Chuanwei Zhang

List of Publications by Year
in descending order

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114 papers	5,653 citations	100601 38 h-index	90395 73 g-index
114 all docs	114 docs citations	114 times ranked	5051 citing authors

#	Article	IF	Citations
1	Quantum Squeezing and Sensing with Pseudo-Anti-Parity-Time Symmetry. Physical Review Letters, 2022, 128, 173602.	2.9	14
2	Wavelength conversion for single-photon polarization qubits through continuous-variable quantum teleportation. Physical Review A, 2022, 105, .	1.0	0
3	Majorana corner pairs in a two-dimensional s -wave cold atomic superfluid. Physical Review A, 2021, 103, .	1.0	4
4	Supersymmetry-assisted high-fidelity ground-state preparation of a single neutral atom in an optical tweezer. Physical Review A, 2021, 103, .	1.0	1
5	Two-dimensional non-Hermitian topological phases induced by asymmetric hopping in a one-dimensional superlattice. Physical Review A, 2021, 103, .	1.0	8
6	Spin-Twisted Optical Lattices: Tunable Flat Bands and Larkin-Ovchinnikov Superfluids. Physical Review Letters, 2021, 126, 103201.	2.9	29
7	Topological phase transitions driven by non-Hermiticity in quantum spin Hall insulators. Physical Review B, 2021, 103, .	1.1	9
8	Pseudo-Goldstone excitations in a striped Bose-Einstein condensate. Physical Review A, 2021, 104, .	1.0	2
9	Nonlinear Dynamics in a Synthetic Momentum-State Lattice. Physical Review Letters, 2021, 127, 130401.	2.9	24
10	Topological and hyperbolic dielectric materials from chirality-induced charge-parity symmetry. Physical Review A, 2021, 104, .	1.0	7
11	Hybrid Entanglement between Optical Discrete Polarizations and Continuous Quadrature Variables. Photonics, 2021, 8, 552.	0.9	4
12	Giant Valley-Polarized Rydberg Excitons in Monolayer WSe₂ Revealed by Magneto-photocurrent Spectroscopy. Nano Letters, 2020, 20, 7635-7641.	4.5	16
13	Topological phases in pseudospin-1 Fermi gases with two-dimensional spin-orbit coupling. Physical Review A, 2020, 101, .	1.0	3
14	In-Plane Zeeman-Field-Induced Majorana Corner and Hinge Modes in an <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>s</mml:mi></mml:math> -Wave Superconductor Heterostructure. Physical Review Letters, 2020, 124, 227001.	2.9	66
15	Active Perovskite Hyperbolic Metasurface. ACS Photonics, 2020, 7, 1754-1761.	3.2	27
16	Phonon-exciton Interactions in WSe2 under a quantizing magnetic field. Nature Communications, 2020, 11, 3104.	5.8	15
17	Topological Bands and Triply Degenerate Points in Non-Hermitian Hyperbolic Metamaterials. Physical Review Letters, 2020, 124, 073603.	2.9	37
18	Quantum spiral spin-tensor magnetism. Physical Review B, 2020, 101, .	1.1	7

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19	Observation of Quantized Exciton Energies in Monolayer <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>WSe</mml:mi></mml:mrow><mml:mrow><mml:mn>2</mml:mn></mml:mrow></mml:msub></mml:mrow></mml:math> under a Strong Magnetic Field. Physical Review X, 2020, 10, .	2.8	20
20	Magnetic stripe soliton and localized stripe wave in spin-1 Bose-Einstein condensates. Physical Review A, 2020, 101, .	1.0	12
21	Tunable flux through a synthetic Hall tube of neutral fermions. Physical Review A, 2020, 102, .	1.0	9
22	Robust Weyl points in a one-dimensional superlattice with transverse spin-orbit coupling. Physical Review A, 2020, 102, .	1.0	1
23	Majorana Corner Modes with Solitons in an Attractive Hubbard-Hofstadter Model of Cold Atom Optical Lattices. Physical Review Letters, 2019, 123, 060402.	2.9	40
24	Topological Mott insulator with bosonic edge modes in one-dimensional fermionic superlattices. Physical Review A, 2019, 100, .	1.0	9
25	Higher-Order Topological Corner States Induced by Gain and Loss. Physical Review Letters, 2019, 123, 073601.	2.9	197
26	Experimental realization of a non-magnetic one-way spin switch. Nature Communications, 2019, 10, 3381.	5.8	11
27	Spin current generation and relaxation in a quenched spin-orbit-coupled Bose-Einstein condensate. Nature Communications, 2019, 10, 375.	5.8	21
28	Experimental realization of a long-lived striped Bose-Einstein condensate induced by momentum-space hopping. Physical Review A, 2019, 99, .	1.0	27
29	Rashba and Weyl spin-orbit coupling in an optical lattice clock. Physical Review A, 2019, 100, .	1.0	5
30	Tunable spin-orbit coupling and magnetic superstripe phase in a Bose-Einstein condensate. Physical Review A, 2019, 100, .	1.0	8
31	Topological photonic orbital-angular-momentum switch. Physical Review A, 2018, 97, .	1.0	18
32	Superfluid-Quasicrystal in a Bose-Einstein Condensate. Physical Review Letters, 2018, 120, 060407.	2.9	22
33	Momentum-Space Josephson Effects. Physical Review Letters, 2018, 120, 120401.	2.9	24
34	Majorana Doublets, Flat Bands, and Dirac Nodes in s -Wave Superfluids. Physical Review Letters, 2018, 121, 185302.	2.9	8
35	Time-reversal-invariant spin-orbit-coupled bilayer Bose-Einstein condensates. Physical Review A, 2018, 97, .	1.0	2
36	Self-Adapted Floquet Dynamics of Ultracold Bosons in a Cavity. Physical Review Letters, 2018, 120, 263202.	2.9	8

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37	Spin-1 topological monopoles in the parameter space of ultracold atoms. Physical Review A, 2018, 98, .	1.0	14
38	Observation of Floquet bands in driven spin-orbit-coupled Fermi gases. Physical Review A, 2018, 98, .	1.0	12
39	Momentum space Aharonov-Bohm interferometry in Rashba spin-orbit coupled Bose-Einstein condensates. Europhysics Letters, 2018, 123, 10005.	0.7	0
40	Topological Triply Degenerate Points Induced by Spin-Tensor-Momentum Couplings. Physical Review Letters, 2018, 120, 240401.	2.9	49
41	Superfluidity in the absence of kinetics in spin-orbit-coupled optical lattices. Physical Review A, 2017, 95, .	1.0	8
42	Synthetic-lattice enabled all-optical devices based on orbital angular momentum of light. Nature Communications, 2017, 8, 16097.	5.8	53
43	Adiabatically tuning quantized supercurrents in an annular Bose-Einstein condensate. Physical Review A, 2017, 96, .	1.0	9
44	Stueckelberg interferometry using periodically driven spin-orbit-coupled Bose-Einstein condensates. Physical Review A, 2017, 95, .	1.0	9
45	Spin-orbit-driven transitions between Mott insulators and finite-momentum superfluids of bosons in optical lattices. Physical Review A, 2017, 96, .	1.0	5
46	Spin-Tensorâ€“Momentum-Coupled Bose-Einstein Condensates. Physical Review Letters, 2017, 119, 193001.	2.9	34
47	Experimental Observation of a Topological Band Gap Opening in Ultracold Fermi Gases with Two-Dimensional Spin-Orbit Coupling. Physical Review Letters, 2016, 117, 235304.	2.9	124
48	Interacting spin-orbit-coupled spin-1 Bose-Einstein condensates. Physical Review A, 2016, 93, .	1.0	56
49	Dirac and Weyl rings in three-dimensional cold-atom optical lattices. Physical Review A, 2016, 93, .	1.0	29
50	One-dimensional topological chains with Majorana fermions in two-dimensional nontopological optical lattices. Physical Review A, 2016, 93, .	1.0	2
51	Fulde-Ferrell Superfluids without Spin Imbalance in Driven Optical Lattices. Physical Review Letters, 2016, 116, 120403.	2.9	15
52	Phase-tunable Josephson junction and spontaneous mass current in a spin-orbit-coupled Fermi superfluid. Physical Review A, 2016, 94, .	1.0	3
53	Spin-momentum coupled Bose-Einstein condensates with lattice band pseudospins. Nature Communications, 2016, 7, 10867.	5.8	23
54	Properties of spinâ€“orbit-coupled Boseâ€“Einstein condensates. Frontiers of Physics, 2016, 11, 1.	2.4	89

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55	Quantum phases of Bose-Einstein condensates with synthetic spinâ€“orbital-angular-momentum coupling. Physical Review A, 2015, 91, .	1.0	38
56	Floquet Fulde-Ferrell-Larkin-Ovchinnikov superfluids and Majorana fermions in a shaken fermionic optical lattice. Physical Review A, 2015, 91, .	1.0	14
57	Spinâ€“orbital-angular-momentum coupling in Bose-Einstein condensates. Physical Review A, 2015, 91, .	1.0	53
58	Dynamical spin-density waves in a spin-orbit-coupled Bose-Einstein condensate. Physical Review A, 2015, 92, .	1.0	12
59	Majorana fermions in quasi-one-dimensional and higher-dimensional ultracold optical lattices. Physical Review A, 2015, 92, .	1.0	8
60	Structured Weyl Points in Spin-Orbit Coupled Fermionic Superfluids. Physical Review Letters, 2015, 115, 265304.	2.9	255
61	Bright solitons in a two-dimensional spin-orbit-coupled dipolar Bose-Einstein condensate. Physical Review A, 2015, 92, .	1.0	46
62	Exciton polaritons in transition-metal dichalcogenides and their direct excitation via energy transfer. Physical Review B, 2015, 92, .	1.1	34
63	Dzyaloshinskii-Moriya Interaction and Spiral Order in Spin-orbit Coupled Optical Lattices. Scientific Reports, 2015, 5, 10050.	1.6	28
64	Magnetic control of valley pseudospin in monolayer WSe2. Nature Physics, 2015, 11, 148-152.	6.5	720
65	Topological Fuldeâ€“Ferrell superfluids of a spinâ€“orbit coupled Fermi gas. International Journal of Modern Physics B, 2015, 29, 1530001.	1.0	26
66	Berezinskii-Kosterlitz-Thouless Phase Transition in 2D Spin-Orbit-Coupled Fulde-Ferrell Superfluids. Physical Review Letters, 2015, 114, 110401.	2.9	31
67	Statistical properties of exciton fine structure splitting and polarization angles in quantum dot ensembles. Physical Review B, 2014, 89, .	1.1	16
68	Fulde-Ferrell-Larkin-Ovchinnikov or Majorana superfluids: The fate of fermionic cold atoms in spin-orbit-coupled optical lattices. Physical Review A, 2014, 89, .	1.0	20
69	Emergent Kinetics and Fractionalized Charge in 1D Spin-Orbit Coupled Flatband Optical Lattices. Physical Review Letters, 2014, 112, 110404.	2.9	21
70	Competing superfluid orders in spin-orbit-coupled fermionic cold-atom optical lattices. Physical Review A, 2014, 89, .	1.0	48
71	Anisotropic Weyl Fermions from the Quasiparticle Excitation Spectrum of a 3D Fulde-Ferrell Superfluid. Physical Review Letters, 2014, 112, 136402.	2.9	58
72	Spin-orbit-coupled quantum wires and Majorana fermions on zigzag edges of monolayer transition-metal dichalcogenides. Physical Review B, 2014, 89, .	1.1	60

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73	Dark Solitons with Majorana Fermions in Spin-Orbit-Coupled Fermi Gases. Physical Review Letters, 2014, 113, 130404.	2.9	48
74	Valley-splitting and valley-dependent inter-Landau-level optical transitions in monolayer<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mrow><mml:mi mathvariant="normal">MoS</mml:mi></mml:mrow><mml:mn>2</mml:mn></mml:msub></mml:math>quantum Hall systems. Physical Review B, 2014, 90, .	1.1	67
75	Dicke-type phase transition in a spin-orbit-coupled Boseâ€“Einstein condensate. Nature Communications, 2014, 5, 4023.	5.8	125
76	FFLO Superfluids in 2D Spin-Orbit Coupled Fermi Gases. Scientific Reports, 2014, 4, 6535.	1.6	23
77	Topological superfluids with finite-momentum pairing and Majorana fermions. Nature Communications, 2013, 4, 2710.	5.8	109
78	Phase Winding a Two-Component Bose-Einstein Condensate in an Elongated Trap: Experimental Observation of Moving Magnetic Orders and Dark-Bright Solitons. Physical Review Letters, 2013, 111, 264101.	2.9	39
79	Tunable Spin-orbit Coupling and Quantum Phase Transition in a Trapped Bose-Einstein Condensate. Scientific Reports, 2013, 3, 1937.	1.6	90
80	Bose-Einstein condensates in spin-orbit-coupled optical lattices: Flat bands and superfluidity. Physical Review A, 2013, 87, .	1.0	74
81	Finite-temperature Dicke phase transition of a Bose-Einstein condensate in an optical cavity. Physical Review A, 2013, 87, .	1.0	8
82	Topological uniform superfluid and Fulde-Ferrell-Larkin-Ovchinnikov phases in three-dimensional to one-dimensional crossover of spin-orbit-coupled Fermi gases. Physical Review A, 2013, 88, .	1.0	7
83	Observation ofZitterbewegungin a spin-orbit-coupled Bose-Einstein condensate. Physical Review A, 2013, 88, .	1.0	268
84	Thermodynamic signatures for topological phase transitions to Majorana and Weyl superfluids in ultracold Fermi gases. Physical Review A, 2013, 87, .	1.0	19
85	Route to observable Fulde-Ferrell-Larkin-Ovchinnikov phases in three-dimensional spin-orbit-coupled degenerate Fermi gases. Physical Review A, 2013, 87, .	1.0	69
86	Many-body Landau-Zener transition in cold-atom double-well optical lattices. Physical Review A, 2013, 87, .	1.0	11
87	Majorana fermions under uniaxial stress in semiconductor-superconductor heterostructures. Physical Review B, 2013, 87, .	1.1	3
88	Probing a topological quantum critical point in semiconductor-superconductor heterostructures. Physical Review B, 2012, 85, .	1.1	25
89	BCS-BEC crossover in spin-orbit-coupled two-dimensional Fermi gases. Physical Review A, 2012, 85, .	1.0	55
90	Searching for Majorana Fermions in 2D Spin-Orbit Coupled Fermi Superfluids at Finite Temperature. Physical Review Letters, 2012, 109, 105302.	2.9	94

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91	Mean-Field Dynamics of Spin-Orbit Coupled Bose-Einstein Condensates. Physical Review Letters, 2012, 108, 035302.	2.9	223
92	Exotic superfluidity in spin-orbit coupled Bose-Einstein condensates. Europhysics Letters, 2012, 100, 50003.	0.7	87
93	Hole-Doped Semiconductor Nanowire on Top of an<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>s</mml:mi></mml:math>-Wave Superconductor: A New and Experimentally Accessible System for Majorana Fermions. Physical Review Letters, 2012, 108, 177001.	2.9	48
94	Topological thermoelectric effects in spin-orbit coupled electron- and hole-doped semiconductors. Physical Review B, 2012, 85, .	1.1	8
95	Quantum transport of bosonic cold atoms in double-well optical lattices. Physical Review A, 2011, 84, .	1.0	43
96	Quantum anomalous Hall states in the<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi>p</mml:mi></mml:mrow></mml:math>-orbital honeycomb optical lattices. Physical Review A, 2011, 83, .	1.0	53
97	Superconducting Phase with a Chiral<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>f</mml:mi></mml:math>-Wave Pairing Symmetry and Majorana Fermions Induced in a Hole-Doped Semiconductor. Physical Review Letters, 2011, 106, 157003.	2.9	36
98	BCS-BEC Crossover and Topological Phase Transition in 3D Spin-Orbit Coupled Degenerate Fermi Gases. Physical Review Letters, 2011, 107, 195303.	2.9	229
99	Robustness of Majorana modes and minigaps in a spin-orbit-coupled semiconductor-superconductor heterostructure. Physical Review B, 2010, 82, .	1.1	34
100	Geometric optics of Bloch waves in a chiral and dissipative medium. Physical Review A, 2010, 81, .	1.0	11
101	Spin-orbit coupling and perpendicular Zeeman field for fermionic cold atoms: Observation of the intrinsic anomalous Hall effect. Physical Review A, 2010, 82, .	1.0	41
102	Quasiparticle Nernst effect in the cuprate superconductors from the<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>d</mml:mi></mml:math>-density-wave theory of the pseudogap phase. Physical Review B, 2010, 81, .	1.1	11
103	Ultrahigh-fidelity qubits for quantum computing. Physical Review A, 2009, 80, .	1.0	10
104	Suppression of phase decoherence in a single atomic qubit. Physical Review A, 2009, 80, .	1.0	5
105	Berry-phase-mediated topological thermoelectric transport in gapped single and bilayer graphene. Physical Review B, 2009, 79, .	1.1	37
106	Goldstone modes and electromagnon fluctuations in the conical cycloid state of a multiferroic. Physical Review B, 2008, 78, .	1.1	9
107	Anomalous Nernst effect from a chiral<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>d</mml:mi></mml:math>-density-wave state in underdoped cuprate superconductors. Physical Review B, 2008, 78, .	1.1	38
108	<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>p</mml:mi><mml:mi>x</mml:mi></mml:msub><mml:mo>+</mml:mo><mml:mi>i</mml:mi><m from<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>s</mml:mi></mml:math>-Wave Interactions of Fermionic Cold Atoms. Physical Review Letters, 2008, 101, 160401.	2.9	348

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109	Ginzburg-Landau theory for the conical cycloid state in multiferroics: Applications toCoCr2O4. Physical Review B, 2008, 78, .	1.1	5
110	Bellâ€™s Inequality and Universal Quantum Gates in a Cold-Atom Chiral Fermionicp-Wave Superfluid. Physical Review Letters, 2007, 99, 220502.	2.9	20
111	Nonequilibrium Spin Dynamics in a Trapped Fermi Gas with Effective Spin-Orbit Interactions. Physical Review Letters, 2007, 99, 110403.	2.9	116
112	Quantum Computation using Vortices and Majorana Zero Modes of apx+ipySuperfluid of Fermionic Cold Atoms. Physical Review Letters, 2007, 98, 010506.	2.9	244
113	Anyonic braiding in optical lattices. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 18415-18420.	3.3	61
114	Manipulation of single neutral atoms in optical lattices. Physical Review A, 2006, 74, .	1.0	65