Vladan VuletiÄ

List of Publications by Year
in descending order

131 papers	15,261 citations	19657 61 h-index	17105 122 g-index
132 all docs	132 docs citations	132 times ranked	8801 citing authors

#	Article	IF	Citations
1	Dispersive optical systems for scalable Raman driving of hyperfine qubits. Physical Review A, 2022, 105, .	2.5	8
2	Any-To-Any Connected Cavity-Mediated Architecture for Quantum Computing with Trapped Ions or Rydberg Arrays. PRX Quantum, 2022, 3, .	9.2	15
3	Collective Spin-Light and Light-Mediated Spin-Spin Interactions in an Optical Cavity. PRX Quantum, 2022, 3, .	9.2	20
4	A quantum processor based on coherent transport of entangled atom arrays. Nature, 2022, 604, 451-456.	27.8	213
5	Evidence of Two-Source King Plot Nonlinearity in Spectroscopic Search for New Boson. Physical Review Letters, 2022, 128, 163201.	7.8	16
6	Quantum optimization of maximum independent set using Rydberg atom arrays. Science, 2022, 376, 1209-1215.	12.6	124
7	Extreme Spin Squeezing via Optimized One-Axis Twisting and Rotations. Physical Review Applied, 2022, 17, .	3.8	9
8	Time-reversal-based quantum metrology with many-body entangled states. Nature Physics, 2022, 18, 925-930.	16.7	40
9	Quantum effects in the Aubry transition. Physical Review Research, 2021, 3, .	3.6	4
10	Quantum Simulators: Architectures and Opportunities. PRX Quantum, 2021, 2, .	9.2	229
11	Controlling quantum many-body dynamics in driven Rydberg atom arrays. Science, 2021, 371, 1355-1359.	12.6	186
12	Fast Preparation and Detection of a Rydberg Qubit Using Atomic Ensembles. Physical Review Letters, 2021, 127, 050501.	7.8	25
13	Quantum phases of matter on a 256-atom programmable quantum simulator. Nature, 2021, 595, 227-232.	27.8	458
14	Entanglement transport and a nanophotonic interface for atoms in optical tweezers. Science, 2021, 373, 1511-1514.	12.6	52
15	Probing topological spin liquids on a programmable quantum simulator. Science, 2021, 374, 1242-1247.	12.6	293
16	Trapping <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mmultiscripts><mml:mi>Yb</mml:mi><mml:mprescripts /><mml:none /><mml:mn>171</mml:mn></mml:mmultiscripts></mml:math> atoms into a one-dimensional optical lattice with a small waist. Physical Review A, 2020, 102, .	2.5	4
17	Evidence for Nonlinear Isotope Shift in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msup><mml:mrow><mml:mi>Yb</mml:mi></mml:mrow><mml:mrow><mml:mo>+</mml:mo></m Search for New Boson. Physical Review Letters, 2020, 125, 123002.	7.8	67
18	Entanglement on an optical atomic-clock transition. Nature, 2020, 588, 414-418.	27.8	118

#	Article	IF	Citations
19	Repulsive photons in a quantum nonlinear medium. Nature Physics, 2020, 16, 921-925.	16.7	26
20	Heralded Interaction Control between Quantum Systems. Physical Review Letters, 2020, 124, 223602.	7.8	4
21	Strong Coupling of Two Individually Controlled Atoms via a Nanophotonic Cavity. Physical Review Letters, 2020, 124, 063602.	7.8	66
22	Cooling of a levitated nanoparticle to the motional quantum ground state. Science, 2020, 367, 892-895.	12.6	367
23	Kinks and nanofriction: Structural phases in few-atom chains. Physical Review Research, 2020, 2, .	3.6	9
24	Generation and manipulation of SchrÃ¶dinger cat states in Rydberg atom arrays. Science, 2019, 365, 570-574.	12.6	375
25	Parallel Implementation of High-Fidelity Multiqubit Gates with Neutral Atoms. Physical Review Letters, 2019, 123, 170503.	7.8	329
26	Strongly Correlated Quantum Gas Prepared by Direct Laser Cooling. Physical Review Letters, 2019, 123, 173401.	7.8	11
27	Geometrically asymmetric optical cavity for strong atom-photon coupling. Physical Review A, 2019, 99, .	2.5	17
28	Direct Laser Cooling to Bose-Einstein Condensation in a Dipole Trap. Physical Review Letters, 2019, 122, 203202.	7.8	53
29	Near-Unitary Spin Squeezing in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mmultiscripts><mml:mrow><mml:mi>Yb</mml:mi></mml:mrow><mml:mprescripts /><mml:none /><mml:mrow><mml:mn>171</mml:mn></mml:mrow></mml:mmultiscripts></mml:mrow></mml:math>. Physical Review Letters, 2019, 122, 223203.	7.8	68
30	Cavity Cooling of a Levitated Nanosphere by Coherent Scattering. Physical Review Letters, 2019, 122, 123602.	7.8	111
31	Quantum Kibbleâ€“Zurek mechanism and critical dynamics on a programmable Rydberg simulator. Nature, 2019, 568, 207-211.	27.8	298
32	Integrating Neural Networks with a Quantum Simulator for State Reconstruction. Physical Review Letters, 2019, 123, 230504.	7.8	90
33	Robust kHz-linewidth distributed Bragg reflector laser with optoelectronic feedback. Optics Express, 2019, 27, 37714.	3.4	4
34	Single-Atom Heat Machines Enabled by Energy Quantization. Physical Review Letters, 2018, 120, 170601.	7.8	41
35	Observation of three-photon bound states in a quantum nonlinear medium. Science, 2018, 359, 783-786.	12.6	99
36	Squeezing on Momentum States for Atom Interferometry. Physical Review Letters, 2018, 120, 033601.	7.8	40

#	Article	IF	Citations
37	Impact of non-unitary spin squeezing on atomic clock performance. New Journal of Physics, 2018, 20, 103019.	2.9	19
38	High-Fidelity Control and Entanglement of Rydberg-Atom Qubits. Physical Review Letters, 2018, 121, 123603.	7.8	274
39	Symmetry-protected collisions between strongly interacting photons. Nature, 2017, 542, 206-209.	27.8	65
40	Strictly nonclassical behavior of a mesoscopic system. Physical Review A, 2017, 95, .	2.5	1
41	Multislip Friction with a Single Ion. Physical Review Letters, 2017, 119, 043601.	7.8	10
42	Creation of a Bose-condensed gas of ⁸⁷ Rb by laser cooling. Science, 2017, 358, 1078-1080.	12.6	67
43	Probing many-body dynamics on a 51-atom quantum simulator. Nature, 2017, 551, 579-584.	27.8	1,463
44	Cavity Cooling of Many Atoms. Physical Review Letters, 2017, 118, 183601.	7.8	26
45	Two-axis-twisting spin squeezing by multipass quantum erasure. Physical Review A, 2017, 96, .	2.5	22
46	Technologies for trapped-ion quantum information systems. Quantum Information Processing, 2016, 15, 5351-5383.	2.2	17
47	Effective Field Theory for Rydberg Polaritons. Physical Review Letters, 2016, 117, 113601.	7.8	35
48	Quantum Network of Atom Clocks: A Possible Implementation with Neutral Atoms. Physical Review Letters, 2016, 117, 060506.	7.8	29
49	Large conditional single-photon cross-phase modulation. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 9740-9744.	7.1	63
50	Partially Nondestructive Continuous Detection of Individual Traveling Optical Photons. Physical Review Letters, 2016, 116, 033602.	7.8	14
51	Atom-by-atom assembly of defect-free one-dimensional cold atom arrays. Science, 2016, 354, 1024-1027.	12.6	534
52	Observation of Aubry-type transition in finite atom chains via friction. Nature Materials, 2016, 15, 717-721.	27.5	65
53	Entangled collective-spin states of atomic ensembles under nonuniform atom-light interaction. Physical Review A, 2015, 92, .	2.5	29
54	Carving Complex Many-Atom Entangled States by Single-Photon Detection. Physical Review Letters, 2015, 115, 250502.	7.8	55

#	ARTICLE	IF	CITATIONS
55	Note: Fast compact laser shutter using a direct current motor and three-dimensional printing. Review of Scientific Instruments, 2015, 86, 126105.	1.3	10
56	Two-color magneto-optical trap with small magnetic field for ytterbium. Journal of Physics B: Atomic, Molecular and Optical Physics, 2015, 48, 155302.	1.5	12
57	Little big photon. Europhysics News, 2015, 46, 18-21.	0.3	0
58	Tuning friction atom-by-atom in an ion-crystal simulator. Science, 2015, 348, 1115-1118.	12.6	101
59	Entanglement with negative Wigner function of almost 3,000 atoms heralded by one photon. Nature, 2015, 519, 439-442.	27.8	170
60	Preventing and reversing vacuum-induced optical losses in high-finesse tantalum (V) oxide mirror coatings. Optics Express, 2015, 23, 18014.	3.4	22
61	Efficient fiber-optical interface for nanophotonic devices. Optica, 2015, 2, 70.	9.3	119
62	Velocity tuning of friction with two trapped atoms. Nature Physics, 2015, 11, 915-919.	16.7	59
63	Passive intrinsic-linewidth narrowing of ultraviolet extended-cavity diode laser by weak optical feedback. Optics Express, 2014, 22, 11592.	3.4	11
64	Quantum nonlinear opticsÂâ€”Âphoton by photon. Nature Photonics, 2014, 8, 685-694.	31.4	539
65	Cross Modulation of Two Laser Beams at the Individual-Photon Level. Physical Review Letters, 2014, 113, 113603.	7.8	8
66	Nanophotonic quantum phase switch with a single atom. Nature, 2014, 508, 241-244.	27.8	448
67	All-Optical Switch and Transistor Gated by One Stored Photon. Science, 2013, 341, 768-770.	12.6	273
68	Attractive photons in a quantum nonlinear medium. Nature, 2013, 502, 71-75.	27.8	331
69	Dissipative Preparation of Spin Squeezed Atomic Ensembles in a Steady State. Physical Review Letters, 2013, 110, 120402.	7.8	139
70	Amplified by randomness. Nature Physics, 2013, 9, 325-326.	16.7	2
71	Coupling a Single Trapped Atom to a Nanoscale Optical Cavity. Science, 2013, 340, 1202-1205.	12.6	393
72	One-dimensional array of ion chains coupled to an optical cavity. New Journal of Physics, 2013, 15, 053001.	2.9	41

#	Article	IF	Citations
73	Generating entangled spin states for quantum metrology by single-photon detection. Physical Review A, 2013, 88, .	2.5	25
74	Suppression of Ion Transport due to Long-Lived Subwavelength Localization by an Optical Lattice. Physical Review Letters, 2013, 111, 163002.	7.8	39
75	Coherence and Raman Sideband Cooling of a Single Atom in an Optical Tweezer. Physical Review Letters, 2013, 110, 133001.	7.8	166
76	Long-external-cavity distributed Bragg reflector laser with subkilohertz intrinsic linewidth. Optics Letters, 2012, 37, 1989.	3.3	25
77	Micromotion-Induced Limit to Atom-Ion Sympathetic Cooling in Paul Traps. Physical Review Letters, 2012, 109, 253201.	7.8	121
78	Unitary cavity spin squeezing by quantum erasure. Physical Review A, 2012, 85, .	2.5	36
79	Switching and Counting With Atomic Vapors in Photonic-Crystal Fibers. IEEE Journal of Selected Topics in Quantum Electronics, 2012, 18, 1747-1753.	2.9	9
80	Collective State Measurement of Mesoscopic Ensembles with Single-Atom Resolution. Physical Review Letters, 2012, 109, 133603.	7.8	60
81	An almost lightless laser. Nature, 2012, 484, 43-44.	27.8	7
82	Quantum nonlinear optics with single photons enabled by strongly interacting atoms. Nature, 2012, 488, 57-60.	27.8	679
83	Laser-cooled atoms inside a hollow-core photonic-crystal fiber. Physical Review A, 2011, 83, .	2.5	70
84	Generating Entanglement and Squeezed States of Nuclear Spins in Quantum Dots. Physical Review Letters, 2011, 107, 206806.	7.8	53
85	Optomechanical Cavity Cooling of an Atomic Ensemble. Physical Review Letters, 2011, 107, 143005.	7.8	78
86	Interaction between Atomic Ensembles and Optical Resonators. Advances in Atomic, Molecular and Optical Physics, 2011, 60, 201-237.	2.3	79
87	Vacuum-Induced Transparency. Science, 2011, 333, 1266-1269.	12.6	117
88	Multi-layer atom chips for atom tunneling experiments near the chip surface. Sensors and Actuators A: Physical, 2011, 165, 101-106.	4.1	12
89	Vacuum-induced transparency. , 2011, , .		0
90	Entangled quartet. Nature, 2010, 468, 384-385.	27.8	1

#	Article	IF	Citations
91	Squeezing the collective spin of a dilute atomic ensemble by cavity feedback. Physical Review A, 2010, 81, .	2.5	114
92	Fast entanglement distribution with atomic ensembles and fluorescent detection. Physical Review A, 2010, 81, .	2.5	16
93	States of an Ensemble of Two-Level Atoms with Reduced Quantum Uncertainty. Physical Review Letters, 2010, 104, 073604.	7.8	250
94	Implementation of Cavity Squeezing of a Collective Atomic Spin. Physical Review Letters, 2010, 104, 073602.	7.8	366
95	Orientation-Dependent Entanglement Lifetime in a Squeezed Atomic Clock. Physical Review Letters, 2010, 104, 250801.	7.8	137
96	Producing squeezed input states for an atomic clock using an optical cavity. , 2009, , .		0
97	Observation of Cold Collisions between Trapped Ions and Trapped Atoms. Physical Review Letters, 2009, 102, 223201.	7.8	228
98	Cavity Sideband Cooling of a Single Trapped Ion. Physical Review Letters, 2009, 103, 103001.	7.8	99
99	Efficient All-Optical Switching Using Slow Light within a Hollow Fiber. Physical Review Letters, 2009, 102, 203902.	7.8	412
100	Trapping and Manipulation of Isolated Atoms Using Nanoscale Plasmonic Structures. Physical Review Letters, 2009, 103, 123004.	7.8	96
101	SPIN SQUEEZING ON AN ATOMIC-CLOCK TRANSITION. , 2009, , .		0
102	Bose-Einstein interferometry and its applications to precision undersea navigation. , 2008, , .		3
103	Crystallization of strongly interacting photons in a nonlinear optical fibre. Nature Physics, 2008, 4, 884-889.	16.7	170
104	Microchips for single atom detection and spin squeezing. , 2007, , .		0
105	Interfacing Collective Atomic Excitations and Single Photons. Physical Review Letters, 2007, 98, 183601.	7.8	133
106	Single-photon bus connecting spin-wave quantum memories. Nature Physics, 2007, 3, 765-769.	16.7	80
107	When superatoms talk photons. Nature Physics, 2006, 2, 801-802.	16.7	30
108	A High-Brightness Source of Narrowband, Identical-Photon Pairs. Science, 2006, 313, 74-77.	12.6	171

#	Article	IF	Citations
109	Collective light forces on atoms in resonators. Journal of Physics B: Atomic, Molecular and Optical Physics, 2005, 38, S605-S615.	1.5	15
110	On-Demand Superradiant Conversion of Atomic Spin Gratings into Single Photons with High Efficiency. Physical Review Letters, 2005, 95, 133601.	7.8	82
111	Observation of Collective Friction Forces due to Spatial Self-Organization of Atoms: From Rayleigh to Bragg Scattering. Physical Review Letters, 2003, 91, 203001.	7.8	285
112	CONTROLLED ATOM-MOLECULE INTERACTIONS IN ULTRACOLD GASES. Modern Physics Letters A, 2003, 18, 398-401.	1.2	0
113	Proposal for Observation of a Hidden Nuclear Population Inversion. Hyperfine Interactions, 2002, 143, 7-11.	0.5	2
114	High precision Feshbach spectroscopy of ultracold cesium collisions. Nuclear Physics A, 2001, 684, 641-645.	1.5	7
115	Three-dimensional cavity Doppler cooling and cavity sideband cooling by coherent scattering. Physical Review A, 2001, 64, .	2.5	94
116	High Resolution Feshbach Spectroscopy of Cesium. Physical Review Letters, 2000, 85, 2717-2720.	7.8	106
117	Beyond Optical Molasses: 3D Raman Sideband Cooling of Atomic Cesium to High Phase-Space Density. Physical Review Letters, 2000, 84, 439-442.	7.8	197
118	Laser Cooling of Atoms, Ions, or Molecules by Coherent Scattering. Physical Review Letters, 2000, 84, 3787-3790.	7.8	232
119	Suppression of Atomic Radiative Collisions by Tuning the Ground State Scattering Length. Physical Review Letters, 1999, 83, 943-946.	7.8	45
120	Observation of Low-Field Feshbach Resonances in Collisions of Cesium Atoms. Physical Review Letters, 1999, 82, 1406-1409.	7.8	160
121	A broad emitter diode laser system for lithium spectroscopy. Applied Physics B: Lasers and Optics, 1998, 67, 163-166.	2.2	17
122	Bichromatic frequency conversion in potassium niobate. Optics Letters, 1998, 23, 436.	3.3	3
123	Degenerate Raman Sideband Cooling of Trapped Cesium Atoms at Very High Atomic Densities. Physical Review Letters, 1998, 81, 5768-5771.	7.8	180
124	Microscopic Magnetic Quadrupole Trap for Neutral Atoms with Extreme Adiabatic Compression. Physical Review Letters, 1998, 80, 1634-1637.	7.8	44
125	Steep magnetic trap for ultra cold atoms. Europhysics Letters, 1996, 36, 349-354.	2.0	25
126	A compact grating-stabilized diode laser system for atomic physics. Optics Communications, 1995, 117, 541-549.	2.1	325

#	Article	IF	Citations
127	All solid state laser source for tunable blue and ultraviolet radiation. Applied Physics Letters, 1995, 66, 2318-2320.	3.3	98
128	Design for a compact tunable Ti:sapphire laser. Optics Letters, 1995, 20, 297.	3.3	36
129	Generation of cylindrically symmetric magnetic fields with permanent magnets and Âµ-metal. Applied Physics B: Lasers and Optics, 1994, 59, 195-201.	2.2	6
130	Optical pumping saturation effect in selective reflection. Optics Communications, 1994, 108, 77-83.	2.1	19
131	Measurement of cesium resonance line self-broadening and shift with doppler-free selective reflection spectroscopy. Optics Communications, 1993, 99, 185-190.	2.1	46