Alexandre M Zagoskin

List of Publications by Year
in descending order

114 papers	4,033 citations	159358 30 h-index	118652 62 g-index
115 all docs	115 docs citations	115 times ranked	2480 citing authors

#	Article	IF	Citations
1	Resonance Fluorescence of a Single Artificial Atom. Science, 2010, 327, 840-843.	6.0	574
2	Electromagnetically Induced Transparency on a Single Artificial Atom. Physical Review Letters, 2010, 104, 193601.	2.9	282
3	Two-level systems driven by large-amplitude fields. Physical Review A, 2007, 75, .	1.0	203
4	Tunable Coupling of Superconducting Qubits. Physical Review Letters, 2003, 90, 127901.	2.9	171
5	Controllable Coupling of Superconducting Flux Qubits. Physical Review Letters, 2007, 98, 057004.	2.9	170
6	Degenerate Ground State in a MesoscopicYBa2Cu3O7â^'xGrain Boundary Josephson Junction. Physical Review Letters, 2001, 86, 5369-5372.	2.9	163
7	Evidence for Entangled States of Two Coupled Flux Qubits. Physical Review Letters, 2004, 93, 037003.	2.9	142
8	Continuous Monitoring of Rabi Oscillations in a Josephson Flux Qubit. Physical Review Letters, 2003, 91, 097906.	2.9	136
9	Quantum metamaterials: Electromagnetic waves in a Josephson qubit line. Physical Review B, 2008, 77, .	1.1	131
10	Andreev scattering and Josephson current in a one-dimensional electron liquid. Physical Review B, 2000, 62, 1433-1445.	1.1	105
11	Quantum Two-Level Systems in Josephson Junctions as Naturally Formed Qubits. Physical Review Letters, 2006, 97, 077001.	2.9	102
12	Ultimate On-Chip Quantum Amplifier. Physical Review Letters, 2010, 104, 183603.	2.9	100
13	Emergence and control of complex behaviors in driven systems of interacting qubits with dissipation. Npj Quantum Information, 2021, 7, .	2.8	92
14	Operation of universal gates in a solid-state quantum computer based on clean Josephson junctions betweend-wave superconductors. Physical Review A, 2000, 61, .	1.0	86
15	A Characterization of Global Entanglement. Quantum Information Processing, 2007, 6, 187-195.	1.0	72
16	Four-Qubit Device with Mixed Couplings. Physical Review Letters, 2006, 96, 047006.	2.9	70
17	State-dependent photon blockade via quantum-reservoir engineering. Physical Review A, 2014, 90, .	1.0	65
18	Controlled Generation of Squeezed States of Microwave Radiation in a Superconducting Resonant Circuit. Physical Review Letters, 2008, 101, 253602.	2.9	64

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19	Switchable resonant coupling of flux qubits. Physical Review B, 2006, 74, .	1.1	61
20	Observation of macroscopic Landau-Zener transitions in a superconducting device. Europhysics Letters, 2004, 65, 844-849.	0.7	60
21	Silent phase qubit based ond-wave Josephson junctions. Physical Review B, 2005, 71, .	1.1	58
22	Single-artificial-atom lasing using a voltage-biased superconducting charge qubit. New Journal of Physics, 2009, 11, 023030.	1.2	51
23	Direct Josephson coupling between superconducting flux qubits. Physical Review B, 2005, 72, .	1.1	50
24	Dynamical Effects of an Unconventional Current-Phase Relation in YBCO dc SQUIDs. Physical Review Letters, 2003, 90, 117002.	2.9	49
25	Coherent transport and nonlocality in mesoscopic SNS junctions: anomalous magnetic interference patterns. Superlattices and Microstructures, 1999, 25, 797-807.	1.4	46
26	Mechanisms of spontaneous current generation in an inhomogeneousd-wave superconductor. Physical Review B, 2001, 63, .	1.1	38
27	Mesoscopic josephson junctions of high-Tcsuperconductors. Physical Review B, 2003, 68, .	1.1	37
28	Quasiclassical theory of spontaneous currents at surfaces and interfaces of d-wave superconductors. Physica B: Condensed Matter, 2002, 318, 162-179.	1.3	35
29	Characterization of superconducting structures designed for qubit realizations. Applied Physics Letters, 2002, 80, 4184-4186.	1.5	33
30	Giant conductance oscillations controlled by supercurrent flow through a ballistic mesoscopic conductor. Physical Review B, 1995, 52, R8662-R8665.	1.1	30
31	Quantum metamaterials in the microwave and optical ranges. EPJ Quantum Technology, 2016, 3, .	2.9	29
32	Squeezing as the source of inefficiency in the quantum Otto cycle. Physical Review B, 2012, 86, .	1.1	28
33	Dissipative electron transport through Andreev interferometers. Physical Review B, 1998, 57, 9995-10016.	1.1	25
34	Modeling an Adiabatic Quantum Computer via an Exact Map to a Gas of Particles. Physical Review Letters, 2007, 98, 120503.	2.9	23
35	Quantum metamaterials: Electromagnetic waves in Josephson qubit lines. Physica Status Solidi (B): Basic Research, 2009, 246, 955-960.	0.7	22
36	d+isversusd+idâ€²time reversal symmetry breaking states in finite size systems. Physical Review B, 2002, 66, .	1.1	20

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37	The half-periodic Josephson effect in an s-wave superconductor - normal-metal - d-wave superconductor junction. Journal of Physics Condensed Matter, 1997, 9, L419-L426.	0.7	19
38	Mesoscopic multiterminal Josephson structures. I. Effects of nonlocal weak coupling. Low Temperature Physics, 2001, 27, 616-623.	0.2	19
39	Polarization switching in optical microsphere resonator. Applied Physics Letters, 2002, 80, 3503-3505.	1.5	19
40	Distinguishing quantum from classical oscillations in a driven phase qubit. New Journal of Physics, 2008, 10, 073026.	1.2	19
41	How to test the Ã¢â‚¬Å“quantumnessÃ¢â‚¬Â•of a quantum computer?. Frontiers in Physics, 2014, 2, .	1.0	18
42	Engineering Dissipative Channels for Realizing SchrÃƒÂ¶dinger Cats in SQUIDs. Frontiers in ICT, 2014, 1, .	3.6	18
43	Toroidal qubits: naturally-decoupled quiet artificial atoms. Scientific Reports, 2015, 5, 16934.	1.6	18
44	Quantum information processing using frequency control of impurity spins in diamond. Physical Review B, 2007, 76, .	1.1	17
45	Measurement of the ground-state flux diagram of three coupled qubits as a first step towards the demonstration of adiabatic quantum computation. Europhysics Letters, 2006, 76, 533-539.	0.7	16
46	Superconducting quantum metamaterials in 3D: possible realizations. Journal of Optics (United) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 3	1.0	16
47	Breakdown of conductance quantization in quantum point contacts with realistic impurity potentials. Journal of Physics Condensed Matter, 1995, 7, 6253-6270.	0.7	15
48	Multi-terminal superconducting phase qubit. Physica C: Superconductivity and Its Applications, 2002, 368, 310-314.	0.6	15
49	Selective amplification of a quantum state. Physical Review A, 2004, 70, .	1.0	15
50	Effects of lasing in a one-dimensional quantum metamaterial. Physical Review B, 2015, 91, .	1.1	15
51	Fermi edge singularities: Bound states and finite-size effects. Journal of Physics A, 1997, 30, 5743-5765.	1.6	14
52	Two-qubit parametric amplifier: Large amplification of weak signals. Physical Review A, 2012, 85, .	1.0	14
53	Noise-induced quantum coherence and persistent Rabi oscillations in a Josephson flux qubit. Physical Review B, 2009, 80, .	1.1	13
54	Heat cost of parametric generation of microwave squeezed states. Physical Review A, 2012, 85, .	1.0	13

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55	Nonlinear transport in a quantum point contact due to soft-disorder-induced coherent mode mixing. Physical Review B, 1994, 50, 4909-4912.	1.1	12
56	Adiabatic Quantum Computation With Flux Qubits, First Experimental Results. IEEE Transactions on Applied Superconductivity, 2007, 17, 113-119.	1.1	12
57	Feedback-controlled adiabatic quantum computation. Physical Review A, 2012, 86, .	1.0	12
58	Quantum metamaterial without local control. Physical Review B, 2013, 87, .	1.1	12
59	DC SQUID based on the mesoscopic multiterminal Josephson junction. Physica C: Superconductivity and Its Applications, 2002, 372-376, 178-180.	0.6	11
60	Spontaneous currents in Josephson junctions between unconventional superconductors and d-wave qubits (Review). Low Temperature Physics, 2004, 30, 535-553.	0.2	11
61	Pseudo-Rabi oscillations in superconducting flux qubits in the classical regime. Physical Review B, 2008, 78, .	1.1	11
62	Spatially resolved single photon detection with a quantum sensor array. Scientific Reports, 2013, 3, 3464.	1.6	11
63	Studies of permittivity and permeability of dielectric matrix with cuboid metallic inclusions in different orientations. Journal of Advanced Dielectrics, 2014, 04, 1450032.	1.5	11
64	Theory of anomalous magnetic interference pattern in mesoscopic superconducting/normal/superconducting Josephson junctions. Physical Review B, 2003, 68, .	1.1	9
65	Driving-voltage-induced mechanical force oscillations in metal quantum-point contacts. Physical Review B, 1998, 58, 15827-15831.	1.1	7
66	Harmonic mixing in two coupled qubits: Quantum synchronization via ac drives. Physical Review A, 2012, 86, .	1.0	7
67	Noise in a quantum point contact due to a fluctuating impurity configuration. Journal of Physics Condensed Matter, 1995, 7, 7239-7252.	0.7	6
68	Spontaneous magnetic flux and quantum noise in an annular mesoscopic SND junction. Journal of Physics Condensed Matter, 1998, 10, L105-L111.	0.7	6
69	d-Wave superconductors and quantum computers. Physica C: Superconductivity and Its Applications, 2002, 368, 305-309.	0.6	6
70	Relationship between minimum gap and success probability in adiabatic quantum computing. Journal of Physics A: Mathematical and Theoretical, 2012, 45, 505305.	0.7	6
71	Spectroscopy of the potential profile in a ballistic quantum constriction. Physical Review B, 1994, 50, 4590-4593.	1.1	5
72	Noise-enhanced performance of adiabatic quantum computing by lifting degeneracies. Physical Review A, 2010, 82, .	1.0	5

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73	Propagation of fluctuations in the quantum Ising model. Physical Review B, 2017, 95, .	1.1	5
74	Quasi-superradiant soliton state of matter in quantum metamaterials. European Physical Journal B, 2018, 91, 1.	0.6	5
75	Towards the Heisenberg limit in microwave photon detection by a qubit array. Physical Review B, 2021, 103, .	1.1	5
76	Feasibility studies of ultra-small Josephson junctions for qubits. IEEE Transactions on Applied Superconductivity, 2003, 13, 948-951.	1.1	4
77	Engineering silicon-based photonic crystal cavities for NV-center quantum information processing. Optics and Spectroscopy (English Translation of Optika I Spektroskopiya), 2010, 108, 225-229.	0.2	3
78	The influence of dissipation in a 1D quantum metamaterial. Superconductor Science and Technology, 2013, 26, 084005.	1.8	3
79	Some implications of superconducting quantum interference to the application of master equations in engineering quantum technologies. Physical Review B, 2016, 94, .	1.1	3
80	Bogoliubov-Born-Green-Kirkwood-Yvon chain and kinetic equations for the level dynamics in an externally perturbed quantum system. Physical Review A, 2017, 95, .	1.0	3
81	Oxygen diffusion and dynamical disorder in high-T c superconductors: low frequency noise in superconducting tunnel junctions. European Physical Journal B, 1993, 91, 277-284.	0.6	2
82	Conductance and persistent current in one-dimensional mesoscopic rings: Configuration-dependent effects of weak impurity scattering. Solid State Communications, 1995, 95, 647-654.	0.9	2
83	Soft disorder effects in the conductance quantization in quantum point contacts: Indirect backscattering statistics. Solid State Communications, 1996, 97, 279-283.	0.9	2
84	Voltage fluctuations on a superconductor grain attached to a quantum wire. Superlattices and Microstructures, 1999, 25, 1177-1183.	1.4	2
85	Publisher's Note: Evidence for Entangled States of Two Coupled Flux Qubits [Phys. Rev. Lett.93, 037003 (2004)]. Physical Review Letters, 2004, 93, .	2.9	2
86	The Grand Challenge of Quantum Computing: Bridging the Capacity Gap. Frontiers in ICT, 2014, 1, .	3.6	2
87	Tunable refraction in a two-dimensional quantum-state metamaterial. Physical Review A, 2014, 90, .	1.0	2
88	Superconducting Quantum Metamaterials. Springer Series in Materials Science, 2015, , 255-279.	0.4	2
89	Pechukas-Yukawa approach to the evolution of the quantum state of a parametrically perturbed system. Physical Review A, 2018, 97, .	1.0	2
90	An exactly solvable quantum-metamaterial type model. Journal of Physics A: Mathematical and Theoretical, 2019, 52, 395304.	0.7	2

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91	Efficient Criteria of Quantumness for a Large System of Qubits. Frontiers in Physics, 2022, 9, .	1.0	2
92	Effect of the pressure and magnetic field on the temperature-dependent resistivity of heavy-fermion systems. Physical Review B, 1992, 46, 14903-14905.	1.1	1
93	Magnetic Interference Pattern in a Clean s-Wave-Normal Metal-d-Wave Superconductor Junction. Physica Status Solidi (B): Basic Research, 1997, 202, R9-R10.	0.7	1
94	Nonlinear Response and Observable Signatures of Equilibrium Entanglement. Quantum Information Processing, 2007, 6, 381-399.	1.0	1
95	Recursive simulation of quantum annealing. Journal of Physics A: Mathematical and Theoretical, 2015, 48, 415301.	0.7	1
96	Quantum engineering of superconducting structures: Principles, promise and problems. Low Temperature Physics, 2017, 43, 751-755.	0.2	1
97	Pechukas-Yukawa formalism for Landau-Zener transitions in the presence of external noise. Physical Review A, 2018, 98, .	1.0	1
98	Renningerâ€™s Gedankenexperiment, the collapse of the wave function in a rigid quantum metamaterial and the reality of the quantum state vector. Scientific Reports, 2018, 8, 9608.	1.6	1
99	A Brief Subjective Perspective on the Development of Quantum Technologies 2.0. Journal of the Physical Society of Japan, 2019, 88, 061001.	0.7	1
100	On the possibility of direct observation of the difference between cyclic and zero boundary conditions. Journal of Physics Condensed Matter, 1990, 2, 5271-5275.	0.7	0
101	On the temperature dependence of the Hall constant in some heavy-fermion compounds: a qualitative theory. Journal of Physics Condensed Matter, 1992, 4, 7115-7120.	0.7	0
102	Oxygen diffusion and dynamical disorder in high-Tc superconductors: Low frequency noise in superconducting tunnel junctions. Applied Superconductivity, 1993, 1, 1123-1132.	0.5	0
103	Magnetic field dependence of cyclotron masses in heavy-fermion conductors in a two-band hybridization model. Physica Scripta, 1993, 48, 382-384.	1.2	0
104	Â¿InstantaneousÂ¿ frequency shift of a high Q planar photonic crystal microcavity mode. , 2007, , .		0
105	Why quantum engineering?. Low Temperature Physics, 2010, 36, 911-914.	0.2	0
106	Transmission through a two dimensional quantum metamaterial. Proceedings of SPIE, 2013, , .	0.8	0
107	Wigner function description of a qubit-oscillator system. Low Temperature Physics, 2013, 39, 289-293.	0.2	0
108	Illustrative bias. Physics World, 2017, 30, 19-19.	0.0	0

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109	Time-dependent real-space renormalization-group approach: application to an adiabatic random quantum Ising model. Journal of Physics A: Mathematical and Theoretical, 2019, 52, 045004.	0.7	0
110	Chaos and hyperchaos in the chain of quantum coherent elements. , 2020, , .		0
111	QUASICLASSICAL CALCULATION OF SPONTANEOUS CURRENT IN RESTRICTED GEOMETRIES. , 2003, , .		0
112	NONLINEAR RESPONSE AND OBSERVABLE SIGNATURES OF EQUILIBRIUM ENTANGLEMENT. , 2008, , .		0
113	SINGLE-ARTIFICIAL-ATOM LASING AND ITS SUPPRESSION BY STRONG PUMPING. , 2009, , .		0
114	Many-Body Theory in One Dimension. Graduate Texts in Physics, 2014, , 227-261.	0.1	0