

# Jared Cole

## List of Publications by Citations

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103  
papers

3,189  
citations

30  
h-index

54  
g-index

112  
ext. papers

3,683  
ext. citations

4.9  
avg, IF

5.29  
L-index

#	Paper	IF	Citations
103	Quantum phase transitions of light. <i>Nature Physics</i> , <b>2006</b> , 2, 856-861	16.2	563
102	Coherent electronic transfer in quantum dot systems using adiabatic passage. <i>Physical Review B</i> , <b>2004</b> , 70,	3.3	218
101	Gas sensing properties of p-type semiconducting Cr-doped TiO <sub>2</sub> thin films. <i>Sensors and Actuators B: Chemical</i> , <b>2002</b> , 83, 160-163	8.5	126
100	High spatial and temporal resolution wide-field imaging of neuron activity using quantum NV-diamond. <i>Scientific Reports</i> , <b>2012</b> , 2, 401	4.9	114
99	Sensing of fluctuating nanoscale magnetic fields using nitrogen-vacancy centers in diamond. <i>Physical Review Letters</i> , <b>2009</b> , 103, 220802	7.4	112
98	All-optical thermometry and thermal properties of the optically detected spin resonances of the NV(-) center in nanodiamond. <i>Nano Letters</i> , <b>2014</b> , 14, 4989-96	11.5	111
97	Towards understanding two-level-systems in amorphous solids: insights from quantum circuits. <i>Reports on Progress in Physics</i> , <b>2019</b> , 82, 124501	14.4	96
96	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> , <b>2010</b> , 107, 18777-82	11.5	92
95	High precision quantum control of single donor spins in silicon. <i>Physical Review Letters</i> , <b>2007</b> , 99, 036403	7.4	87
94	Scanning quantum decoherence microscopy. <i>Nanotechnology</i> , <b>2009</b> , 20, 495401	3.4	79
93	Ultralow-power spectroscopy of a rare-earth spin ensemble using a superconducting resonator. <i>Physical Review B</i> , <b>2011</b> , 84,	3.3	79
92	Observation of directly interacting coherent two-level systems in an amorphous material. <i>Nature Communications</i> , <b>2015</b> , 6, 6182	17.4	77
91	Spatial coherent transport of interacting dilute Bose gases. <i>Physical Review A</i> , <b>2008</b> , 77,	2.6	74
90	Quantum phase transitions in photonic cavities with two-level systems. <i>Physical Review A</i> , <b>2008</b> , 77,	2.6	59
89	Measuring the temperature dependence of individual two-level systems by direct coherent control. <i>Physical Review Letters</i> , <b>2010</b> , 105, 230504	7.4	57
88	Ambient nanoscale sensing with single spins using quantum decoherence. <i>New Journal of Physics</i> , <b>2013</b> , 15, 073042	2.9	56
87	Lasing and transport in a quantum-dot resonator circuit. <i>Physical Review B</i> , <b>2011</b> , 84,	3.3	56

86	Bloch-Redfield equations for modeling light-harvesting complexes. <i>Journal of Chemical Physics</i> , <b>2015</b> , 142, 064104	3.9	55
85	Identifying an experimental two-state Hamiltonian to arbitrary accuracy. <i>Physical Review A</i> , <b>2005</b> , 71,	2.6	55
84	Ultrasensitive diamond magnetometry using optimal dynamic decoupling. <i>Physical Review B</i> , <b>2010</b> , 82,	3.3	52
83	Photochemical upconversion of near-infrared light from below the silicon bandgap. <i>Nature Photonics</i> , <b>2020</b> , 14, 585-590	33.9	48
82	Emission characteristics of laser-driven dissipative coupled-cavity systems. <i>Physical Review A</i> , <b>2011</b> , 83,	2.6	46
81	Spatial adiabatic passage in a realistic triple well structure. <i>Physical Review B</i> , <b>2008</b> , 77,	3.3	44
80	Stimulated emission from nitrogen-vacancy centres in diamond. <i>Nature Communications</i> , <b>2017</b> , 8, 14000	17.4	34
79	Quantum metrology subject to spatially correlated Markovian noise: restoring the Heisenberg limit. <i>New Journal of Physics</i> , <b>2014</b> , 16, 073039	2.9	33
78	Time evolution of the one-dimensional Jaynes-Cummings-Hubbard Hamiltonian. <i>Physical Review A</i> , <b>2009</b> , 80,	2.6	32
77	Analytic solutions to the central-spin problem for nitrogen-vacancy centers in diamond. <i>Physical Review B</i> , <b>2014</b> , 90,	3.3	31
76	Lasing, trapping states, and multistability in a circuit quantum electrodynamical analog of a single-atom injection maser. <i>Physical Review B</i> , <b>2011</b> , 83,	3.3	31
75	Rabi spectroscopy of a qubit-fluctuator system. <i>Physical Review B</i> , <b>2010</b> , 81,	3.3	30
74	Scheme for direct measurement of a general two-qubit Hamiltonian. <i>Physical Review A</i> , <b>2006</b> , 73,	2.6	30
73	Identifying a two-state Hamiltonian in the presence of decoherence. <i>Physical Review A</i> , <b>2006</b> , 73,	2.6	29
72	Quantitative evaluation of defect-models in superconducting phase qubits. <i>Applied Physics Letters</i> , <b>2010</b> , 97, 252501	3.4	27
71	Multiphoton spectroscopy of a hybrid quantum system. <i>Physical Review B</i> , <b>2010</b> , 82,	3.3	27
70	Laser threshold magnetometry. <i>New Journal of Physics</i> , <b>2016</b> , 18, 013015	2.9	27
69	Atomistic simulations of adiabatic coherent electron transport in triple donor systems. <i>Physical Review B</i> , <b>2009</b> , 80,	3.3	25

68	Single-qubit lasing in the strong-coupling regime. <i>Physical Review A</i> , <b>2010</b> , 82,	2.6	24
67	Passive On-Chip Superconducting Circulator Using a Ring of Tunnel Junctions. <i>Physical Review Letters</i> , <b>2018</b> , 120, 213602	7.4	24
66	Derivation of Markovian master equations for spatially correlated decoherence. <i>Physical Review A</i> , <b>2013</b> , 87,	2.6	23
65	Delocalized oxygen as the origin of two-level defects in Josephson junctions. <i>Physical Review Letters</i> , <b>2013</b> , 110, 077002	7.4	22
64	Quantum-dot cellular automata using buried dopants. <i>Physical Review B</i> , <b>2005</b> , 71,	3.3	19
63	Understanding entanglement sudden death through multipartite entanglement and quantum correlations. <i>Journal of Physics A: Mathematical and Theoretical</i> , <b>2010</b> , 43, 135301	2	17
62	Precision characterization of two-qubit Hamiltonians via entanglement mapping. <i>Journal of Physics A</i> , <b>2006</b> , 39, 14649-14658		15
61	Subspace confinement: how good is your qubit?. <i>New Journal of Physics</i> , <b>2007</b> , 9, 384-384	2.9	15
60	Supersolid phases of light in extended Jaynes-Cummings-Hubbard systems. <i>Physical Review A</i> , <b>2014</b> , 90,	2.6	14
59	The Hong-Ou-Mandel effect in the context of few-photon scattering. <i>Optics Express</i> , <b>2012</b> , 20, 12326-40	3.3	14
58	Spin guides and spin splitters: waveguide analogies in one-dimensional spin chains. <i>Physical Review Letters</i> , <b>2012</b> , 108, 017207	7.4	13
57	Single electron relativistic clock interferometer. <i>New Journal of Physics</i> , <b>2016</b> , 18, 093050	2.9	13
56	Excitation and state transfer through spin chains in the presence of spatially correlated noise. <i>Physical Review A</i> , <b>2013</b> , 88,	2.6	12
55	Stochastic Bloch-Redfield theory: Quantum jumps in a solid-state environment. <i>Physical Review B</i> , <b>2013</b> , 88,	3.3	12
54	Approximate solutions to Mathieu's equation. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , <b>2018</b> , 100, 24-30	3	11
53	Interferometry using adiabatic passage in dilute-gas Bose-Einstein condensates. <i>Physical Review A</i> , <b>2012</b> , 86,	2.6	11
52	Influence of two-level fluctuators on adiabatic passage techniques. <i>Physical Review B</i> , <b>2012</b> , 85,	3.3	11
51	Dual-probe decoherence microscopy: probing pockets of coherence in a decohering environment. <i>New Journal of Physics</i> , <b>2012</b> , 14, 023013	2.9	11

50	Constructing ab initio models of ultra-thin Al <sub>x</sub> O <sub>x</sub> barriers. <i>Molecular Simulation</i> , <b>2016</b> , 42, 542-548	2	10
49	Atomic delocalization as a microscopic origin of two-level defects in Josephson junctions. <i>New Journal of Physics</i> , <b>2015</b> , 17, 023017	2.9	9
48	Entangling microscopic defects via a macroscopic quantum shuttle. <i>New Journal of Physics</i> , <b>2011</b> , 13, 063015	2.9	9
47	Signatures of spatially correlated noise and non-secular effects in two-dimensional electronic spectroscopy. <i>Journal of Chemical Physics</i> , <b>2017</b> , 146, 024109	3.9	8
46	Optical vector network analysis of ultranarrow transitions in Er : LiYF crystal. <i>Optics Letters</i> , <b>2018</b> , 43, 935-938	3	8
45	Spin coherent quantum transport of electrons between defects in diamond. <i>Nanophotonics</i> , <b>2019</b> , 8, 1975-1984	6.3	8
44	Electronic properties of Edoped Si:P and Ge:P layers in the high-density limit using a Thomas-Fermi method. <i>Physical Review B</i> , <b>2014</b> , 89,	3.3	8
43	Ab initio calculation of energy levels for phosphorus donors in silicon. <i>Scientific Reports</i> , <b>2017</b> , 7, 6010	4.9	8
42	Parity effect and single-electron injection for Josephson junction chains deep in the insulating state. <i>Physical Review B</i> , <b>2015</b> , 92,	3.3	8
41	Correlated transport through junction arrays in the small Josephson energy limit: incoherent Cooper-pairs and hot electrons. <i>New Journal of Physics</i> , <b>2014</b> , 16, 063019	2.9	8
40	First-Principles Calculation of Triplet Exciton Diffusion in Crystalline Poly(p-phenylene vinylene). <i>Journal of Physical Chemistry C</i> , <b>2019</b> , 123, 26831-26841	3.8	7
39	Rabi oscillations in a superconducting nanowire circuit. <i>Npj Quantum Materials</i> , <b>2020</b> , 5,	5	7
38	De-pinning of disordered bosonic chains. <i>New Journal of Physics</i> , <b>2016</b> , 18, 053026	2.9	7
37	Validation of a Novel Multivariate Method of Defining HIV-Associated Cognitive Impairment. <i>Open Forum Infectious Diseases</i> , <b>2019</b> , 6, ofz198	1	5
36	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> , <b>2013</b> , 377, 1242-1249	2.3	5
35	Parity effect in Josephson junction arrays. <i>Physical Review B</i> , <b>2015</b> , 91,	3.3	5
34	Charge filling factors in clean and disordered arrays of tunnel junctions. <i>Scientific Reports</i> , <b>2015</b> , 5, 17572	4.9	5
33	Modeling two-spin dynamics in a noisy environment. <i>Physical Review A</i> , <b>2009</b> , 80,	2.6	5

32	Effect of atomic structure on the electrical response of aluminum oxide tunnel junctions. <i>Physical Review Research</i> , <b>2020</b> , 2,	3.9	5
31	Simulating the fabrication of aluminium oxide tunnel junctions. <i>Npj Quantum Information</i> , <b>2021</b> , 7,	8.6	5
30	Büttiker probes and the recursive Green's function: An efficient approach to include dissipation in general configurations. <i>Physical Review B</i> , <b>2018</b> , 97,	3.3	4
29	Electronic transport in Si:P Doped wires. <i>Physical Review B</i> , <b>2015</b> , 92,	3.3	4
28	Correlated charge transport in bilinear tunnel junction arrays. <i>Physical Review B</i> , <b>2013</b> , 88,	3.3	4
27	Lasing and transport in a coupled quantum dot-resonator system. <i>Physica Scripta</i> , <b>2012</b> , T151, 014032	2.6	4
26	Acoustic spectral hole-burning in a two-level system ensemble. <i>Npj Quantum Information</i> , <b>2021</b> , 7,	8.6	4
25	Bilirubin analogues as model compounds for exciton coupling. <i>Physical Chemistry Chemical Physics</i> , <b>2020</b> , 22, 15567-15572	3.6	3
24	Hamiltonian tomography: the quantum (system) measurement problem. <i>New Journal of Physics</i> , <b>2015</b> , 17, 101001	2.9	3
23	Scaling of coherent tunneling adiabatic passage in solid-state coherent quantum systems <b>2005</b> ,		3
22	Influence of a planar metal nanoparticle assembly on the optical response of a quantum emitter. <i>Physical Review Research</i> , <b>2020</b> , 2,	3.9	3
21	Aharonov-Bohm interference as a probe of Majorana fermions. <i>Physical Review Research</i> , <b>2020</b> , 2,	3.9	3
20	Coulomb drag and depinning in bilinear Josephson junction arrays. <i>New Journal of Physics</i> , <b>2017</b> , 19, 093023	3.3	2
19	Single atom-scale diamond defect allows a large Aharonov-Casher phase. <i>Physical Review A</i> , <b>2009</b> , 80,	2.6	2
18	Experimental Hamiltonian Identification for Qubits subject to Multiple Independent Control Mechanisms. <i>AIP Conference Proceedings</i> , <b>2004</b> ,	0	2
17	An algorithm for simulating the Ising model on a type-II quantum computer. <i>Computer Physics Communications</i> , <b>2004</b> , 161, 18-26	4.2	2
16	Singlet Exciton Dynamics of Perylene Diimide- and Tetracene-Based Hetero/Homogeneous Substrates via an Ab Initio Kinetic Monte Carlo Model. <i>Journal of Physical Chemistry C</i> , <b>2021</b> , 125, 23646-23656	3.8	2
15	Neuron-Inspired Steiner Tree Networks for 3D Low-Density Metastructures. <i>Advanced Science</i> , <b>2021</b> , 8, e2100141	13.6	2

14	Controlling Photoluminescence for Optoelectronic Applications via Precision Fabrication of Quantum Dot/Au Nanoparticle Hybrid Assemblies. <i>ACS Applied Nano Materials</i> , <b>2022</b> , 5, 3213-3228	5.6	2
13	Linear response theory of Josephson junction arrays in a microwave cavity. <i>Physical Review B</i> , <b>2019</b> , 99,	3.3	1
12	Probing Charge Carrier Movement in Organic Semiconductor Thin Films via Nanowire Conductance Spectroscopy. <i>ACS Applied Electronic Materials</i> , <b>2019</b> , 1, 1667-1677	4	1
11	Building a bigger Hilbert space for superconducting devices, one Bloch state at a time. <i>Physical Review Research</i> , <b>2020</b> , 2,	3.9	1
10	Boson peak in ultrathin alumina layers investigated with neutron spectroscopy. <i>Physical Review Research</i> , <b>2020</b> , 2,	3.9	1
9	Exciton transport in amorphous polymers and the role of morphology and thermalisation. <i>New Journal of Physics</i> , <b>2021</b> , 23, 113038	2.9	1
8	Two-dimensional spectroscopy beyond the perturbative limit: The influence of finite pulses and detection modes. <i>Journal of Chemical Physics</i> , <b>2021</b> , 154, 114113	3.9	1
7	NanoNET: An extendable Python framework for semi-empirical tight-binding models. <i>Computer Physics Communications</i> , <b>2021</b> , 259, 107676	4.2	1
6	Eliminating Quantum Phase Slips in Superconducting Nanowires. <i>ACS Nano</i> , <b>2021</b> , 15, 4108-4114	16.7	0
5	The effects of thermal and correlated noise on magnons in a quantum ferromagnet. <i>New Journal of Physics</i> , <b>2018</b> , 20, 093017	2.9	0
4	Stability of superconducting resonators: Motional narrowing and the role of Landau-Zener driving of two-level defects. <i>Science Advances</i> , <b>2021</b> , 7, eabh0462	14.3	0
3	Influence of Device Geometry and Imperfections on the Interpretation of Transverse Magnetic Focusing Experiments.. <i>Nanoscale Research Letters</i> , <b>2022</b> , 17, 31	5	0
2	Correlation between lasing and transport properties in a quantum dot-resonator system. <i>Journal of Physics: Conference Series</i> , <b>2012</b> , 400, 042025	0.3	
1	Measuring decoherence properties of charge qubits using buried donor cellular automata <b>2005</b> , 5650, 504		