Tilman Esslinger

List of Publications by Year
in descending order

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138 papers	23,544 citations	64 h-index	124 g-index
		18887	18400
144 all docs	144 docs citations	144 times ranked	9799 citing authors

#	Article	IF	Citations
1	Floquet engineering of individual band gaps in an optical lattice using a two-tone drive. Physical Review Research, 2022, 4, .	1.3	9
2	Observing Dynamical Currents in a Non-Hermitian Momentum Lattice. Physical Review Letters, 2022, 128, 143602.	2.9	18
3	Dissipation-Engineered Family of Nearly Dark States in Many-Body Cavity-Atom Systems. Physical Review Letters, 2022, 128, 153601.	2.9	12
4	Suppressing Dissipation in a Floquet-Hubbard System. Physical Review X, 2021, 11, .	2.8	23
5	First order phase transition between two centro-symmetric superradiant crystals. Physical Review Research, 2021, 3, .	1.3	13
6	Flat-band transport and Josephson effect through a finite-size sawtooth lattice. Physical Review B, 2021, 103, .	1.1	15
7	Interaction-Assisted Reversal of Thermopower with Ultracold Atoms. Physical Review X, 2021, 11, .	2.8	12
8	A low-noise and scalable FPGA-based analog signal generator for quantum gas experiments. , 2021, , .		2
9	Emerging Dissipative Phases in a Superradiant Quantum Gas with Tunable Decay. Physical Review X, 2021, 11, .	2.8	28
10	Continuous feedback on a quantum gas coupled to an optical cavity. New Journal of Physics, 2020, 22, 033020.	1.2	22
11	Realization of density-dependent Peierls phases to engineer quantized gauge fields coupled to ultracold matter. Nature Physics, 2019, 15, 1161-1167.	6.5	174
12	Two-mode Dicke model from nondegenerate polarization modes. Physical Review A, 2019, 100, .	1.0	19
13	Quantized conductance through a dissipative atomic point contact. Physical Review A, 2019, 100, .	1.0	35
14	Quantized Conductance through a Spin-Selective Atomic Point Contact. Physical Review Letters, 2019, 123, 193605.	2.9	46
15	Quantum Simulation Meets Nonequilibrium Dynamical Mean-Field Theory: Exploring the Periodically Driven, Strongly Correlated Fermi-Hubbard Model. Physical Review Letters, 2019, 123, 193602.	2.9	26
16	<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>P</mml:mi></mml:math> -Band Induced Self-Organization and Dynamics with Repulsively Driven Ultracold Atoms in an Optical Cavity. Physical Review Letters, 2019, 123, 233601.	2.9	29
17	Dissipation-induced structural instability and chiral dynamics in a quantum gas. Science, 2019, 366, 1496-1499.	6.0	90
18	Metastability and avalanche dynamics in strongly correlated gases with long-range interactions. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 3279-3284.	3.3	46

#	Article	IF	Citations
19	From Laser Cooling to the Superfluid Mott Insulator. , 2018, , 805-812.		0
20	Enhancement and sign change of magnetic correlations in a driven quantum many-body system. Nature, 2018, 553, 481-485.	13.7	98
21	Band and Correlated Insulators of Cold Fermions in a Mesoscopic Lattice. Physical Review X, 2018, 8, .	2.8	56
22	Floquet Dynamics in Driven Fermi-Hubbard Systems. Physical Review Letters, 2018, 121, 233603.	2.9	59
23	Formation of a Spin Texture in a Quantum Gas Coupled to a Cavity. Physical Review Letters, 2018, 120, 223602.	2.9	93
24	Coupling two order parameters in a quantum gas. Nature Materials, 2018, 17, 686-690.	13.3	23
25	Breakdown of the Wiedemannâ€“Franz law in a unitary Fermi gas. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 8563-8568.	3.3	28
26	Supersolid formation in a quantum gas breaking a continuous translational symmetry. Nature, 2017, 543, 87-90.	13.7	337
27	Scanning Gate Microscope for Cold Atomic Gases. Physical Review Letters, 2017, 119, 030403.	2.9	29
28	Two-terminal transport measurements with cold atoms. Journal of Physics Condensed Matter, 2017, 29, 343003.	0.7	118
29	Monitoring and manipulating Higgs and Goldstone modes in a supersolid quantum gas. Science, 2017, 358, 1415-1418.	6.0	120
30	Controlling the Floquet state population and observing micromotion in a periodically driven two-body quantum system. Physical Review A, 2017, 96, .	1.0	45
31	Quantum simulations with quantum gases. , 2017, , .		0
32	Anomalous Conductances in an Ultracold Quantum Wire. Physical Review Letters, 2016, 117, 255302.	2.9	26
33	â€œEnlightening the World with the Laserâ€â€”Honoring T. W. HÃnsch. Applied Physics B: Lasers and Optics, 2016, 122, 1.	1.1	0
34	Quantum phases from competing short- and long-range interactions in an optical lattice. Nature, 2016, 532, 476-479.	13.7	296
35	Creating topological interfaces and detecting chiral edge modes in a two-dimensional optical lattice. Physical Review A, 2016, 94, .	1.0	26
36	Mapping out spin and particle conductances in a quantum point contact. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 8144-8149.	3.3	52

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37	Observation of a Fragmented, Strongly Interacting Fermi Gas. Physical Review Letters, 2015, 115, 045302.	2.9	17
38	Exploring Competing Density Order in the Ionic Hubbard Model with Ultracold Fermions. Physical Review Letters, 2015, 115, 115303.	2.9	54
39	Formation and Dynamics of Antiferromagnetic Correlations in Tunable Optical Lattices. Physical Review Letters, 2015, 115, 260401.	2.9	67
40	Creating State-Dependent Lattices for Ultracold Fermions by Magnetic Gradient Modulation. Physical Review Letters, 2015, 115, 073002.	2.9	88
41	Connecting strongly correlated superfluids by a quantum point contact. Science, 2015, 350, 1498-1501.	6.0	108
42	Observation of quantized conductance in neutral matter. Nature, 2015, 517, 64-67.	13.7	165
43	Measuring the dynamic structure factor of a quantum gas undergoing a structural phase transition. Nature Communications, 2015, 6, 7046.	5.8	73
44	Optical transport and manipulation of an ultracold atomic cloud using focus-tunable lenses. New Journal of Physics, 2014, 16, 093028.	1.2	28
45	Thermodynamics and Magnetic Properties of the Anisotropic 3D Hubbard Model. Physical Review Letters, 2014, 112, 115301.	2.9	33
46	Experimental realization of the topological Haldane model with ultracold fermions. Nature, 2014, 515, 237-240.	13.7	1,670
47	Double transfer through Dirac points in a tunable honeycomb optical lattice. European Physical Journal: Special Topics, 2013, 217, 121-133.	1.2	35
48	Real-time observation of fluctuations at the driven-dissipative Dicke phase transition. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 11763-11767.	3.3	159
49	Cold atoms in cavity-generated dynamical optical potentials. Reviews of Modern Physics, 2013, 85, 553-601.	16.4	664
50	Superfluidity with disorder in a thin film of quantum gas. Physical Review Letters, 2013, 110, 100601.	2.9	55
51	A Thermoelectric Heat Engine with Ultracold Atoms. Science, 2013, 342, 713-715.	6.0	230
52	Short-Range Quantum Magnetism of Ultracold Fermions in an Optical Lattice. Science, 2013, 340, 1307-1310.	6.0	321
53	Bloch-Zener oscillations in a tunable optical honeycomb lattice. , 2013, , .		0
54	Focus on quantum simulation. New Journal of Physics, 2013, 15, 085009.	1.2	45

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55	Exploring cavity-mediated long-range interactions in a quantum gas. , 2013, , .		0
56	Artificial Graphene with Tunable Interactions. Physical Review Letters, 2013, 111, 185307.	2.9	129
57	Observing the drop of resistance in the flow of a superfluid Fermi gas. Nature, 2012, 491, 736-739.	13.7	87
58	Roton-Type Mode Softening in a Quantum Gas with Cavity-Mediated Long-Range Interactions. Science, 2012, 336, 1570-1573.	6.0	217
59	Conduction of Ultracold Fermions Through a Mesoscopic Channel. Science, 2012, 337, 1069-1071.	6.0	239
60	Creating, moving and merging Dirac points with a Fermi gas in a tunable honeycomb lattice. Nature, 2012, 483, 302-305.	13.7	786
61	Interferometric measurement of local spin fluctuations in a quantum gas. Nature Physics, 2012, 8, 454-458.	6.5	37
62	Exploring Symmetry Breaking at the Dicke Quantum Phase Transition. Physical Review Letters, 2011, 107, 140402.	2.9	332
63	Probing Nearest-Neighbor Correlations of Ultracold Fermions in an Optical Lattice. Physical Review Letters, 2011, 106, 145302.	2.9	86
64	High-resolution imaging of ultracold fermions in microscopically tailored optical potentials. New Journal of Physics, 2011, 13, 043007.	1.2	77
65	SYNTHETIC QUANTUM MANY-BODY SYSTEMS. , 2010, , .		0
66	Dicke quantum phase transition with a superfluid gas in an optical cavity. Nature, 2010, 464, 1301-1306.	13.7	1,147
67	Local Observation of Antibunching in a Trapped Fermi Gas. Physical Review Letters, 2010, 105, 040401.	2.9	84
68	Cavity quantum electrodynamics with a Rydberg-blocked atomic ensemble. Physical Review A, 2010, 82, .	1.0	68
69	Lifetime of double occupancies in the Fermi-Hubbard model. Physical Review B, 2010, 82, .	1.1	95
70	Observation of Elastic Doublon Decay in the Fermi-Hubbard Model. Physical Review Letters, 2010, 104, 080401.	2.9	215
71	Fermi-Hubbard Physics with Atoms in an Optical Lattice. Annual Review of Condensed Matter Physics, 2010, 1, 129-152.	5.2	401
72	Quantitative Determination of Temperature in the Approach to Magnetic Order of Ultracold Fermions in an Optical Lattice. Physical Review Letters, 2010, 104, 180401.	2.9	136

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73	Dynamical coupling between a Boseâ€“Einstein condensate andÂaÂcavity optical lattice. Applied Physics B: Lasers and Optics, 2009, 95, 213-218.	1.1	90
74	A new phase for ytterbium atoms. Physics Magazine, 2009, 2, .	0.1	2
75	Criticality and Correlations in Cold Atomic Gases. , 2008, , 79-88.		2
76	A Mott insulator of fermionic atoms in an optical lattice. Nature, 2008, 455, 204-207.	13.7	830
77	Cavity Optomechanics with a Bose-Einstein Condensate. Science, 2008, 322, 235-238.	6.0	502
78	Correlations in ultracold atomic gases. , 2007, , .		0
79	Interaction-Controlled Transport of an Ultracold Fermi Gas. Physical Review Letters, 2007, 99, 220601.	2.9	102
80	Time interval distributions of atoms in atomic beams. Applied Physics B: Lasers and Optics, 2007, 86, 391-393.	1.1	8
81	Cavity QED with a Boseâ€“Einstein condensate. Nature, 2007, 450, 268-271.	13.7	483
82	Critical Behavior of a Trapped Interacting Bose Gas. Science, 2007, 315, 1556-1558.	6.0	151
83	Observing the Formation of Long-Range Order during Bose-Einstein Condensation. Physical Review Letters, 2007, 98, 090402.	2.9	75
84	Hybrid apparatus for Bose-Einstein condensation and cavity quantum electrodynamics: Single atom detection in quantum degenerate gases. Review of Scientific Instruments, 2006, 77, 063118.	0.6	44
85	Fermionic atoms in an optical lattice: a new synthetic material. Europhysics News, 2006, 37, 18-21.	0.1	7
86	Atomic gas in flatland. Nature, 2006, 441, 1053-1054.	13.7	5
87	Strongly interacting atoms and molecules in a 3D optical lattice. Journal of Physics B: Atomic, Molecular and Optical Physics, 2006, 39, S47-S56.	0.6	13
88	Bose-Fermi Mixtures in a Three-Dimensional Optical Lattice. Physical Review Letters, 2006, 96, 180402.	2.9	263
89	Molecules of Fermionic Atoms in an Optical Lattice. Physical Review Letters, 2006, 96, 030401.	2.9	231
90	Cavity QED detection of interfering matter waves. Physical Review A, 2006, 73, .	1.0	29

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91	FERMIONIC ATOMS WITH TUNABLE INTERACTIONS IN A 3D OPTICAL LATTICE. , 2005, , .		1
92	Superfluid to Mott insulator transition in one, two, and three dimensions. Journal of Low Temperature Physics, 2005, 138, 635-644.	0.6	80
93	Fermionic atoms in an optical lattice. , 2005, , .		0
94	p-Wave Interactions in Low-Dimensional Fermionic Gases. Physical Review Letters, 2005, 95, 230401.	2.9	190
95	Fermionic Atoms in a Three Dimensional Optical Lattice: Observing Fermi Surfaces, Dynamics, and Interactions. Physical Review Letters, 2005, 94, 080403.	2.9	564
96	Observing the profile of an atom laser beam. Physical Review A, 2005, 72, .	1.0	34
97	Correlations and Counting Statistics of an Atom Laser. Physical Review Letters, 2005, 95, 090404.	2.9	265
98	Confinement Induced Molecules in a 1D Fermi Gas. Physical Review Letters, 2005, 94, 210401.	2.9	333
99	ELECTRIC FIELD SPECTROSCOPY OF ULTRACOLD POLAR MOLECULAR DIMERS. , 2005, , .		1
100	Excitations of a Superfluid in a Three-Dimensional Optical Lattice. Physical Review Letters, 2004, 93, 240402.	2.9	111
101	1D Bose gases in an optical lattice. Applied Physics B: Lasers and Optics, 2004, 79, 1009-1012.	1.1	27
102	Transition from a Strongly Interacting 1D Superfluid to a Mott Insulator. Physical Review Letters, 2004, 92, 130403.	2.9	898
103	Line width of an atom laser. Applied Physics B: Lasers and Optics, 2003, 76, 109-112.	1.1	1
104	Exciting Collective Oscillations in a Trapped 1D Gas. Physical Review Letters, 2003, 91, 250402.	2.9	445
105	Atoms and Molecules in Lattices: Bose-Einstein Condensates Built on a Shared Vacuum. Physical Review Letters, 2003, 90, 160406.	2.9	12
106	Continuous detection of an atom laser beam. Physical Review A, 2002, 65, .	1.0	11
107	Growth of Bose-Einstein Condensates from Thermal Vapor. Physical Review Letters, 2002, 88, 080402.	2.9	78
108	Generating And Manipulating Atom Laser Beams. , 2002, , 117-128.		0

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109	Transverse mode of an atom laser. Physical Review A, 2002, 65, .	1.0	26
110	Quantum phase transition from a superfluid to a Mott insulator in a gas of ultracold atoms. Nature, 2002, 415, 39-44.	13.7	4,939
111	From Diode Laser to Atom Laser. , 2002, , 275-280.		0
112	Exploring Phase Coherence in a 2D Lattice of Bose-Einstein Condensates. Physical Review Letters, 2001, 87, 160405.	2.9	565
113	Measuring the Temporal Coherence of an Atom Laser Beam. Physical Review Letters, 2001, 87, 160404.	2.9	68
114	Boseâ€“Einstein condensates in 1D- and 2D optical lattices. Applied Physics B: Lasers and Optics, 2001, 73, 769-772.	1.1	64
115	Optics with an Atom Laser Beam. Physical Review Letters, 2001, 87, 030401.	2.9	70
116	Photoelectron spectrometry of atomic scandium in the region of the3pâ†'3dgiant resonance. Physical Review A, 2001, 64, .	1.0	18
117	Magnetic transport of trapped cold atoms over a large distance. Physical Review A, 2001, 63, .	1.0	110
118	Sympathetic cooling of85Rband87Rb. Physical Review A, 2001, 64, .	1.0	58
119	Measurement of the spatial coherence of a trapped Bose gas at the phase transition. Nature, 2000, 403, 166-170.	13.7	258
120	Probing first-order spatial coherence of a Bose-Einstein condensate. Journal of Modern Optics, 2000, 47, 2725-2732.	0.6	10
121	Atomlaser: Aus Boseâ€Einsteinâ€Kondensaten lassen sich kohÃrente Materiewellen auskoppeln. Physik Journal, 2000, 56, 47-50.	0.1	8
122	Atom Laser with a cw Output Coupler. Physical Review Letters, 1999, 82, 3008-3011.	2.9	458
123	Bose-Einstein condensation in a quadrupole-Ioffe-configuration trap. Physical Review A, 1998, 58, R2664-R2667.	1.0	199
124	All-optical gray lattice for atoms. Physical Review A, 1997, 55, 545-551.	1.0	21
125	Ramsey-Type Subrecoil Cooling. Physical Review Letters, 1997, 78, 4023-4026.	2.9	12
126	Recurring dark states in Ramsey-type subrecoil cooling. Applied Physics B: Lasers and Optics, 1997, 65, 701-706.	1.1	0

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127	Purely optical dark lattice. Optics Letters, 1996, 21, 991.	1.7	20
128	Measuring the Band Populations in a Purely Optical Dark Lattice. , 1996, , .		0
129	Subrecoil Laser Cooling with Adiabatic Transfer. Physical Review Letters, 1996, 76, 2432-2435.	2.9	53
130	A compact grating-stabilized diode laser system for atomic physics. Optics Communications, 1995, 117, 541-549.	1.0	325
131	Bragg Diffraction in an Atomic Lattice Bound by Light. Physical Review Letters, 1995, 75, 4583-4586.	2.9	134
132	Trapping Atoms in a Dark Optical Lattice. Physical Review Letters, 1995, 75, 37-40.	2.9	79
133	A Novel Scheme for Efficient Cooling below the Photon Recoil Limit. Europhysics Letters, 1994, 27, 109-114.	0.7	56
134	Surface-plasmon mirror for atoms. Optics Letters, 1993, 18, 450.	1.7	76
135	Collective Atomic Dynamics in a Magneto-optical Trap. Europhysics Letters, 1993, 21, 445-450.	0.7	16
136	Elastic Scattering of Rubidium Atoms by Two Crossed Standing Waves. Europhysics Letters, 1992, 18, 391-395.	0.7	16
137	Imaging an atomic beam in two dimensions. Optics Communications, 1992, 93, 49-53.	1.0	15
138	Probing first-order spatial coherence of a Bose-Einstein condensate. , 0, .		1