Markus Greiner

List of Publications by Year
in descending order

43 papers	11,382 citations	117453 34 h-index	276539 41 g-index
43 all docs	43 docs citations	43 times ranked	6074 citing authors

#	Article	IF	Citations
1	Probing many-body dynamics on a 51-atom quantum simulator. Nature, 2017, 551, 579-584.	13.7	1,463
2	A quantum gas microscope for detecting single atoms in a Hubbard-regime optical lattice. Nature, 2009, 462, 74-77.	13.7	1,161
3	Measuring entanglement entropy in a quantum many-body system. Nature, 2015, 528, 77-83.	13.7	827
4	Quantum thermalization through entanglement in an isolated many-body system. Science, 2016, 353, 794-800.	6.0	748
5	Probing the Superfluid–to–Mott Insulator Transition at the Single-Atom Level. Science, 2010, 329, 547-550.	6.0	669
6	Atom-by-atom assembly of defect-free one-dimensional cold atom arrays. Science, 2016, 354, 1024-1027.	6.0	534
7	A cold-atom Fermi–Hubbard antiferromagnet. Nature, 2017, 545, 462-466.	13.7	514
8	Quantum phases of matter on a 256-atom programmable quantum simulator. Nature, 2021, 595, 227-232.	13.7	458
9	Generation and manipulation of Schrödinger cat states in Rydberg atom arrays. Science, 2019, 365, 570-574.	6.0	375
10	Probing entanglement in a many-body–localized system. Science, 2019, 364, 256-260.	6.0	341
11	Strongly correlated quantum walks in optical lattices. Science, 2015, 347, 1229-1233.	6.0	334
12	Parallel Implementation of High-Fidelity Multiqubit Gates with Neutral Atoms. Physical Review Letters, 2019, 123, 170503.	2.9	329
13	Quantum Kibble–Zurek mechanism and critical dynamics on a programmable Rydberg simulator. Nature, 2019, 568, 207-211.	13.7	298
14	Probing topological spin liquids on a programmable quantum simulator. Science, 2021, 374, 1242-1247.	6.0	293
15	High-Fidelity Control and Entanglement of Rydberg-Atom Qubits. Physical Review Letters, 2018, 121, 123603.	2.9	274
16	Site-Resolved Imaging of Fermionic ^{6}Li in an Optical Lattice. Physical Review Letters, 2015, 114, 213002.	2.9	263
17	Site-resolved measurement of the spin-correlation function in the Fermi-Hubbard model. Science, 2016, 353, 1253-1256.	6.0	241
18	Quantum Simulators: Architectures and Opportunities. PRX Quantum, 2021, 2, .	3.5	229

#	Article	IF	Citations
19	A quantum processor based on coherent transport of entangled atom arrays. Nature, 2022, 604, 451-456.	13.7	213
20	Microscopy of the interacting Harper–Hofstadter model in the two-body limit. Nature, 2017, 546, 519-523.	13.7	198
21	Controlling quantum many-body dynamics in driven Rydberg atom arrays. Science, 2021, 371, 1355-1359.	6.0	186
22	Site-resolved imaging of a fermionic Mott insulator. Science, 2016, 351, 953-957.	6.0	150
23	Quantum optimization of maximum independent set using Rydberg atom arrays. Science, 2022, 376, 1209-1215.	6.0	124
24	Ultra-precise holographic beam shaping for microscopic quantum control. Optics Express, 2016, 24, 13881.	1.7	120
25	Quantum critical behaviour at the many-body localization transition. Nature, 2019, 573, 385-389.	13.7	118
26	Photon-Assisted Tunneling in a Biased Strongly Correlated Bose Gas. Physical Review Letters, 2011, 107, 095301.	2.9	115
27	Optical lattices. Nature, 2008, 453, 736-738.	13.7	104
28	String patterns in the doped Hubbard model. Science, 2019, 365, 251-256.	6.0	102
29	Classifying snapshots of the doped Hubbard model with machine learning. Nature Physics, 2019, 15, 921-924.	6.5	94
30	Integrating Neural Networks with a Quantum Simulator for State Reconstruction. Physical Review Letters, 2019, 123, 230504.	2.9	90
31	Quantum information processing in optical lattices and magnetic microtraps. Fortschritte Der Physik, 2006, 54, 702-718.	1.5	89
32	Quantum State Engineering of a Hubbard System with Ultracold Fermions. Physical Review Letters, 2018, 120, 243201.	2.9	83
33	Parton Theory of Magnetic Polarons: Mesonic Resonances and Signatures in Dynamics. Physical Review X, 2018, 8, .	2.8	65
34	Quantum gas microscopy with spin, atom-number, and multilayer readout. Physical Review A, 2015, 91, .	1.0	55
35	Coupling a Mobile Hole to an Antiferromagnetic Spin Background: Transient Dynamics of a Magnetic Polaron. Physical Review X, 2021, 11, .	2.8	33
36	Quantum correlations at infinite temperature: The dynamical Nagaoka effect. Physical Review B, 2017, 96, .	1.1	22

#	Article	IF	Citations
37	Correlator convolutional neural networks as an interpretable architecture for image-like quantum matter data. Nature Communications, 2021, 12, 3905.	5.8	22
38	Quantum Virtual Cooling. Physical Review X, 2019, 9, .	2.8	16
39	Analyzing Nonequilibrium Quantum States through Snapshots with Artificial Neural Networks. Physical Review Letters, 2021, 127, 150504.	2.9	15
40	Implementation of a stable, high-power optical lattice for quantum gas microscopy. Review of Scientific Instruments, 2019, 90, 033101.	0.6	9
41	Dispersive optical systems for scalable Raman driving of hyperfine qubits. Physical Review A, 2022, 105, .	1.0	8
42	Quantum Information Processing in Optical Lattices and Magnetic Microtraps. , 0, , 121-144.		0
43	Deborah S. Jin 1968â€"2016: Trailblazer of ultracold science. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 791-792.	3.3	0