters</i> , 2001, 26, 1185.	3.3	36
49	Motional narrowing, ballistic transport, and trapping of room-temperature exciton polaritons in an atomically-thin semiconductor. <i>Nature Communications</i> , 2021, 12, 5366.	12.8	35
50	Observation of bound states of interacting vector solitons. <i>Optics Letters</i> , 2000, 25, 417.	3.3	34
51	Localization of Two-Component Bose-Einstein Condensates in Optical Lattices. <i>Physical Review Letters</i> , 2004, 92, 180405.	7.8	33
52	Nonlinear theory of soliton-induced waveguides. <i>Optics Letters</i> , 1998, 23, 1268.	3.3	31
53	Matter-wave dark solitons in optical lattices. <i>Journal of Optics B: Quantum and Semiclassical Optics</i> , 2004, 6, S309-S317.	1.4	31
54	Mixed-mode spatial solitons in semiconductor waveguides. <i>Journal of the Optical Society of America B: Optical Physics</i> , 1997, 14, 880.	2.1	30

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55	Talbot Effect for Exciton Polaritons. <i>Physical Review Letters</i> , 2016, 117, 097403.	7.8	29
56	Controlled Ordering of Topological Charges in an Exciton-Polariton Chain. <i>Physical Review Letters</i> , 2018, 121, 225302.	7.8	28
57	Topological phase transition in an all-optical exciton-polariton lattice. <i>Optica</i> , 2021, 8, 1084.	9.3	25
58	Multi-hump optical solitons in a saturable medium. <i>Journal of Optics B: Quantum and Semiclassical Optics</i> , 1999, 1, 77-83.	1.4	24
59	Coupled-mode theory for spatial gap solitons in optically induced lattices. <i>Physical Review E</i> , 2005, 71, 056616.	2.1	24
60	Suppression of collapse for matter waves with orbital angular momentum. <i>Journal of Optics (United Kingdom)</i> , 2007, 10, 022202.	2.2	22
61	Interaction of matter-wave gap solitons in optical lattices. <i>Journal of Optics B: Quantum and Semiclassical Optics</i> , 2004, 6, 423-427.	1.4	21
62	Optical tweezers for vortex rings in Bose-Einstein condensates. <i>Physical Review A</i> , 2013, 88, .	2.5	21
63	Bistability in microcavities with incoherent optical or electrical excitation. <i>Physical Review B</i> , 2014, 90, .	3.2	21
64	Generation and detection of matter-wave gap vortices in optical lattices. <i>Physical Review A</i> , 2006, 74, .	2.5	20
65	Nonlinearity-assisted quantum tunnelling in a matter-wave interferometer. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2007, 40, 4235-4244.	1.5	20
66	Vortex excitation in a stirred toroidal Bose-Einstein condensate. <i>Physical Review A</i> , 2015, 91, .	2.5	20
67	Nonresonant spin selection methods and polarization control in exciton-polariton condensates. <i>Physical Review B</i> , 2019, 99, .	3.2	19
68	Multi-soliton energy transport in anharmonic lattices. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2001, 282, 157-162.	2.1	18
69	Atom-laser dynamics. <i>Physical Review A</i> , 2001, 64, .	2.5	18
70	Ratchet-induced matter-wave transport and soliton collisions in Bose-Einstein condensates. <i>Physica D: Nonlinear Phenomena</i> , 2009, 238, 1338-1344.	2.8	18
71	Spontaneous formation and synchronization of vortex modes in optically induced traps for exciton-polariton condensates. <i>Physical Review B</i> , 2016, 94, .	3.2	18
72	Micro-mechanical assembly and characterization of high-quality Fabry-Pérot microcavities for the integration of two-dimensional materials. <i>Applied Physics Letters</i> , 2021, 118, .	3.3	18

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73	Three-dimensional matter-wave vortices in optical lattices. <i>Physical Review A</i> , 2005, 72, .	2.5	17
74	Incoherent excitation and switching of spin states in exciton-polariton condensates. <i>Physical Review B</i> , 2015, 92, .	3.2	17
75	Low-Energy Collective Oscillations and Bogoliubov Sound in an Exciton-Polariton Condensate. <i>Physical Review Letters</i> , 2021, 126, 075301.	7.8	17
76	Vector azimuthons in two-component Bose-Einstein condensates. <i>Physical Review A</i> , 2009, 80, .	2.5	16
77	Vortices in atomic-molecular Bose-Einstein condensates. <i>Journal of Optics B: Quantum and Semiclassical Optics</i> , 2002, 4, S33-S38.	1.4	15
78	Second-harmonic generation in vortex-induced waveguides. <i>Optics Letters</i> , 2004, 29, 593.	3.3	15
79	Motion of patterns in polariton quantum fluids with spin-orbit interaction. <i>Physical Review B</i> , 2014, 89, .	3.2	15
80	Effect of optically induced potential on the energy of trapped exciton polaritons below the condensation threshold. <i>Physical Review B</i> , 2019, 100, .	3.2	15
81	Quantum-noise properties of matter-wave gap solitons. <i>Physical Review A</i> , 2005, 72, .	2.5	14
82	Matter waves in anharmonic periodic potentials. <i>Physical Review A</i> , 2008, 77, .	2.5	13
83	Controlled Transport of Matter Waves in Two-Dimensional Optical Lattices. <i>Physical Review Letters</i> , 2010, 105, 090401.	7.8	13
84	Macroscopic quantum self-trapping of an ultracold Bose-Fermi mixture in a double-well potential. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2009, 42, 215308.	1.5	12
85	Stability of persistent currents in open dissipative quantum fluids. <i>Physical Review B</i> , 2015, 91, .	3.2	12
86	Multichannel soliton transmission and pulse shepherding in bit-parallel-wavelength optical fiber links. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2002, 8, 591-596.	2.9	11
87	Dynamics of matter-wave solitons in harmonic traps with flashing optical lattices. <i>Physical Review A</i> , 2012, 85, .	2.5	11
88	Azimuthal vortex clusters in Bose-Einstein condensates. <i>Physical Review A</i> , 2012, 85, .	2.5	11
89	Collective Excitations of Exciton-Polariton Condensates in a Synthetic Gauge Field. <i>Physical Review Letters</i> , 2021, 127, 185301.	7.8	11
90	Multi-component optical solitary waves. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2000, 288, 152-173.	2.6	10

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91	Visualising Berry phase and diabolical points in a quantum exciton-polariton billiard. Scientific Reports, 2016, 6, 37653.	3.3	9
92	Bogoliubov-Cherenkov radiation in an atom laser. Physical Review A, 2018, 97, .	2.5	9
93	Coherent dynamics of Floquet-Bloch states in monolayer WS_2 reveals fast adiabatic switching. Physical Review B, 2021, 104, .	3.2	9
94	Influence of direct deposition of dielectric materials on the optical response of monolayer WS_2 . Applied Physics Letters, 2021, 119, .	3.3	9
95	Instability-induced localization of matter waves in moving optical lattices. Physical Review A, 2006, 73, .	2.5	8
96	Probing quantum chaos. Nature Materials, 2016, 15, 702-703.	27.5	8
97	Bogoliubov excitations of a polariton condensate in dynamical equilibrium with an incoherent reservoir. Physical Review B, 2022, 105, .	3.2	8
98	Observation of gain-pinned dissipative solitons in a microcavity laser. APL Photonics, 2020, 5, 086103.	5.7	6
99	Light Molecules: Dipole-Mode Vector Solitons. Optics and Photonics News, 2000, 11, 36.	0.5	3
100	Matter-Wave Solitons In Optical Superlattices. AIP Conference Proceedings, 2006, , .	0.4	1
101	A three-site Bose-Fermi ring with a few atoms. Journal of Physics B: Atomic, Molecular and Optical Physics, 2011, 44, 135301.	1.5	1
102	Dynamic band-gap solitons in nonlinear optically-induced lattices. , 2004, , .		1
103	Multihump vector optical spatial solitons. , 2000, 3928, 299.		0
104	<title>Multihump vector optical spatial solitons</title>. , 2000, 3927, 117.		0
105	<title>Multiwavelength and multicolor temporal and spatial optical solitons</title>. , 2000, 3927, 9.		0
106	Vector incoherent solitons. , 2001, 4271, 89.		0
107	Localization of light in optically-induced gratings. , 0, , .		0
108	Three-dimensional matter-wave vortices in optical lattices. , 0, , .		0

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109	Bose-Einstein condensates in optical lattices: band-gap structure, solitons, and vortices. , 0, , .		0
110	New gap states of matter waves in optical lattices. , 0, , .		0
111	Optically-induced lattices as tunable nonlinear photonic crystals. , 2005, , .		0
112	Optical nanoprobng via spin-orbit interaction of light. , 2010, , .		0
113	Matter waves with orbital angular momentum: Collapse suppression and bistability. , 2011, , .		0
114	Angular momentum of light revisited: spin-orbit interactions in free space. , 2011, , .		0
115	Collapse suppression in Bose-Einstein condensate clouds with orbital angular momentum. , 2011, , .		0
116	Observation of Dipole-Mode Vector Solitons. , 2001, , 229-234.		0
117	Multipole optical vector solitons. , 2001, , .		0
118	Observation of discrete vortex solitons. , 2004, , .		0
119	Second-harmonic generation in waveguides induced by optical vortices. , 2004, , .		0
120	Phase sensitivity of a nonlinear matter-wave interferometer. , 2007, , .		0
121	Do stable multi-hump solitons exist?. , 1999, , .		0
122	Polariton Condensates in Complex Potential Landscapes. , 2015, , .		0
123	Stability of vortices and spiraling waves in non-equilibrium polariton condensates. , 2015, , .		0
124	Talbot effect for exciton-polaritons. , 2016, , .		0
125	A Model of a Pumped Continuous Atom Laser. , 2001, , 50-59.		0
126	Nonlinear Localization of BECs in Optical Lattices. , 2008, , 99-130.		0