

# Klaus Sengstock

## List of Publications by Year in descending order

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45  
papers

4,869  
citations

201674

27  
h-index

233421

45  
g-index

45  
all docs

45  
docs citations

45  
times ranked

3205  
citing authors

#	ARTICLE	IF	CITATIONS
1	Quantum Simulation of Frustrated Classical Magnetism in Triangular Optical Lattices. <i>Science</i> , 2011, 333, 996-999.	12.6	543
2	Tunable Gauge Potential for Neutral and Spinless Particles in Driven Optical Lattices. <i>Physical Review Letters</i> , 2012, 108, 225304.	7.8	523
3	Experimental reconstruction of the Berry curvature in a Floquet Bloch band. <i>Science</i> , 2016, 352, 1091-1094.	12.6	358
4	Dynamics of $F=2$ Spinor Bose-Einstein Condensates. <i>Physical Review Letters</i> , 2004, 92, 040402.	7.8	306
5	Non-Abelian Gauge Fields and Topological Insulators in Shaken Optical Lattices. <i>Physical Review Letters</i> , 2012, 109, 145301.	7.8	287
6	Engineering Ising-XY spin-models in a triangular lattice using tunable artificial gauge fields. <i>Nature Physics</i> , 2013, 9, 738-743.	16.7	286
7	Multi-component quantum gases in spin-dependent hexagonal lattices. <i>Nature Physics</i> , 2011, 7, 434-440.	16.7	275
8	Observation of dynamical vortices after quenches in a system with topology. <i>Nature Physics</i> , 2018, 14, 265-268.	16.7	263
9	Ultracold quantum gases in triangular optical lattices. <i>New Journal of Physics</i> , 2010, 12, 065025.	2.9	184
10	Probing superfluids in optical lattices by momentum-resolved Bragg spectroscopy. <i>Nature Physics</i> , 2010, 6, 56-61.	16.7	180
11	Physics with coherent matter waves. <i>Reports on Progress in Physics</i> , 2004, 67, 907-963.	20.1	153
12	Identifying quantum phase transitions using artificial neural networks on experimental data. <i>Nature Physics</i> , 2019, 15, 917-920.	16.7	150
13	Quantum phase transition to unconventional multi-orbital superfluidity in optical lattices. <i>Nature Physics</i> , 2012, 8, 71-75.	16.7	144
14	Frustrated quantum antiferromagnetism with ultracold bosons in a triangular lattice. <i>Europhysics Letters</i> , 2010, 89, 10010.	2.0	131
15	Measuring topology from dynamics by obtaining the Chern number from a linking number. <i>Nature Communications</i> , 2019, 10, 1728.	12.8	130
16	Engineering novel optical lattices. <i>Reports on Progress in Physics</i> , 2013, 76, 086401.	20.1	122
17	Measuring quantized circular dichroism in ultracold topological matter. <i>Nature Physics</i> , 2019, 15, 449-454.	16.7	106
18	Coherent multi-flavour spin dynamics in a fermionic quantum gas. <i>Nature Physics</i> , 2012, 8, 813-818.	16.7	68

#	ARTICLE	IF	CITATIONS
19	Multiphoton interband excitations of quantum gases in driven optical lattices. <i>Physical Review A</i> , 2015, 92, .	2.5	65
20	Multiband Spectroscopy of Ultracold Fermions: Observation of Reduced Tunneling in Attractive Bose-Fermi Mixtures. <i>Physical Review Letters</i> , 2011, 107, 135303.	7.8	58
21	Spin-orbit coupling in periodically driven optical lattices. <i>Physical Review A</i> , 2014, 90, .	2.5	54
22	Polarization-gradient cooling in a strong doughnut-mode dipole potential. <i>Physical Review A</i> , 1998, 58, 3068-3079.	2.5	52
23	Dynamics of ultracold quantum gases in the dissipative Fermi-Hubbard model. <i>Quantum Science and Technology</i> , 2019, 4, 014002.	5.8	51
24	Giant Spin Oscillations in an Ultracold Fermi Sea. <i>Science</i> , 2014, 343, 157-160.	12.6	46
25	Unsupervised machine learning of topological phase transitions from experimental data. <i>Machine Learning: Science and Technology</i> , 2021, 2, 035037.	5.0	41
26	Driving protocol for a Floquet topological phase without static counterpart. <i>New Journal of Physics</i> , 2017, 19, 113010.	2.9	32
27	Quantum phases in tunable state-dependent hexagonal optical lattices. <i>Physical Review A</i> , 2014, 90, .	2.5	28
28	Intrinsic Photoconductivity of Ultracold Fermions in Optical Lattices. <i>Physical Review Letters</i> , 2013, 110, 085302.	7.8	27
29	Observation of Topological Bloch-State Defects and Their Merging Transition. <i>Physical Review Letters</i> , 2017, 118, 240403.	7.8	26
30	Absolute strong-field ionization probabilities of ultracold rubidium atoms. <i>Communications Physics</i> , 2018, 1, .	5.3	22
31	Breaking inversion symmetry in a state-dependent honeycomb lattice: artificial graphene with tunable band gap. <i>2D Materials</i> , 2016, 3, 024005.	4.4	21
32	Engineering Spin Waves in a High-Spin Ultracold Fermi Gas. <i>Physical Review Letters</i> , 2013, 110, 250402.	7.8	20
33	High-precision multiband spectroscopy of ultracold fermions in a nonseparable optical lattice. <i>Physical Review A</i> , 2018, 97, .	2.5	15
34	Charge density wave and charge pump of interacting fermions in circularly shaken hexagonal optical lattices. <i>Physical Review A</i> , 2018, 98, .	2.5	15
35	Quantum gas magnifier for sub-lattice-resolved imaging of 3D quantum systems. <i>Nature</i> , 2021, 599, 571-575.	27.8	14
36	Topological proximity effects in a Haldane graphene bilayer system. <i>Physical Review B</i> , 2019, 100, .	3.2	12

#	ARTICLE	IF	CITATIONS
37	Relaxation Dynamics of an Isolated Large-Spin Fermi Gas Far from Equilibrium. Physical Review X, 2014, 4, .	8.9	10
38	Ultrafast electron cooling in an expanding ultracold plasma. Nature Communications, 2021, 12, 596.	12.8	10
39	Formation of Spontaneous Density-Wave Patterns in dc Driven Lattices. Physical Review X, 2022, 12, .	8.9	9
40	Interorbital interactions in an $SU(2)$ -symmetric Fermi-Fermi mixture. Physical Review A, 2021, 103, .	2.5	7
41	Investigation of Feshbach resonances in ultracold $K$ spin mixtures. Physical Review A, 2017, 95, .	2.5	7
42	Modified spin-wave theory and spin-liquid behavior of cold bosons on an inhomogeneous triangular lattice. Physical Review B, 2016, 94, .	3.2	6
43	Magnetic guiding of a slow metastable beam. Optics Communications, 2002, 204, 185-194.	2.1	5
44	Das ideale Quantenlabor: Bose-Einstein-Kondensation. Physik in Unserer Zeit, 2003, 34, 168-176.	0.0	5
45	Tunable gauge potential for spinless particles in driven lattices. EPJ Web of Conferences, 2013, 57, 01004.	0.3	1