

Simon A Haine

List of Publications by Year in descending order

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40
papers

1,061
citations

304368

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414034

32
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all docs

42
docs citations

42
times ranked

718
citing authors

#	ARTICLE	IF	CITATIONS
1	Pumped-Up SU(1,1) Interferometry. <i>Physical Review Letters</i> , 2017, 118, 150401.	2.9	93
2	Optimal and Robust Quantum Metrology Using Interaction-Based Readouts. <i>Physical Review Letters</i> , 2017, 119, 193601.	2.9	79
3	Bose-Einstein condensation in large time-averaged optical ring potentials. <i>New Journal of Physics</i> , 2016, 18, 035003.	1.2	67
4	Generating Controllable Atom-Light Entanglement with a Raman Atom Laser System. <i>Physical Review Letters</i> , 2006, 96, 133601.	2.9	48
5	Observation of shock waves in a large Bose-Einstein condensate. <i>Physical Review A</i> , 2009, 80, .	1.0	48
6	Achieving Peak Brightness in an Atom Laser. <i>Physical Review Letters</i> , 2006, 96, 140403.	2.9	47
7	High-Precision Quantum-Enhanced Gravimetry with a Bose-Einstein Condensate. <i>Physical Review Letters</i> , 2020, 125, 100402.	2.9	41
8	Generating Quadrature Squeezing in an Atom Laser through Self-Interaction. <i>Physical Review Letters</i> , 2007, 99, 010401.	2.9	40
9	Squeezed-light-enhanced atom interferometry below the standard quantum limit. <i>Physical Review A</i> , 2014, 90, .	1.0	38
10	Dynamic scheme for generating number squeezing in Bose-Einstein condensates through nonlinear interactions. <i>Physical Review A</i> , 2009, 80, .	1.0	32
11	Using interaction-based readouts to approach the ultimate limit of detection-noise robustness for quantum-enhanced metrology in collective spin systems. <i>Physical Review A</i> , 2018, 98, .	1.0	30
12	Information-Recycling Beam Splitters for Quantum Enhanced Atom Interferometry. <i>Physical Review Letters</i> , 2013, 110, 053002.	2.9	29
13	Mean-Field Dynamics and Fisher Information in Matter Wave Interferometry. <i>Physical Review Letters</i> , 2016, 116, 230404.	2.9	29
14	Quantum metrology with mixed states: When recovering lost information is better than never losing it. <i>Physical Review A</i> , 2015, 92, .	1.0	28
15	Quantum enhanced measurement of rotations with a spin-1 Bose-Einstein condensate in a ring trap. <i>Physical Review A</i> , 2016, 93, .	1.0	28
16	Robustifying twist-and-turn entanglement with interaction-based readout. <i>Physical Review A</i> , 2018, 97, .	1.0	27
17	Stability of Continuously Pumped Atom Lasers. <i>Physical Review Letters</i> , 2002, 88, 170403.	2.9	26
18	Heisenberg-limited metrology with information recycling. <i>Physical Review A</i> , 2015, 91, .	1.0	26

#	ARTICLE	IF	CITATIONS
19	Quantum noise in bright soliton matterwave interferometry. <i>New Journal of Physics</i> , 2018, 20, 033009.	1.2	25
20	Machine-Designed Sensor to Make Optimal Use of Entanglement-Generating Dynamics for Quantum Sensing. <i>Physical Review Letters</i> , 2020, 124, 060402.	2.9	25
21	Improving cold-atom sensors with quantum entanglement: Prospects and challenges. <i>Applied Physics Letters</i> , 2021, 118, .	1.5	24
22	Self-induced spatial dynamics to enhance spin squeezing via one-axis twisting in a two-component Bose-Einstein condensate. <i>Physical Review A</i> , 2014, 90, .	1.0	23
23	Searching for signatures of quantum gravity in quantum gases. <i>New Journal of Physics</i> , 2021, 23, 033020.	1.2	22
24	Optically trapped atom interferometry using the clock transition of large ⁸⁷ Rb Bose-Einstein condensates. <i>New Journal of Physics</i> , 2011, 13, 065020.	1.2	21
25	Semiclassical limits to the linewidth of an atom laser. <i>Physical Review A</i> , 2007, 75, .	1.0	18
26	Optimal matter-wave gravimetry. <i>Physical Review A</i> , 2018, 98, .	1.0	18
27	A multi-mode model of a non-classical atom laser produced by outcoupling from a Bose-Einstein condensate with squeezed light. <i>Laser Physics Letters</i> , 2005, 2, 597-602.	0.6	17
28	Generation of atom-light entanglement in an optical cavity for quantum enhanced atom interferometry. <i>Physical Review A</i> , 2016, 93, .	1.0	17
29	Quantum Fisher information as a predictor of decoherence in the preparation of spin-cat states for quantum metrology. <i>Physical Review A</i> , 2017, 95, .	1.0	17
30	Optimized fast gates for quantum computing with trapped ions. <i>Physical Review A</i> , 2020, 101, .	1.0	16
31	Surpassing the standard quantum limit in an atom interferometer with four-mode entanglement produced from four-wave mixing. <i>Physical Review A</i> , 2011, 84, .	1.0	15
32	Heisenberg-limited metrology with a squeezed vacuum state, three-mode mixing, and information recycling. <i>Physical Review A</i> , 2015, 91, .	1.0	13
33	Stabilizing an atom laser using spatially selective pumping and feedback. <i>Physical Review A</i> , 2005, 72, .	1.0	9
34	Generating macroscopic superpositions with interacting Bose-Einstein condensates: Multimode speedups and speed limits. <i>Physical Review A</i> , 2018, 98, .	1.0	7
35	From squeezed atom lasers to teleportation of massive articles. <i>European Physical Journal: Special Topics</i> , 2008, 160, 331-342.	1.2	6
36	Spin squeezing of a Bose-Einstein condensate via a quantum nondemolition measurement for quantum-enhanced atom interferometry. <i>Physical Review A</i> , 2021, 103, .	1.0	6

#	ARTICLE	IF	CITATIONS
37	Coherence and linewidth of a continuously pumped atom laser at finite temperature. Physical Review A, 2015, 92, .	1.0	4
38	Classical noise and flux: The limits of multi-state atom lasers. , 2004, , .		0
39	DYNAMICAL EFFECTS OF BACK-COUPPLING ON AN ATOM LASER. , 2004, , .		0
40	Using interaction-based readouts to approach the ultimate limit of detection noise robustness for quantum-enhanced metrology in collective spin systems. , 2019, , .		0