Philipp Treutlein

List of Publications by Year
in descending order

#	Article	IF	Citations
1	Coherent Feedback Cooling of a Nanomechanical Membrane with Atomic Spins. Physical Review X, 2022, 12, .	8.9	10
2	Single-Photon Storage in a Ground-State Vapor Cell Quantum Memory. PRX Quantum, 2022, 3, .	9.2	23
3	Ã‰tude thÃ©orique de la compression de spin nuclÃ©aire par mesure quantique non destructive en continu. Comptes Rendus Physique, 2021, 22, 1-35.	0.9	4
4	Nuclear Spin Squeezing in Helium-3 by Continuous Quantum Nondemolition Measurement. Physical Review Letters, 2021, 127, 013601.	7.8	15
5	Entanglement between Identical Particles Is a Useful and Consistent Resource. Physical Review X, 2020, 10, .	8.9	39
6	Large-range frequency tuning of a narrow-linewidth quantum emitter. Applied Physics Letters, 2020, 117, .	3.3	12
7	Fundamental Limit of Phase Coherence in Two-Component Bose-Einstein Condensates. Physical Review Letters, 2020, 125, 123402.	7.8	3
8	Light-mediated strong coupling between a mechanical oscillator and atomic spins 1 meter apart. Science, 2020, 369, 174-179.	12.6	48
9	An efficient, tunable, and robust source of narrow-band photon pairs at the ⁸⁷Rb D1 line. Optics Express, 2020, 28, 3159.	3.4	12
10	Remote Hamiltonian interactions mediated by light. Physical Review A, 2019, 99, .	2.5	19
11	Rb Vapor Cell Quantum Memory for Single Photons. , 2019, , .		0
12	Does large quantum Fisher information imply Bell correlations?. Physical Review A, 2019, 99, .	2.5	18
13	Spatial entanglement patterns and Einstein-Podolsky-Rosen steering in a Bose-Einstein condensate. , 2019, , .		0
14	Spatial entanglement and Einstein-Podolsky-Rosen steering in a Bose-Einstein condensate. , 2019, , .		0
15	Light-Mediated Collective Atomic Motion in an Optical Lattice Coupled to a Membrane. Physical Review Letters, 2018, 120, 073602.	7.8	22
16	Spatial entanglement patterns and Einstein-Podolsky-Rosen steering in Bose-Einstein condensates. Science, 2018, 360, 409-413.	12.6	191
17	Microwave Device Characterization Using a Widefield Diamond Microscope. Physical Review Applied, 2018, 10, .	3.8	64
18	Quantum metrology with nonclassical states of atomic ensembles. Reviews of Modern Physics, 2018, 90, .	45.6	852

#	Article	IF	Citations
19	On-demand semiconductor source of 780-nm single photons with controlled temporal wave packets. Physical Review B, 2018, 97, .	3.2	17
20	Bell Correlations in a Many-Body System with Finite Statistics. Physical Review Letters, 2017, 119, 170403.	7.8	18
21	Mesoscopic quantum superpositions in bimodal Bose-Einstein condensates: Decoherence and strategies to counteract it. Physical Review A, 2017, 95, .	2.5	26
22	Optimal entanglement witnesses in a split spin-squeezed Bose-Einstein condensate. Physical Review A, 2017, 95, .	2.5	7
23	Simple Atomic Quantum Memory Suitable for Semiconductor Quantum Dot Single Photons. Physical Review Letters, 2017, 119, 060502.	7.8	77
24	Widefield microwave imaging using NV centres. , 2017, , .		0
25	An atomic memory suitable for semiconductor quantum dot single photons. , 2017, , .		1
26	Frequency-tunable microwave field detection in an atomic vapor cell. Applied Physics Letters, 2016, 108, .	3.3	48
27	Bell correlations in a Bose-Einstein condensate. Science, 2016, 352, 441-444.	12.6	141
28	Photon Qubit is Made of Two Colors. Physics Magazine, 2016, 9, .	0.1	5
29	Sideband Rabi spectroscopy of finite-temperature trapped Bose gases. Physical Review A, 2016, 93, .	2.5	4
30	An artificial Rb atom in a semiconductor with lifetime-limited linewidth. Physical Review B, 2015, 92, .	3.2	54
31	Widefield microwave imaging in alkali vapor cells with sub-100Î¼m resolution. New Journal of Physics, 2015, 17, 112002.	2.9	48
32	Imaging Microwave and DC Magnetic Fields in a Vapor-Cell Rb Atomic Clock. IEEE Transactions on Instrumentation and Measurement, 2015, 64, 3629-3637.	4.7	35
33	Long distance coupling of a quantum mechanical oscillator to the internal states of an atomic ensemble. New Journal of Physics, 2015, 17, 043044.	2.9	26
34	Nanomechanical answer to Einstein. Nature Nanotechnology, 2015, 10, 832-833.	31.5	1
35	Imaging the static magnetic field distribution in a vapor cell atomic clock. , 2015, , .		0
36	Sympathetic cooling of a membrane oscillator in a hybrid mechanicalâ€"atomic system. Nature Nanotechnology, 2015, 10, 55-59.	31.5	105

#	Article	IF	Citations
37	Hybrid Mechanical Systems. , 2014, , 327-351.		53
38	Experimental and numerical study of the microwave field distribution in a compact magnetron-type microwave cavity. , 2014, , .		5
39	Sequential quantum-enhanced measurement with an atomic ensemble. Physical Review A, 2014, 89, .	2.5	3
40	A strained couple. Nature Nanotechnology, 2014, 9, 99-100.	31.5	9
41	Quantum Metrology with a Scanning Probe Atom Interferometer. Physical Review Letters, 2013, 111, 143001.	7.8	148
42	Spin squeezing and Einstein-Podolsky-Rosen entanglement of two bimodal condensates in state-dependent potentials. Physical Review A, 2013, 88, .	2.5	23
43	Cavity-enhanced long-distance coupling of an atomic ensemble to a micromechanical membrane. Physical Review A, 2013, 87, .	2.5	60
44	Prospects for storage and retrieval of a quantum-dot single photon in an ultracold<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msup><mml:mrow /><mml:mn>87</mml:mn></mml:msup></mml:math>Rb ensemble. Physical Review A, 2013, 88, .	2.5	18
45	Spatially resolved measurement of relaxation times in a microfabricated vapor cell. , 2013, , .		1
46	Imaging of relaxation times and microwave field strength in a microfabricated vapor cell. Physical Review A, 2013, 88, .	2.5	53
47	Hybrid atom-membrane optomechanics. EPJ Web of Conferences, 2013, 57, 03006.	0.3	2
48	Simple microwave field imaging technique using hot atomic vapor cells. Applied Physics Letters, 2012, 101, .	3.3	47
49	Optomechanics with Ultracold Atoms and SiN Membranes. , 2012, , .		0
50	A Single Spin Feels the Vibrations. Science, 2012, 335, 1584-1585.	12.6	6
51	Coupling ultracold atoms to mechanical oscillators. Comptes Rendus Physique, 2011, 12, 871-887.	0.9	57
52	Realization of an Optomechanical Interface Between Ultracold Atoms and a Membrane. Physical Review Letters, 2011, 107, 223001.	7.8	156
53	Quantum computing implementations with neutral particles. Quantum Information Processing, 2011, 10, 721-753.	2.2	53
54	Spectroscopy of mechanical dissipation in micro-mechanical membranes. Applied Physics Letters, 2011, 99, .	3.3	43

#	Article	IF	Citations
55	Tomographic reconstruction of the Wigner function on the Bloch sphere. New Journal of Physics, 2011, 13, 065019.	2.9	28
56	Single-atom cavity QED and optomicromechanics. Physical Review A, 2010, 81, .	2.5	101
57	Atom-chip-based generation of entanglement for quantum metrology. Nature, 2010, 464, 1170-1173.	27.8	690
58	Resonant Coupling of a Bose-Einstein Condensate to a Micromechanical Oscillator. Physical Review Letters, 2010, 104, 143002.	7.8	120
59	Optical lattices with micromechanical mirrors. Physical Review A, 2010, 82, .	2.5	57
60	Imaging of microwave fields using ultracold atoms. Applied Physics Letters, 2010, 97, .	3.3	58
61	Enhanced and Reduced Atom Number Fluctuations in a BEC Splitter. Physical Review Letters, 2010, 105, 080403.	7.8	73
62	Strong Coupling of a Mechanical Oscillator and a Single Atom. Physical Review Letters, 2009, 103, 063005.	7.8	192
63	Ultracold atoms coupled to micro- and nanomechanical oscillators: Towards hybrid quantum systems. , 2009, , .		0
64	State selective microwave nearfield potentials on atom chips. , 2009, , .		0
65	Coherent manipulation of Boseâ€"Einstein condensates with state-dependent microwave potentials on an atom chip. Nature Physics, 2009, 5, 592-597.	16.7	170
66	Spin squeezing in a bimodal condensate: spatial dynamics and particle losses. European Physical Journal B, 2009, 68, 365-381.	1.5	82
67	Magnetic coupling of a Bose-Einstein condensate to a nanomchanical resonator. , 2007, , .		0
68	Strong atom-cavity coupling observed for trapped single atoms and Bose-Einstein condensates on an atom chip. , 2007, , .		0
69	Bose-Einstein Condensate Coupled to a Nanomechanical Resonator on an Atom Chip. Physical Review Letters, 2007, 99, 140403.	7.8	185
70	Microwave near-fields on atom chips. , 2007, , .		0
71	Quantum information processing in optical lattices and magnetic microtraps. Fortschritte Der Physik, 2006, 54, 702-718.	4.4	89
72	Microwave potentials and optimal control for robust quantum gates on an atom chip. Physical Review A, 2006, 74, .	2.5	108

#	Article	IF	Citations
73	Coherence in Microchip Traps. Physical Review Letters, 2004, 92, 203005.	7.8	212
74	Bright Bose-Einstein Gap Solitons of Atoms with Repulsive Interaction. Physical Review Letters, 2004, 92, 230401.	7.8	614
75	DISPERSION MANAGEMENT AND BRIGHT GAP SOLITONS FOR ATOMIC MATTER WAVES. , 2004, , .		0
76	COHERENT ATOMIC STATES IN MICROTRAPS. , 2004, , .		0
77	Observation of coherent internal-state superpositions near a chip surface. , 2003, , .		0
78	Dispersion Management for Atomic Matter Waves. Physical Review Letters, 2003, 91, 060402.	7.8	119
79	High-brightness atom source for atomic fountains. Physical Review A, 2001, 63, .	2.5	67