Elizabeth A Donley

List of Publications by Year
in descending order

101 papers	4,835 citations	159358 30 h-index	91712 69 g-index
104 all docs	104 docs citations	104 times ranked	3183 citing authors

#	Article	IF	Citations
1	Dynamics of collapsing and exploding Boseâ€“Einstein condensates. Nature, 2001, 412, 295-299.	13.7	670
2	Atomâ€“molecule coherence in a Boseâ€“Einstein condensate. Nature, 2002, 417, 529-533.	13.7	600
3	Controlled Collapse of a Bose-Einstein Condensate. Physical Review Letters, 2001, 86, 4211-4214.	2.9	375
4	Single-Atom Optical Clock with High Accuracy. Physical Review Letters, 2006, 97, 020801.	2.9	251
5	A comparison of molecular hyperpolarizabilities from gas and liquid phase measurements. Journal of Chemical Physics, 1998, 108, 849-856.	1.2	240
6	Atomic Sensors â€“ A Review. IEEE Sensors Journal, 2011, 11, 1749-1758.	2.4	231
7	SINGLE-MOLECULE SPECTROSCOPY. Annual Review of Physical Chemistry, 1997, 48, 181-212.	4.8	203
8	NIST-F1: recent improvements and accuracy evaluations. Metrologia, 2005, 42, 411-422.	0.6	169
9	First accuracy evaluation of NIST-F2. Metrologia, 2014, 51, 174-182.	0.6	153
10	Double-pass acousto-optic modulator system. Review of Scientific Instruments, 2005, 76, 063112.	0.6	145
11	Evanescent-wave guiding of atoms in hollow optical fibers. Physical Review A, 1996, 53, R648-R651.	1.0	133
12	Very-high-precision bound-state spectroscopy near a85RbFeshbach resonance. Physical Review A, 2003, 67, .	1.0	116
13	Microscopic Dynamics in a Strongly Interacting Bose-Einstein Condensate. Physical Review Letters, 2002, 89, 010401.	2.9	87
14	A comparison of calculated and experimental hyperpolarizabilities for acetonitrile in gas and liquid phases. Journal of Chemical Physics, 1993, 98, 5595-5603.	1.2	83
15	Cold-atom double-<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>Î›</mml:mi></mml:math>coherent population trapping clock. Physical Review A, 2013, 88, .	1.0	68
16	Glass-blown spherical microcells for chip-scale atomic devices. Sensors and Actuators A: Physical, 2008, 143, 175-180.	2.0	63
17	Optical hyperpolarization and NMR detection of 129Xe on a microfluidic chip. Nature Communications, 2014, 5, 3908.	5.8	58
18	Nuclear magnetic resonance gyroscopes. , 2010, , .		54

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19	Optical-dipole-force fiber guiding and heating of atoms. Physical Review A, 1997, 55, 3684-3696.	1.0	52
20	Low-Drift Coherent Population Trapping Clock Based on Laser-Cooled Atoms and High-Coherence Excitation Fields. Physical Review Applied, 2017, 8, .	1.5	46
21	Nuclear quadrupole resonances in compact vapor cells: The crossover between the NMR and the nuclear quadrupole resonance interaction regimes. Physical Review A, 2009, 79, .	1.0	43
22	Low helium permeation cells for atomic microsystems technology. Optics Letters, 2016, 41, 2775.	1.7	42
23	Improved characterization of elastic scattering near a Feshbach resonance in85Rb. Physical Review A, 2001, 64, .	1.0	38
24	Operation of the NIST-F1 caesium fountain primary frequency standard with a maser ensemble, including the impact of frequency transfer noise. Metrologia, 2005, 42, 423-430.	0.6	36
25	Demonstration of high-performance compact magnetic shields for chip-scale atomic devices. Review of Scientific Instruments, 2007, 78, 083102.	0.6	35
26	Light shifts in a pulsed cold-atom coherent-population-trapping clock. Physical Review A, 2015, 91, .	1.0	35
27	NIST on a Chip: Realizing SI units with microfabricated alkali vapour cells. Journal of Physics: Conference Series, 2016, 723, 012056.	0.3	35
28	High contrast dark resonances in a cold-atom clock probed with counterpropagating circularly polarized beams. Applied Physics Letters, 2017, 111, .	1.5	35
29	Quantum-based microwave power measurements: Proof-of-concept experiment. Review of Scientific Instruments, 2004, 75, 2575-2580.	0.6	34
30	Coupling Strength Distributions for Dynamic Interactions Experienced by Probe Molecules in a Polymer Host. Journal of Physical Chemistry A, 1999, 103, 2282-2289.	1.1	32
31	Single-Source Multiaxis Cold-Atom Interferometer in a Centimeter-Scale Cell. Physical Review Applied, 2019, 12, .	1.5	32
32	Point source atom interferometry with a cloud of finite size. Applied Physics Letters, 2016, 109, .	1.5	31
33	The distribution of line widths of single probe molecules in a crystalline host at milliKelvin temperatures. Journal of Luminescence, 1999, 83-84, 255-259.	1.5	30
34	High-Accuracy Measurement of the Blackbody Radiation Frequency Shift of the Ground-State Hyperfine Transition inCs133. Physical Review Letters, 2014, 112, 050801.	2.9	25
35	The hyperpolarizability dispersion of neon is not anomalous. Chemical Physics Letters, 1992, 195, 591-595.	1.2	24
36	Rubidium vapor cell with integrated Bragg reflectors for compact atomic MEMS. Sensors and Actuators A: Physical, 2009, 154, 295-303.	2.0	24

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37	Ramsey Spectroscopy with Displaced Frequency Jumps. Physical Review Letters, 2019, 122, 113601.	2.9	24
38	Luminescence lifetimes of single molecules in disordered media. Journal of Chemical Physics, 2001, 114, 9993-9997.	1.2	21
39	General Methods for Suppressing the Light Shift in Atomic Clocks Using Power Modulation. Physical Review Applied, 2020, 14, .	1.5	21
40	Zeroâ€œphonon lines of single molecules in polyethylene down to millikelvin temperatures. Journal of Luminescence, 2000, 87-89, 109-114.	1.5	20
41	Cryogenic fountain development at NIST and INRIM: preliminary characterization. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2010, 57, 600-605.	1.7	20
42	Atom number in magneto-optic traps with millimeter scale laser beams. Optics Letters, 2013, 38, 661.	1.7	20
43	Recent Improvements in NIST-F1 and a Resulting Accuracy of<tex>$delta f/f=0.61times 10^-15$</tex>. IEEE Transactions on Instrumentation and Measurement, 2005, 54, 842-845.	2.4	19
44	ac Stark shifts of dark resonances probed with Ramsey spectroscopy. Physical Review A, 2018, 98, .	1.0	19
45	A cold-atom beam clock based on coherent population trapping. Applied Physics Letters, 2019, 115, 033503.	1.5	19
46	Reduction of light shifts in Ramsey spectroscopy with a combined error signal. Applied Physics Letters, 2019, 114, .	1.5	19
47	Hyperpolarizabilities measured for interacting molecular pairs. Chemical Physics Letters, 1993, 215, 156-162.	1.2	18
48	PARCS: NASAâ€™s laser-cooled atomic clock in space. Advances in Space Research, 2005, 36, 107-113.	1.2	18
49	A low-power reversible alkali atom source. Applied Physics Letters, 2017, 110, .	1.5	18
50	An optimized microfabricated platform for the optical generation and detection of hyperpolarized 129Xe. Scientific Reports, 2017, 7, 43994.	1.6	18
51	Magneto-optic trap using a reversible, solid-state alkali-metal source. Optics Letters, 2019, 44, 3002.	1.7	18
52	Spectral diffusion in polyethylene: Single-molecule studies performed between 30 mK and 1.8 K. Journal of Chemical Physics, 2000, 113, 9294-9299.	1.2	16
53	Combined error signal in Ramsey spectroscopy of clock transitions. New Journal of Physics, 2018, 20, 123016.	1.2	16
54	Differential atomic magnetometry based on a diverging laser beam. Applied Physics Letters, 2007, 91, .	1.5	15

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55	Offset phase locking of noisy diode lasers aided by frequency division. Review of Scientific Instruments, 2011, 82, 083110.	0.6	15
56	Dynamic Characterization of an Alkali-Ion Battery as a Source for Laser-Cooled Atoms. Physical Review Applied, 2020, 13, .	1.5	14
57	Some simple mechanisms of multiphoton excitation in many-level systems. Molecular Physics, 2001, 99, 1275-1287.	0.8	13
58	Atom-number amplification in a magneto-optical trap via stimulated light forces. Physical Review A, 2012, 85, .	1.0	13
59	A new microwave synthesis chain for the primary frequency standard NIST-F1. , 0, , .		12
60	Single molecule microscopy: peak-frequency trajectories and linewidth distribution. Optical Materials, 1998, 9, 376-380.	1.7	11
61	Statistics for Single Molecule Spectroscopy Data. Single Molecules, 2001, 2, 23-30.	1.7	10
62	Optical Molasses Loaded From a Low-Velocity Intense Source of Atoms: An Atom Source for Improved Atomic Fountains. IEEE Transactions on Instrumentation and Measurement, 2005, 54, 1905-1910.	2.4	8
63	Active stabilization of alkali-atom vapor density with a solid-state electrochemical alkali-atom source. Optics Express, 2018, 26, 3696.	1.7	8
64	Cesium Primary Frequency References. Japanese Journal of Applied Physics, 2004, 43, 2803-2807.	0.8	6
65	On the power dependence of extraneous microwave fields in atomic frequency standards. , 0, , .		5
66	CHIP-SCALE ATOMIC DEVICES: PRECISION ATOMIC INSTRUMENTS BASED ON MEMS. , 2009, , .		5
67	Statistics of a single terrylene molecule in hexadecane. Journal of Luminescence, 2000, 86, 175-180.	1.5	4
68	Electronic Energy Relaxation and Transition Frequency Jumps of Single Molecules at 30 mK. Physical Review Letters, 2001, 87, 015504.	2.9	4
69	A quantum-based microwave power measurement performed with a miniature atomic fountain. , 0, , .		4
70	Measurement of dynamic end-to-end cavity phase shifts in cesium-fountain frequency standards. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2004, 51, 652-653.	1.7	3
71	Spherical rubidium vapor cells fabricated by micro glass blowing. , 2007, , .		3
72	The cryogenic fountain ITCsF2. , 2009, , .		3

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73	Compact atom-interferometer gyroscope based on an expanding ball of atoms. Journal of Physics: Conference Series, 2016, 723, 012058.	0.3	3
74	Robust inertial sensing with point-source atom interferometry for interferograms spanning a partial period. Optics Express, 2020, 28, 34516.	1.7	3
75	Progress towards the second-generation atomic fountain clock at NIST. , 0, , .		2
76	Frequency biases in a cold-atom coherent population trapping clock. , 2014, , .		2
77	Gas pump with a magnetically coupled piston. Review of Scientific Instruments, 1993, 64, 2399-2400.	0.6	1
78	Development of a quantum based microwave power measurement. , 0, , .		1
79	Laser cooling and launching performance in a (1,1,1)-geometry atomic fountain. , 0, , .		1
80	Towards a compact cold atom frequency standard based on coherent population trapping. , 2010, , .		1
81	Status of a compact cold-atom CPT frequency standard. , 2011, , .		1
82	Frequency shift mitigation in a cold-atom CPT clock. , 2016, , .		1
83	NIST on a chip with alkali vapor cells: Initial results. , 2016, , .		1
84	Measurement of dynamic end-to-end cavity phase shifts in cesium-fountain frequency standards. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2004, 51, 652-653.	1.7	1
85	Chip-scale MOT for Microsystems Technology. , 2016, , .		1
86	Progress on a miniature laser-cooled cesium fountain frequency standard. , 0, , .		0
87	Atom-Molecule Coherence in 85Rb BEC. , 2005, , 311-319.		0
88	Absolute Optical Frequency Measurements with a Fractional Frequency Uncertainty at 1 Õ10Â¿15. , 2006, , .		0
89	Number enhancement for compact laser-cooled atomic samples by use of stimulated radiation forces. , 2010, , .		0
90	MOT loading enhancement with stimulated light forces. , 2011, , .		0

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91	A compact cold-atom frequency standard based on coherent population trapping. , 2012, , .		0
92	A View on Energy Transfer Between Cold Atoms. Science, 2013, 342, 942-943.	6.0	0
93	Cancellation of Doppler shifts in a cold-atom CPT clock. , 2013, , .		0
94	Dependence of scale factor on initial cloud size for an atom-ball gyroscope. , 2016, , .		0
95	Extended source interferometry in the compact regime. , 2016, , .		0
96	Analytical tools for point source interferometry. , 2017, , .		0
97	Trade-offs in size and performance for a point source interferometer gyroscope. , 2017, , .		0
98	A Cold Atomic Beam Ramsey CPT Clock. , 2018, , .		0
99	Editorial Introduction to the Special Issue on the IEEE International Frequency Control Symposium (IFCS) and European Frequency and Time Forum (EFTF). IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2018, 65, 897-897.	1.7	0
100	QUANTUM IMPLOSIONS AND EXPLOSIONS IN A 85RB BEC. , 2002, , .		0
101	Atomâ€"Molecule Coherence Near a Feshbach Resonance in a Bose-Einstein Condensate. , 2003, , .		0