

Jared Cole

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/6675257/publications.pdf>

Version: 2024-02-01

111
papers

4,082
citations

136950

32
h-index

118850

62
g-index

112
all docs

112
docs citations

112
times ranked

4082
citing authors

#	ARTICLE	IF	CITATIONS
1	Quantum phase transitions of light. <i>Nature Physics</i> , 2006, 2, 856-861.	16.7	662
2	Coherent electronic transfer in quantum dot systems using adiabatic passage. <i>Physical Review B</i> , 2004, 70, .	3.2	247
3	Towards understanding two-level-systems in amorphous solids: insights from quantum circuits. <i>Reports on Progress in Physics</i> , 2019, 82, 124501.	20.1	239
4	All-Optical Thermometry and Thermal Properties of the Optically Detected Spin Resonances of the NV ⁺ Center in Nanodiamond. <i>Nano Letters</i> , 2014, 14, 4989-4996.	9.1	162
5	High spatial and temporal resolution wide-field imaging of neuron activity using quantum NV-diamond. <i>Scientific Reports</i> , 2012, 2, 401.	3.3	141
6	Gas sensing properties of p-type semiconducting Cr-doped TiO ₂ thin films. <i>Sensors and Actuators B: Chemical</i> , 2002, 83, 160-163.	7.8	137
7	Sensing of Fluctuating Nanoscale Magnetic Fields Using Nitrogen-Vacancy Centers in Diamond. <i>Physical Review Letters</i> , 2009, 103, 220802.	7.8	127
8	Monitoring ion-channel function in real time through quantum decoherence. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010, 107, 18777-18782.	7.1	112
9	High Precision Quantum Control of Single Donor Spins in Silicon. <i>Physical Review Letters</i> , 2007, 99, 036403.	7.8	108
10	Observation of directly interacting coherent two-level systems in an amorphous material. <i>Nature Communications</i> , 2015, 6, 6182.	12.8	105
11	Scanning quantum decoherence microscopy. <i>Nanotechnology</i> , 2009, 20, 495401.	2.6	99
12	Ultralow-power spectroscopy of a rare-earth spin ensemble using a superconducting resonator. <i>Physical Review B</i> , 2011, 84, .	3.2	91
13	Photochemical upconversion of near-infrared light from below the silicon bandgap. <i>Nature Photonics</i> , 2020, 14, 585-590.	31.4	88
14	Spatial coherent transport of interacting dilute Bose gases. <i>Physical Review A</i> , 2008, 77, .	2.5	80
15	Quantum phase transitions in photonic cavities with two-level systems. <i>Physical Review A</i> , 2008, 77, .	2.5	68
16	Bloch-Redfield equations for modeling light-harvesting complexes. <i>Journal of Chemical Physics</i> , 2015, 142, 064104.	3.0	68
17	Identifying an experimental two-state Hamiltonian to arbitrary accuracy. <i>Physical Review A</i> , 2005, 71, .	2.5	64
18	Measuring the Temperature Dependence of Individual Two-Level Systems by Direct Coherent Control. <i>Physical Review Letters</i> , 2010, 105, 230504.	7.8	64

#	ARTICLE	IF	CITATIONS
19	Ambient nanoscale sensing with single spins using quantum decoherence. <i>New Journal of Physics</i> , 2013, 15, 073042.	2.9	61
20	Lasing and transport in a quantum-dot resonator circuit. <i>Physical Review B</i> , 2011, 84, .	3.2	60
21	Stimulated emission from nitrogen-vacancy centres in diamond. <i>Nature Communications</i> , 2017, 8, 14000.	12.8	60
22	Ultrasensitive diamond magnetometry using optimal dynamic decoupling. <i>Physical Review B</i> , 2010, 82, .	3.2	58
23	Spatial adiabatic passage in a realistic triple well structure. <i>Physical Review B</i> , 2008, 77, .	3.2	51
24	Emission characteristics of laser-driven dissipative coupled-cavity systems. <i>Physical Review A</i> , 2011, 83, .	2.5	47
25	Analytic solutions to the central-spin problem for nitrogen-vacancy centers in diamond. <i>Physical Review B</i> , 2014, 90, .	3.2	42
26	Passive On-Chip Superconducting Circulator Using a Ring of Tunnel Junctions. <i>Physical Review Letters</i> , 2018, 120, 213602.	7.8	39
27	Quantum metrology subject to spatially correlated Markovian noise: restoring the Heisenberg limit. <i>New Journal of Physics</i> , 2014, 16, 073039.	2.9	38
28	Scheme for direct measurement of a general two-qubit Hamiltonian. <i>Physical Review A</i> , 2006, 73, .	2.5	36
29	Time evolution of the one-dimensional Jaynes-Cummings-Hubbard Hamiltonian. <i>Physical Review A</i> , 2009, 80, .	2.5	36
30	Laser threshold magnetometry. <i>New Journal of Physics</i> , 2016, 18, 013015.	2.9	36
31	Derivation of Markovian master equations for spatially correlated decoherence. <i>Physical Review A</i> , 2013, 87, .	2.5	34
32	Identifying a two-state Hamiltonian in the presence of decoherence. <i>Physical Review A</i> , 2006, 73, .	2.5	32
33	Rabi spectroscopy of a qubit-fluctuator system. <i>Physical Review B</i> , 2010, 81, .	3.2	32
34	Lasing, trapping states, and multistability in a circuit quantum electrodynamical analog of a single-atom injection maser. <i>Physical Review B</i> , 2011, 83, .	3.2	32
35	Quantitative evaluation of defect-models in superconducting phase qubits. <i>Applied Physics Letters</i> , 2010, 97, .	3.3	29
36	Multiphoton spectroscopy of a hybrid quantum system. <i>Physical Review B</i> , 2010, 82, .	3.2	28

#	ARTICLE	IF	CITATIONS
37	Delocalized Oxygen as the Origin of Two-Level Defects in Josephson Junctions. <i>Physical Review Letters</i> , 2013, 110, 077002.	7.8	28
38	Atomistic simulations of adiabatic coherent electron transport in triple donor systems. <i>Physical Review B</i> , 2009, 80, .	3.2	27
39	Single-qubit lasing in the strong-coupling regime. <i>Physical Review A</i> , 2010, 82, .	2.5	27
40	Quantum-dot cellular automata using buried dopants. <i>Physical Review B</i> , 2005, 71, .	3.2	22
41	Subspace confinement: how good is your qubit?. <i>New Journal of Physics</i> , 2007, 9, 384-384.	2.9	19
42	Understanding entanglement sudden death through multipartite entanglement and quantum correlations. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2010, 43, 135301.	2.1	18
43	Stochastic Bloch-Redfield theory: Quantum jumps in a solid-state environment. <i>Physical Review B</i> , 2013, 88, .	3.2	18
44	Ab initio calculation of energy levels for phosphorus donors in silicon. <i>Scientific Reports</i> , 2017, 7, 6010.	3.3	18
45	Precision characterization of two-qubit Hamiltonians via entanglement mapping. <i>Journal of Physics A</i> , 2006, 39, 14649-14658.	1.6	17
46	Single electron relativistic clock interferometer. <i>New Journal of Physics</i> , 2016, 18, 093050.	2.9	17
47	Effect of atomic structure on the electrical response of aluminum oxide tunnel junctions. <i>Physical Review Research</i> , 2020, 2, .	3.6	17
48	The Hong-Ou-Mandel effect in the context of few-photon scattering. <i>Optics Express</i> , 2012, 20, 12326.	3.4	16
49	Supersolid phases of light in extended Jaynes-Cummings-Hubbard systems. <i>Physical Review A</i> , 2014, 90, .	2.5	16
50	Simulating the fabrication of aluminium oxide tunnel junctions. <i>Npj Quantum Information</i> , 2021, 7, .	6.7	16
51	Spin Guides and Spin Splitters: Waveguide Analogies in One-Dimensional Spin Chains. <i>Physical Review Letters</i> , 2012, 108, 017207.	7.8	14
52	Excitation and state transfer through spin chains in the presence of spatially correlated noise. <i>Physical Review A</i> , 2013, 88, .	2.5	14
53	Interferometry using adiabatic passage in dilute-gas Bose-Einstein condensates. <i>Physical Review A</i> , 2012, 86, .	2.5	13
54	Approximate solutions to Mathieu's equation. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2018, 100, 24-30.	2.7	13

#	ARTICLE	IF	CITATIONS
55	Rabi oscillations in a superconducting nanowire circuit. Npj Quantum Materials, 2020, 5, .	5.2	13
56	Dual-probe decoherence microscopy: probing pockets of coherence in a decohering environment. New Journal of Physics, 2012, 14, 023013.	2.9	12
57	Electronic properties of $\hat{\Gamma}$ -doped Si:P and Ge:P layers in the high-density limit using a Thomas-Fermi method. Physical Review B, 2014, 89, .	3.2	12
58	Atomic delocalization as a microscopic origin of two-level defects in Josephson junctions. New Journal of Physics, 2015, 17, 023017.	2.9	12
59	Constructing <i>ab initio</i> models of ultra-thin AlO_x/Al barriers. Molecular Simulation, 2016, 42, 542-548.	2.0	12
60	Optical vector network analysis of ultranarrow transitions in $^{166}\text{Er}^{3+}/^{7}\text{LiYF}_4$ crystal. Optics Letters, 2018, 43, 935.	3.3	12
61	Acoustic spectral hole-burning in a two-level system ensemble. Npj Quantum Information, 2021, 7, .	6.7	12
62	Influence of two-level fluctuators on adiabatic passage techniques. Physical Review B, 2012, 85, .	3.2	11
63	Spin coherent quantum transport of electrons between defects in diamond. Nanophotonics, 2019, 8, 1975-1984.	6.0	11
64	Correlated transport through junction arrays in the small Josephson energy limit: incoherent Cooper-pairs and hot electrons. New Journal of Physics, 2014, 16, 063019.	2.9	10
65	Signatures of spatially correlated noise and non-secular effects in two-dimensional electronic spectroscopy. Journal of Chemical Physics, 2017, 146, 024109.	3.0	10
66	Validation of a Novel Multivariate Method of Defining HIV-Associated Cognitive Impairment. Open Forum Infectious Diseases, 2019, 6, ofz198.	0.9	10
67	Neuron-inspired Steiner Tree Networks for 3D Low-Density Metastructures. Advanced Science, 2021, 8, e2100141.	11.2	10
68	Stability of superconducting resonators: Motional narrowing and the role of Landau-Zener driving of two-level defects. Science Advances, 2021, 7, eabh0462.	10.3	10
69	Entangling microscopic defects via a macroscopic quantum shuttle. New Journal of Physics, 2011, 13, 063015.	2.9	9
70	Eliminating Quantum Phase Slips in Superconducting Nanowires. ACS Nano, 2021, 15, 4108-4114.	14.6	9
71	Two-dimensional spectroscopy beyond the perturbative limit: The influence of finite pulses and detection modes. Journal of Chemical Physics, 2021, 154, 114113.	3.0	9
72	Parity effect and single-electron injection for Josephson junction chains deep in the insulating state. Physical Review B, 2015, 92, .	3.2	8

#	ARTICLE	IF	CITATIONS
73	Böttiker probes and the recursive Green's function: An efficient approach to include dissipation in general configurations. <i>Physical Review B</i> , 2018, 97, .	3.2	8
74	Parity effect in Josephson junction arrays. <i>Physical Review B</i> , 2015, 91, .	3.2	7
75	De-pinning of disordered bosonic chains. <i>New Journal of Physics</i> , 2016, 18, 053026.	2.9	7
76	First-Principles Calculation of Triplet Exciton Diffusion in Crystalline Poly(<i>p</i> -phenylene) Tj ETQq0 0 0 rgBT /Overlock 10,Jf 50 622	3.1	7
77	Aharonov-Bohm interference as a probe of Majorana fermions. <i>Physical Review Research</i> , 2020, 2, .	3.6	7
78	Modeling two-spin dynamics in a noisy environment. <i>Physical Review A</i> , 2009, 80, .	2.5	6
79	Quantum Bocce: Magnon-magnon collisions between propagating and bound states in 1D spin chains. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2013, 377, 1242-1249.	2.1	6
80	Building a bigger Hilbert space for superconducting devices, one Bloch state at a time. <i>Physical Review Research</i> , 2020, 2, .	3.6	6
81	Boson peak in ultrathin alumina layers investigated with neutron spectroscopy. <i>Physical Review Research</i> , 2020, 2, .	3.6	6
82	Influence of a planar metal nanoparticle assembly on the optical response of a quantum emitter. <i>Physical Review Research</i> , 2020, 2, .	3.6	6
83	Singlet Exciton Dynamics of Perylene Diimide- and Tetracene-Based Hetero/Homogeneous Substrates via an <i>Ab Initio</i> Kinetic Monte Carlo Model. <i>Journal of Physical Chemistry C</i> , 2021, 125, 23646-23656.	3.1	6
84	Single atom-scale diamond defect allows a large Aharonov-Casher phase. <i>Physical Review A</i> , 2009, 80, .	2.5	5
85	Lasing and transport in a coupled quantum dot-resonator system. <i>Physica Scripta</i> , 2012, T151, 014032.	2.5	5
86	Correlated charge transport in bilinear tunnel junction arrays. <i>Physical Review B</i> , 2013, 88, .	3.2	5
87	Electronic transport in Si:P-doped wires. <i>Physical Review B</i> , 2015, 92, .	3.2	5
88	Charge filling factors in clean and disordered arrays of tunnel junctions. <i>Scientific Reports</i> , 2015, 5, 17572.	3.3	5
89	Bilirubin analogues as model compounds for exciton coupling. <i>Physical Chemistry Chemical Physics</i> , 2020, 22, 15567-15572.	2.8	5
90	NanoNET: An extendable Python framework for semi-empirical tight-binding models. <i>Computer Physics Communications</i> , 2021, 259, 107676.	7.5	5

#	ARTICLE	IF	CITATIONS
91	Exciton transport in amorphous polymers and the role of morphology and thermalisation. <i>New Journal of Physics</i> , 2021, 23, 113038.	2.9	5
92	Controlling Photoluminescence for Optoelectronic Applications via Precision Fabrication of Quantum Dot/Au Nanoparticle Hybrid Assemblies. <i>ACS Applied Nano Materials</i> , 2022, 5, 3213-3228.	5.0	5
93	Hamiltonian tomography: the quantum (system) measurement problem. <i>New Journal of Physics</i> , 2015, 17, 101001.	2.9	4
94	The effects of thermal and correlated noise on magnons in a quantum ferromagnet. <i>New Journal of Physics</i> , 2018, 20, 093017.	2.9	4
95	Scaling of coherent tunneling adiabatic passage in solid-state coherent quantum systems. , 2005, , .		3
96	Accurate calculation of excitonic signatures in the absorption spectrum of BiSBr using semiconductor Bloch equations. <i>Physical Review B</i> , 2021, 103, .	3.2	3
97	Localized Wannier function based tight-binding models for two-dimensional allotropes of bismuth. <i>New Journal of Physics</i> , 2021, 23, 063042.	2.9	3
98	Experimental Hamiltonian Identification for Qubits subject to Multiple Independent Control Mechanisms. <i>AIP Conference Proceedings</i> , 2004, , .	0.4	2
99	An algorithm for simulating the Ising model on a type-II quantum computer. <i>Computer Physics Communications</i> , 2004, 161, 18-26.	7.5	2
100	Coulomb drag and depinning in bilinear Josephson junction arrays. <i>New Journal of Physics</i> , 2017, 19, 093023.	2.9	2
101	Influence of Device Geometry and Imperfections on the Interpretation of Transverse Magnetic Focusing Experiments. <i>Nanoscale Research Letters</i> , 2022, 17, 31.	5.7	2
102	Microscopic quantum point contact formation as the electromigration mechanism in granular superconductor nanowires. <i>New Journal of Physics</i> , 2022, 24, 073008.	2.9	2
103	Probing Charge Carrier Movement in Organic Semiconductor Thin Films via Nanowire Conductance Spectroscopy. <i>ACS Applied Electronic Materials</i> , 2019, 1, 1667-1677.	4.3	1
104	Linear response theory of Josephson junction arrays in a microwave cavity. <i>Physical Review B</i> , 2019, 99, .	3.2	1
105	Microwave quantum optics as a direct probe of the Overhauser field in a quantum dot circuit quantum electrodynamics device. <i>Physical Review B</i> , 2021, 103, .	3.2	1
106	Measuring decoherence properties of charge qubits using buried donor cellular automata. , 2005, 5650, 504.		0
107	Qubit Transport and Fault-tolerant Architectures in Silicon. , 2006, , .		0
108	Phase transitions in photonic cavities: Exact vs. mean-field. , 2008, , .		0

#	ARTICLE	IF	CITATIONS
109	Spatial adiabatic passage as a quantum wire. , 2008, , .		0
110	Correlation between lasing and transport properties in a quantum dot-resonator system. Journal of Physics: Conference Series, 2012, 400, 042025.	0.4	0
111	Correlated charge transport in bilinear tunnel junction arrays with straight and slanted coupling. , 2014, , .		0