Aidan S Arnold

List of Publications by Year in Descending Order

61 papers	1,556 citations	20 h-index	38 g-index
78 ext. papers	1,940 ext. citations	4.1 avg, IF	4.63 L-index

#	Paper	IF	Citations
61	A simple imaging solution for chip-scale laser cooling. *Applied Physics Letters*, **2021**, 119, 184002	3.4	4
60	A simple, powerful diode laser system for atomic physics. *Applied Optics*, **2021**, 60, 5832-5836	1.7	2
59	Gouy phase-matched angular and radial mode conversion in four-wave mixing. *Physical Review A*, **2021**, 103,	2.6	10
58	Roadmap on Atomtronics: State of the art and perspective. *AVS Quantum Science*, **2021**, 3, 039201	10.3	13
57	Stand-alone vacuum cell for compact ultracold quantum technologies. *Applied Physics Letters*, **2021**, 119, 124002	3.4	5
56	Optical characterisation of micro-fabricated Fresnel zone plates for atomic waveguides. *Optics Express*, **2020**, 28, 9072-9081	3.3	3
55	Towards a compact, optically interrogated, cold-atom microwave clock. *Advanced Optical Technologies*, **2020**, 9, 297-303	0.9	2
54	Laser cooling in a chip-scale platform. *Applied Physics Letters*, **2020**, 117, 054001	3.4	13
53	Impact of Laser Frequency Noise in Coherent Population Trapping with Cold Atoms **2019**,		1
52	Cold-atom clock based on a diffractive optic. *Optics Express*, **2019**, 27, 38359-38366	3.3	18
51	Towards a compact atomic clock based on coherent population trapping and the grating magneto-optical trap **2019**,		1
50	Talbot-enhanced, maximum-visibility imaging of condensate interference. *Optica*, **2018**, 5, 80	8.6	9
49	Raman-Ramsey CPT with a grating magneto-optical trap **2018**,		3
48	Holographically controlled three-dimensional atomic population patterns. *Optics Express*, **2018**, 26, 18513-18522	3.3	12
47	Spiral bandwidth of four-wave mixing in Rb vapour. *Communications Physics*, **2018**, 1,	5.4	25
46	Vector Magnetometry Exploiting Phase-Geometry Effects in a Double-Resonance Alignment Magnetometer. *Physical Review Applied*, **2018**, 10,	4.3	14
45	High-precision control of static magnetic field magnitude, orientation, and gradient using optically pumped vapour cell magnetometry. *Review of Scientific Instruments*, **2017**, 88, 043109	1.7	9

44	Grating chips for quantum technologies. *Scientific Reports*, **2017**, 7, 384	4.9	32
43	Orientational effects on the amplitude and phase of polarimeter signals in double-resonance atomic magnetometry. *Physical Review A*, **2017**, 96,	2.6	12
42	Detection of applied and ambient forces with a matter-wave magnetic gradiometer. *Physical Review A*, **2017**, 96,	2.6	2
41	Comparison of beam generation techniques using a phase only spatial light modulator. *Optics Express*, **2016**, 24, 6249-64	3.3	67
40	Comparative simulations of Fresnel holography methods for atomic waveguides. *New Journal of Physics*, **2016**, 18, 025007	2.9	3
39	Design and fabrication of diffractive atom chips for laser cooling and trapping. *Applied Physics B: Lasers and Optics*, **2016**, 122, 172	1.9	16
38	Utilising diffractive optics towards a compact, cold atom clock **2016**,		1
37	The UK National Quantum Technologies Hub in sensors and metrology (Keynote Paper) **2016**,		6
36	Diffraction-grating characterization for cold-atom experiments. *Journal of the Optical Society of America B: Optical Physics*, **2016**, 33, 1271	1.7	19
35	Cavity-enhanced frequency up-conversion in rubidium vapor. *Optics Letters*, **2016**, 41, 2177-80	3	19
34	Phase-space properties of magneto-optical traps utilising micro-fabricated gratings. *Optics Express*, **2015**, 23, 8948-59	3.3	26
33	Optical pattern formation with a two-level nonlinearity. *Physical Review A*, **2015**, 92,	2.6	15
32	Inductively guided circuits for ultracold dressed atoms. *Nature Communications*, **2014**, 5, 5289	17.4	9
31	Inductive dressed ring traps for ultracold atoms. *Journal of Physics B: Atomic, Molecular and Optical Physics*, **2014**, 47, 071001	1.3	7
30	(87)Rb-stabilized 375-MHz Yb:fiber femtosecond frequency comb. *Optics Express*, **2014**, 22, 10494-9	3.3	5
29	Optomechanical self-structuring in a cold atomic gas. *Nature Photonics*, **2014**, 8, 321-325	33.9	59
28	A surface-patterned chip as a strong source of ultracold atoms for quantum technologies. *Nature Nanotechnology*, **2013**, 8, 321-4	28.7	71
27	Diamond heat sinking of terahertz antennas for continuous-wave photomixing. *Journal of Applied Physics*, **2012**, 112, 123109	2.5	6

26	Trans-spectral orbital angular momentum transfer via four-wave mixing in Rb vapor. *Physical Review Letters*, **2012**, 108, 243601	7.4	137
25	Demonstration of an inductively coupled ring trap for cold atoms. *New Journal of Physics*, **2012**, 14, 103047	2.9	21
24	Extending dark optical trapping geometries. *Optics Letters*, **2012**, 37, 2505-7	3	36
23	Spatial interference from well-separated split condensates. *Physical Review A*, **2010**, 81,	2.6	17
22	Spectroscopy and isotope shifts of the 4s3d 1D2–4s5p 1P1 repumping transition in magneto-optically trapped calcium atoms. *Physical Review A*, **2010**, 81,	2.6	6
21	Enhanced frequency up-conversion in Rb vapor. *Optics Express*, **2010**, 18, 17020-6	3.3	61
20	Laser cooling with a single laser beam and a planar diffractor. *Optics Letters*, **2010**, 35, 3453-5	3	26
19	Single-laser, one beam, tetrahedral magneto-optical trap. *Optics Express*, **2009**, 17, 13601-8	3.3	35
18	Reproducible dynamic dark ring lattices for ultracold atoms. *Journal of Physics B: Atomic, Molecular and Optical Physics*, **2008**, 41, 211001	1.3	24
17	Experimental single-impulse magnetic focusing of launched cold atoms. *Journal of Physics B: Atomic, Molecular and Optical Physics*, **2008**, 41, 125302	1.3	8
16	Smooth inductively coupled ring trap for atoms. *Physical Review A*, **2008**, 77,	2.6	29
15	Twisting Light to Trap Atoms. *American Scientist*, **2008**, 96, 226	2.7	3
14	Optical ferris wheel for ultracold atoms. *Optics Express*, **2007**, 15, 8619-25	3.3	229
13	Double-impulse magnetic focusing of launched cold atoms. *New Journal of Physics*, **2006**, 8, 53-53	2.9	4
12	Transport of launched cold atoms with a laser guide and pulsed magnetic fields. *New Journal of Physics*, **2006**, 8, 309-309	2.9	6
11	Large magnetic storage ring for Bose-Einstein condensates. *Physical Review A*, **2006**, 73,	2.6	107
10	Adaptable-radius, time-orbiting magnetic ring trap for Bose–Einstein condensates. *Journal of Physics B: Atomic, Molecular and Optical Physics*, **2004**, 37, L29-L33	1.3	27
9	Diffraction-limited focusing of Bose–Einstein condensates. *Journal of Physics B: Atomic, Molecular and Optical Physics*, **2004**, 37, 485-494	1.3	13

8	Single-impulse magnetic focusing of launched cold atoms. *Journal of Physics B: Atomic, Molecular and Optical Physics*, **2004**, 37, 4435-4450	1.3	8
7	Laser cooling of calcium in a "golden ratio" quasi-electrostatic lattice. *Journal of Physics B: Atomic, Molecular and Optical Physics*, **2003**, 36, 1933-1942	1.3	7
6	Adaptive inelastic magnetic mirror for Bose-Einstein condensates. *Physical Review A*, **2002**, 65,	2.6	31
5	Bose-Einstein condensates in "giant" toroidal magnetic traps. *Journal of Modern Optics*, **2002**, 49, 959-964	1.1	14
4	Coherence length for a trapped Bose gas. *Journal of Physics B: Atomic, Molecular and Optical Physics*, **2000**, 33, 4177-4191	1.3	11
3	Atomic density and temperature distributions in magneto-optical traps. *Journal of the Optical Society of America B: Optical Physics*, **2000**, 17, 497	1.7	12
2	A simple extended-cavity diode laser. *Review of Scientific Instruments*, **1998**, 69, 1236-1239	1.7	143
1	Nonlinear Models of the Bump Cepheid HV 905 and the Distance Modulus to the Large Magellanic Cloud. *Astrophysical Journal*, **1997**, 485, L25-L28	4.7	31