

Jared Cole

List of Publications by Year in descending order

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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	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
2	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
3	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
4	NanoNET: An extendable Python framework for semi-empirical tight-binding models. <i>Computer Physics Communications</i> , 2021, 259, 107676.	7.5	5
5	Simulating the fabrication of aluminium oxide tunnel junctions. <i>Npj Quantum Information</i> , 2021, 7, .	6.7	16
6	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
7	Eliminating Quantum Phase Slips in Superconducting Nanowires. <i>ACS Nano</i> , 2021, 15, 4108-4114.	14.6	9
8	Two-dimensional spectroscopy beyond the perturbative limit: The influence of finite pulses and detection modes. <i>Journal of Chemical Physics</i> , 2021, 154, 114113.	3.0	9
9	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
10	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
11	Neuron-inspired Steiner Tree Networks for 3D Low-density Metastructures. <i>Advanced Science</i> , 2021, 8, e2100141.	11.2	10
12	Stability of superconducting resonators: Motional narrowing and the role of Landau-Zener driving of two-level defects. <i>Science Advances</i> , 2021, 7, eabh0462.	10.3	10
13	Acoustic spectral hole-burning in a two-level system ensemble. <i>Npj Quantum Information</i> , 2021, 7, .	6.7	12
14	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
15	Exciton transport in amorphous polymers and the role of morphology and thermalisation. <i>New Journal of Physics</i> , 2021, 23, 113038.	2.9	5
16	Photochemical upconversion of near-infrared light from below the silicon bandgap. <i>Nature Photonics</i> , 2020, 14, 585-590.	31.4	88
17	Bilirubin analogues as model compounds for exciton coupling. <i>Physical Chemistry Chemical Physics</i> , 2020, 22, 15567-15572.	2.8	5
18	Rabi oscillations in a superconducting nanowire circuit. <i>Npj Quantum Materials</i> , 2020, 5, .	5.2	13

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19	Effect of atomic structure on the electrical response of aluminum oxide tunnel junctions. Physical Review Research, 2020, 2, .	3.6	17
20	Building a bigger Hilbert space for superconducting devices, one Bloch state at a time. Physical Review Research, 2020, 2, .	3.6	6
21	Boson peak in ultrathin alumina layers investigated with neutron spectroscopy. Physical Review Research, 2020, 2, .	3.6	6
22	Influence of a planar metal nanoparticle assembly on the optical response of a quantum emitter. Physical Review Research, 2020, 2, .	3.6	6
23	Aharonov-Bohm interference as a probe of Majorana fermions. Physical Review Research, 2020, 2, .	3.6	7
24	Probing Charge Carrier Movement in Organic Semiconductor Thin Films via Nanowire Conductance Spectroscopy. ACS Applied Electronic Materials, 2019, 1, 1667-1677.	4.3	1
25	Towards understanding two-level-systems in amorphous solids: insights from quantum circuits. Reports on Progress in Physics, 2019, 82, 124501.	20.1	239
26	Validation of a Novel Multivariate Method of Defining HIV-Associated Cognitive Impairment. Open Forum Infectious Diseases, 2019, 6, ofz198.	0.9	10
27	Spin coherent quantum transport of electrons between defects in diamond. Nanophotonics, 2019, 8, 1975-1984.	6.0	11
28	First-Principles Calculation of Triplet Exciton Diffusion in Crystalline Poly(p-phenylene) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 382	3.1	7
29	Linear response theory of Josephson junction arrays in a microwave cavity. Physical Review B, 2019, 99, .	3.2	1
30	BÃ¼ttiker probes and the recursive Green's function: An efficient approach to include dissipation in general configurations. Physical Review B, 2018, 97, .	3.2	8
31	Approximate solutions to Mathieu's equation. Physica E: Low-Dimensional Systems and Nanostructures, 2018, 100, 24-30.	2.7	13
32	The effects of thermal and correlated noise on magnons in a quantum ferromagnet. New Journal of Physics, 2018, 20, 093017.	2.9	4
33	Passive On-Chip Superconducting Circulator Using a Ring of Tunnel Junctions. Physical Review Letters, 2018, 120, 213602.	7.8	39
34	Optical vector network analysis of ultranarrow transitions in Er^{3+} LiYF_4 crystal. Optics Letters, 2018, 43, 935.	3.3	12
35	Stimulated emission from nitrogen-vacancy centres in diamond. Nature Communications, 2017, 8, 14000.	12.8	60
36	Signatures of spatially correlated noise and non-secular effects in two-dimensional electronic spectroscopy. Journal of Chemical Physics, 2017, 146, 024109.	3.0	10

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37	Ab initio calculation of energy levels for phosphorus donors in silicon. Scientific Reports, 2017, 7, 6010.	3.3	18
38	Coulomb drag and depinning in bilinear Josephson junction arrays. New Journal of Physics, 2017, 19, 093023.	2.9	2
39	Laser threshold magnetometry. New Journal of Physics, 2016, 18, 013015.	2.9	36
40	De-pinning of disordered bosonic chains. New Journal of Physics, 2016, 18, 053026.	2.9	7
41	Single electron relativistic clock interferometer. New Journal of Physics, 2016, 18, 093050.	2.9	17
42	Constructing <i>ab initio</i> models of ultra-thin Al _x O _x Al barriers. Molecular Simulation, 2016, 42, 542-548.	2.0	12
43	Parity effect in Josephson junction arrays. Physical Review B, 2015, 91, .	3.2	7
44	Electronic transport in Si:P ⁻ -doped wires. Physical Review B, 2015, 92, .	3.2	5
45	Parity effect and single-electron injection for Josephson junction chains deep in the insulating state. Physical Review B, 2015, 92, .	3.2	8
46	Charge filling factors in clean and disordered arrays of tunnel junctions. Scientific Reports, 2015, 5, 17572.	3.3	5
47	Hamiltonian tomography: the quantum (system) measurement problem. New Journal of Physics, 2015, 17, 101001.	2.9	4
48	Observation of directly interacting coherent two-level systems in an amorphous material. Nature Communications, 2015, 6, 6182.	12.8	105
49	Atomic delocalization as a microscopic origin of two-level defects in Josephson junctions. New Journal of Physics, 2015, 17, 023017.	2.9	12
50	Bloch-Redfield equations for modeling light-harvesting complexes. Journal of Chemical Physics, 2015, 142, 064104.	3.0	68
51	Quantum metrology subject to spatially correlated Markovian noise: restoring the Heisenberg limit. New Journal of Physics, 2014, 16, 073039.	2.9	38
52	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
53	Correlated charge transport in bilinear tunnel junction arrays with straight and slanted coupling. , 2014, , .		0
54	Analytic solutions to the central-spin problem for nitrogen-vacancy centers in diamond. Physical Review B, 2014, 90, .	3.2	42

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55	Electronic properties of $\hat{\rho}$ -doped Si:P and Ge:P layers in the high-density limit using a Thomas-Fermi method. <i>Physical Review B</i> , 2014, 89, .	3.2	12
56	Supersolid phases of light in extended Jaynes-Cummings-Hubbard systems. <i>Physical Review A</i> , 2014, 90, .	2.5	16
57	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
58	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
59	Ambient nanoscale sensing with single spins using quantum decoherence. <i>New Journal of Physics</i> , 2013, 15, 073042.	2.9	61
60	Derivation of Markovian master equations for spatially correlated decoherence. <i>Physical Review A</i> , 2013, 87, .	2.5	34
61	Delocalized Oxygen as the Origin of Two-Level Defects in Josephson Junctions. <i>Physical Review Letters</i> , 2013, 110, 077002.	7.8	28
62	Excitation and state transfer through spin chains in the presence of spatially correlated noise. <i>Physical Review A</i> , 2013, 88, .	2.5	14
63	Stochastic Bloch-Redfield theory: Quantum jumps in a solid-state environment. <i>Physical Review B</i> , 2013, 88, .	3.2	18
64	Correlated charge transport in bilinear tunnel junction arrays. <i>Physical Review B</i> , 2013, 88, .	3.2	5
65	Lasing and transport in a coupled quantum dot-resonator system. <i>Physica Scripta</i> , 2012, T151, 014032.	2.5	5
66	The Hong-Ou-Mandel effect in the context of few-photon scattering. <i>Optics Express</i> , 2012, 20, 12326.	3.4	16
67	Spin Guides and Spin Splitters: Waveguide Analogies in One-Dimensional Spin Chains. <i>Physical Review Letters</i> , 2012, 108, 017207.	7.8	14
68	Interferometry using adiabatic passage in dilute-gas Bose-Einstein condensates. <i>Physical Review A</i> , 2012, 86, .	2.5	13
69	Influence of two-level fluctuators on adiabatic passage techniques. <i>Physical Review B</i> , 2012, 85, .	3.2	11
70	Dual-probe decoherence microscopy: probing pockets of coherence in a decohering environment. <i>New Journal of Physics</i> , 2012, 14, 023013.	2.9	12
71	Correlation between lasing and transport properties in a quantum dot-resonator system. <i>Journal of Physics: Conference Series</i> , 2012, 400, 042025.	0.4	0
72	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

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73	Lasing and transport in a quantum-dot resonator circuit. <i>Physical Review B</i> , 2011, 84, .	3.2	60
74	Entangling microscopic defects via a macroscopic quantum shuttle. <i>New Journal of Physics</i> , 2011, 13, 063015.	2.9	9
75	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
76	Emission characteristics of laser-driven dissipative coupled-cavity systems. <i>Physical Review A</i> , 2011, 83, .	2.5	47
77	Ultralow-power spectroscopy of a rare-earth spin ensemble using a superconducting resonator. <i>Physical Review B</i> , 2011, 84, .	3.2	91
78	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
79	Rabi spectroscopy of a qubit-fluctuator system. <i>Physical Review B</i> , 2010, 81, .	3.2	32
80	Ultrasensitive diamond magnetometry using optimal dynamic decoupling. <i>Physical Review B</i> , 2010, 82, .	3.2	58
81	Single-qubit lasing in the strong-coupling regime. <i>Physical Review A</i> , 2010, 82, .	2.5	27
82	Quantitative evaluation of defect-models in superconducting phase qubits. <i>Applied Physics Letters</i> , 2010, 97, .	3.3	29
83	Measuring the Temperature Dependence of Individual Two-Level Systems by Direct Coherent Control. <i>Physical Review Letters</i> , 2010, 105, 230504.	7.8	64
84	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
85	Multiphoton spectroscopy of a hybrid quantum system. <i>Physical Review B</i> , 2010, 82, .	3.2	28
86	Modeling two-spin dynamics in a noisy environment. <i>Physical Review A</i> , 2009, 80, .	2.5	6
87	Single atom-scale diamond defect allows a large Aharonov-Casher phase. <i>Physical Review A</i> , 2009, 80, .	2.5	5
88	Atomistic simulations of adiabatic coherent electron transport in triple donor systems. <i>Physical Review B</i> , 2009, 80, .	3.2	27
89	Scanning quantum decoherence microscopy. <i>Nanotechnology</i> , 2009, 20, 495401.	2.6	99
90	Sensing of Fluctuating Nanoscale Magnetic Fields Using Nitrogen-Vacancy Centers in Diamond. <i>Physical Review Letters</i> , 2009, 103, 220802.	7.8	127

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91	Time evolution of the one-dimensional Jaynes-Cummings-Hubbard Hamiltonian. <i>Physical Review A</i> , 2009, 80, .	2.5	36
92	Spatial adiabatic passage in a realistic triple well structure. <i>Physical Review B</i> , 2008, 77, .	3.2	51
93	Phase transitions in photonic cavities: Exact vs. mean-field. , 2008, , .		0
94	Spatial adiabatic passage as a quantum wire. , 2008, , .		0
95	Quantum phase transitions in photonic cavities with two-level systems. <i>Physical Review A</i> , 2008, 77, .	2.5	68
96	Spatial coherent transport of interacting dilute Bose gases. <i>Physical Review A</i> , 2008, 77, .	2.5	80
97	Subspace confinement: how good is your qubit?. <i>New Journal of Physics</i> , 2007, 9, 384-384.	2.9	19
98	High Precision Quantum Control of Single Donor Spins in Silicon. <i>Physical Review Letters</i> , 2007, 99, 036403.	7.8	108
99	Quantum phase transitions of light. <i>Nature Physics</i> , 2006, 2, 856-861.	16.7	662
100	Precision characterization of two-qubit Hamiltonians via entanglement mapping. <i>Journal of Physics A</i> , 2006, 39, 14649-14658.	1.6	17
101	Qubit Transport and Fault-tolerant Architectures in Silicon. , 2006, , .		0
102	Scheme for direct measurement of a general two-qubit Hamiltonian. <i>Physical Review A</i> , 2006, 73, .	2.5	36
103	Identifying a two-state Hamiltonian in the presence of decoherence. <i>Physical Review A</i> , 2006, 73, .	2.5	32
104	Measuring decoherence properties of charge qubits using buried donor cellular automata. , 2005, 5650, 504.		0
105	Scaling of coherent tunneling adiabatic passage in solid-state coherent quantum systems. , 2005, , .		3
106	Quantum-dot cellular automata using buried dopants. <i>Physical Review B</i> , 2005, 71, .	3.2	22
107	Identifying an experimental two-state Hamiltonian to arbitrary accuracy. <i>Physical Review A</i> , 2005, 71, .	2.5	64
108	Coherent electronic transfer in quantum dot systems using adiabatic passage. <i>Physical Review B</i> , 2004, 70, .	3.2	247

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109	Experimental Hamiltonian Identification for Qubits subject to Multiple Independent Control Mechanisms. AIP Conference Proceedings, 2004, , .	0.4	2
110	An algorithm for simulating the Ising model on a type-II quantum computer. Computer Physics Communications, 2004, 161, 18-26.	7.5	2
111	Gas sensing properties of p-type semiconducting Cr-doped TiO ₂ thin films. Sensors and Actuators B: Chemical, 2002, 83, 160-163.	7.8	137