VerÃ²nica Ahufinger

List of Publications by Year
in descending order

67 papers	3,578 citations	361413 20 h-index	168389 53 g-index
68 all docs	68 docs citations	68 times ranked	2804 citing authors

#	Article	IF	Citations
1	Ultracold atomic gases in optical lattices: mimicking condensed matter physics and beyond. Advances in Physics, 2007, 56, 243-379.	14.4	1,712
2	Spatial adiabatic passage: a review of recent progress. Reports on Progress in Physics, 2016, 79, 074401.	20.1	68
3	Disordered ultracold atomic gases in optical lattices: A case study of Fermi-Bose mixtures. Physical Review A, 2005, 72, .	2.5	56
4	Creation and mobility of discrete solitons in Bose-Einstein condensates. Physical Review A, 2004, 69, .	2.5	54
5	Blue-detuned optical ring trap for Bose-Einstein condensates based on conical refraction. Optics Express, 2015, 23, 1638.	3.4	54
6	Soliton-based matter-wave interferometer. Physical Review A, 2013, 88, .	2.5	53
7	Coherent patterning of matter waves with subwavelength localization. Physical Review A, 2009, 79, .	2.5	50
8	Trapped Ion Chain as a Neural Network: Error Resistant Quantum Computation. Physical Review Letters, 2007, 98, 023003.	7.8	42
9	Light spectral filtering based on spatial adiabatic passage. Light: Science and Applications, 2013, 2, e90-e90.	16.6	42
10	Topological edge states with ultracold atoms carrying orbital angular momentum in a diamond chain. Physical Review A, 2019, 99, .	2.5	36
11	Adiabatic splitting, transport, and self-trapping of a Bose-Einstein condensate in a double-well potential. Physical Review A, 2010, 81, .	2.5	34
12	Second-order topological corner states with ultracold atoms carrying orbital angular momentum in optical lattices. Physical Review B, 2019, 100, .	3.2	31
13	Damping of Josephson Oscillations in Strongly Correlated One-Dimensional Atomic Gases. Physical Review Letters, 2018, 121, 090404.	7.8	30
14	Artificial gauge field switching using orbital angular momentum modes in optical waveguides. Light: Science and Applications, 2020, 9, 150.	16.6	30
15	Adiabatic Passage of Light in CMOS-Compatible Silicon Oxide Integrated Rib Waveguides. IEEE Photonics Technology Letters, 2012, 24, 536-538.	2.5	28
16	Disordered spinor Bose-Hubbard model. Physical Review A, 2011, 83, .	2.5	26
17	Interaction-induced topological properties of two bosons in flat-band systems. Physical Review Research, 2020, 2, .	3.6	26
18	Topological edge states and Aharanov-Bohm caging with ultracold atoms carrying orbital angular momentum. Physical Review A, 2019, 99, .	2.5	25

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19	Topological state engineering via supersymmetric transformations. Communications Physics, 2020, 3, .	5.3	21
20	Lasing without inversion with frequency up-conversion in a Doppler-broadened V-type three-level system. Physical Review A, 1999, 60, 614-620.	2.5	20
21	Electromagnetically induced transparency in Doppler-broadened three-level systems with resonant standing-wave drive. Europhysics Letters, 2000, 51, 286-292.	2.0	20
22	Electromagnetically induced transparency with a standing-wave drive in the frequency up-conversion regime. Physical Review A, 2001, 64, .	2.5	20
23	Electromagnetically induced transparency in a Boseâ€“Einstein condensate. Optics Communications, 2002, 211, 159-165.	2.1	20
24	Analysis beyond the Thomas-Fermi approximation of the density profiles of a miscible two-component Bose-Einstein condensate. Physical Review A, 2015, 91, .	2.5	20
25	Propagation effects on lasing without population inversion. Journal of Optics B: Quantum and Semiclassical Optics, 2000, 2, 359-363.	1.4	18
26	Quantum sensing using imbalanced counter-rotating Boseâ€“Einstein condensate modes. New Journal of Physics, 2018, 20, 103001.	2.9	18
27	Lasing without inversion in three-level systems without external coherent driving. Physical Review A, 2000, 61, .	2.5	16
28	Lattice Solitons in Quasicondensates. Physical Review Letters, 2005, 94, 130403.	7.8	16
29	Quantum switches and quantum memories for matter-wave lattice solitons. New Journal of Physics, 2007, 9, 4-4.	2.9	16
30	Transport of ultracold atoms between concentric traps via spatial adiabatic passage. New Journal of Physics, 2016, 18, 015010.	2.9	14
31	Two-color quantum memory in double-<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>Î</mml:mi></mml:math>media. Physical Review A, 2012, 86, .	2.5	13
32	Spatial adiabatic passage processes in sonic crystals with linear defects. Physical Review B, 2014, 89, .	3.2	13
33	Engineering of orbital angular momentum supermodes in coupled optical waveguides. Scientific Reports, 2017, 7, 44057.	3.3	13
34	Quantum optics and frontiers of physics: the third quantum revolution. Physica Scripta, 2017, 92, 013003.	2.5	13
35	Mode-division (de)multiplexing using adiabatic passage and supersymmetric waveguides. Optics Express, 2017, 25, 27396.	3.4	13
36	Filtering of matter-wave vibrational states via spatial adiabatic passage. Physical Review A, 2011, 83, .	2.5	12

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37	Integrated photonic devices based on adiabatic transitions between supersymmetric structures. Optics Express, 2018, 26, 33797.	3.4	12
38	Dipole spectrum structure of nonresonant nonpertubative driven two-level atoms. Physical Review A, 2010, 81, .	2.5	11
39	Single-atom interferometer based on two-dimensional spatial adiabatic passage. Physical Review A, 2014, 89, .	2.5	11
40	Frequency up-conversion He-Ne laser without inversion. Applied Physics B: Lasers and Optics, 2005, 80, 67-72.	2.2	10
41	Ultrashort pulse control of space-dependent excitations in a three-level system. Physical Review A, 2007, 75, .	2.5	10
42	Tunneling-induced angular momentum for single cold atoms. Physical Review A, 2014, 89, .	2.5	10
43	Cavity Solitons in Two-Level Lasers with Dense Amplifying Medium. Physical Review Letters, 2003, 91, 083901.	7.8	9
44	Quantum-information processing in disordered and complex quantum systems. Physical Review A, 2006, 74, .	2.5	9
45	Single-site addressing of ultracold atoms beyond the diffraction limit via position-dependent adiabatic passage. Physical Review A, 2012, 86, .	2.5	9
46	Orbital angular momentum dynamics of Bose-Einstein condensates trapped in two stacked rings. Physical Review A, 2020, 102, .	2.5	9
47	Strongly correlated Fermiâ€“Bose mixtures in disordered optical lattices. Journal of Physics B: Atomic, Molecular and Optical Physics, 2006, 39, S121-S134.	1.5	8
48	Doppler-free adiabatic self-induced transparency. Physical Review A, 2009, 79, .	2.5	8
49	Coherent injecting, extracting, and velocity filtering of neutral atoms in a ring trap via spatial adiabatic passage. European Physical Journal D, 2014, 68, 1.	1.3	8
50	Single-atom edgelike states via quantum interference. Physical Review A, 2017, 95, .	2.5	8
51	Supersymmetry-enhanced stark-chirped rapid-adiabatic-passage in multimode optical waveguides. Optics Express, 2021, 29, 39200.	3.4	7
52	Spatially strongly confined atomic excitation viatwo dimensional stimulated Raman adiabaticpassage. Optics Express, 2022, 30, 13915-13930.	3.4	7
53	Optical quantum memory for polarization qubits withV-type three-level atoms. Journal of Physics B: Atomic, Molecular and Optical Physics, 2011, 44, 195504.	1.5	6
54	Spin Effects in Bose-Glass Phases. Journal of Low Temperature Physics, 2011, 165, 227-238.	1.4	6

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55	Quantum magnetism with ultracold bosons carrying orbital angular momentum. Physical Review A, 2019, 100, .	2.5	6
56	Gain without inversion at two symmetrical sidebands of resonance in cold free87Rb atoms: an experimental proposal. Journal of Optics B: Quantum and Semiclassical Optics, 2003, 5, 268-271.	1.4	5
57	Double-barrier potentials for matter-wave gap solitons. Physical Review A, 2008, 78, .	2.5	5
58	Quantum-state storage and processing for polarization qubits in an inhomogeneously broadenedÎ›-type three-level medium. Physical Review A, 2011, 84, .	2.5	5
59	Nanoscale resolution for fluorescence microscopy via adiabatic passage. Optics Express, 2013, 21, 22139.	3.4	5
60	Effective triangular ladders with staggered flux from spin-orbit coupling in 1D optical lattices. European Physical Journal D, 2020, 74, 1.	1.3	5
61	High-efficiency topological pumping with discrete supersymmetry transformations. Optics Express, 2022, 30, 23531.	3.4	5
62	Enlargement of the inversionless lasing domain by using broad-area cavities. Journal of Optics B: Quantum and Semiclassical Optics, 2003, 5, 201-207.	1.4	4
63	Atomic-frequency-comb quantum memory via piecewise adiabatic passage. Physical Review A, 2018, 98, .	2.5	4
64	Coherent spin mixing via spin-orbit coupling in Bose gases. Physical Review A, 2019, 100, .	2.5	3
65	Optimal conditions for spatial adiabatic passage of a Bose-Einstein condensate. Physical Review A, 2016, 94, .	2.5	2
66	DISORDERED COMPLEX SYSTEMS USING COLD GASES AND TRAPPED IONS. , 2005, , .		0
67	Trapped Ion Chain as a Neural Network: Error Resistant Quantum Computation. , 2007, , .		0