

Robert J Lewis-Swan

List of Publications by Year in descending order

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Version: 2024-02-01

31
papers

1,268
citations

430874

18
h-index

454955

30
g-index

33
all docs

33
docs citations

33
times ranked

1064
citing authors

#	ARTICLE	IF	CITATIONS
1	Quantum-Enhanced Sensing Based on Time Reversal of Nonlinear Dynamics. <i>Physical Review Letters</i> , 2016, 117, 013001.	7.8	153
2	Unifying scrambling, thermalization and entanglement through measurement of fidelity out-of-time-order correlators in the Dicke model. <i>Nature Communications</i> , 2019, 10, 1581.	12.8	131
3	Cavity-mediated collective spin-exchange interactions in a strontium superradiant laser. <i>Science</i> , 2018, 361, 259-262.	12.6	124
4	Exploring dynamical phase transitions with cold atoms in an optical cavity. <i>Nature</i> , 2020, 580, 602-607.	27.8	111
5	Pumped-Up SU(1,1) Interferometry. <i>Physical Review Letters</i> , 2017, 118, 150401.	7.8	93
6	Verification of a Many-Ion Simulator of the Dicke Model Through Slow Quenches across a Phase Transition. <i>Physical Review Letters</i> , 2018, 121, 040503.	7.8	90
7	Quantum-enhanced sensing of displacements and electric fields with two-dimensional trapped-ion crystals. <i>Science</i> , 2021, 373, 673-678.	12.6	67
8	Shattered time: can a dissipative time crystal survive many-body correlations?. <i>New Journal of Physics</i> , 2018, 20, 123003.	2.9	61
9	Dynamics of quantum information. <i>Nature Reviews Physics</i> , 2019, 1, 627-634.	26.6	53
10	Proposal for demonstrating the Hong-Ou-Mandel effect with matter waves. <i>Nature Communications</i> , 2014, 5, 3752.	12.8	46
11	Robust Spin Squeezing via Photon-Mediated Interactions on an Optical Clock Transition. <i>Physical Review Letters</i> , 2018, 121, 070403.	7.8	45
12	Solving the Quantum Many-Body Problem via Correlations Measured with a Momentum Microscope. <i>Physical Review Letters</i> , 2017, 118, 240402.	7.8	34
13	Bang-bang shortcut to adiabaticity in the Dicke model as realized in a Penning trap experiment. <i>New Journal of Physics</i> , 2018, 20, 055013.	2.9	34
14	Driven-dissipative quantum dynamics in ultra-long-lived dipoles in an optical cavity. <i>Physical Review A</i> , 2019, 99, .	2.5	31
15	Proposal for a motional-state Bell inequality test with ultracold atoms. <i>Physical Review A</i> , 2015, 91, .	2.5	26
16	Engineering spin squeezing in a 3D optical lattice with interacting spin-orbit-coupled fermions. <i>Physical Review Research</i> , 2019, 1, .	3.6	25
17	Sensitivity to thermal noise of atomic Einstein-Podolsky-Rosen entanglement. <i>Physical Review A</i> , 2013, 87, .	2.5	23
18	Cavity-QED Quantum Simulator of Dynamical Phases of a Bardeen-Cooper-Schrieffer Superconductor. <i>Physical Review Letters</i> , 2021, 126, 173601.	7.8	19

#	ARTICLE	IF	CITATIONS
19	Approximate particle number distribution from direct stochastic sampling of the Wigner function. Physical Review A, 2016, 94, .	2.5	15
20	Detecting Out-of-Time-Order Correlations via Quasiadiabatic Echoes as a Tool to Reveal Quantum Coherence in Equilibrium Quantum Phase Transitions. Physical Review Letters, 2020, 125, 240605.	7.8	15
21	Protocol for Precise Field Sensing in the Optical Domain with Cold Atoms in a Cavity. Physical Review Letters, 2020, 124, 193602.	7.8	15
22	Characterizing the dynamical phase diagram of the Dicke model via classical and quantum probes. Physical Review Research, 2021, 3, .	3.6	13
23	Engineering infinite-range $su(2)$ interactions with spin-orbit-coupled fermions in an optical lattice. Physical Review A, 2022, 105, .	2.5	10
24	Facilitating spin squeezing generated by collective dynamics with single-particle decoherence. Physical Review A, 2020, 102, .	2.5	7
25	Ultracold Atoms for Foundational Tests of Quantum Mechanics. Springer Theses, 2016, , .	0.1	6
26	Tailored generation of quantum states in an entangled spinor interferometer to overcome detection noise. Physical Review A, 2021, 104, .	2.5	6
27	Identifying and harnessing dynamical phase transitions for quantum-enhanced sensing. Physical Review Research, 2021, 3, .	3.6	4
28	Atomic twin beams and violation of a motional-state Bell inequality from a phase-fluctuating quasicondensate source. Physical Review A, 2020, 101, .	2.5	2
29	Atom-light entanglement for precise field sensing in the optical domain. Physical Review A, 2020, 102, .	2.5	1
30	Proposal for a Motional-State Bell Inequality Test with Ultracold Atoms. Springer Theses, 2016, , 57-69.	0.1	0
31	Introduction and Background Physics. Springer Theses, 2016, , 1-43.	0.1	0