

Lloyd C L Hollenberg

List of Publications by Citations

Source: <https://exaly.com/author-pdf/1279649/lloyd-c-l-hollenberg-publications-by-citations.pdf>

Version: 2024-04-27

This document has been generated based on the publications and citations recorded by exaly.com. For the latest version of this publication list, visit the link given above.

The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

251
papers

12,829
citations

52
h-index

108
g-index

292
ext. papers

15,086
ext. citations

6.7
avg, IF

6.33
L-index

#	Paper	IF	Citations
251	The nitrogen-vacancy colour centre in diamond. <i>Physics Reports</i> , 2013 , 528, 1-45	27.7	1363
250	Electric-field sensing using single diamond spins. <i>Nature Physics</i> , 2011 , 7, 459-463	16.2	720
249	Silicon quantum electronics. <i>Reviews of Modern Physics</i> , 2013 , 85, 961-1019	40.5	679
248	A single-atom transistor. <i>Nature Nanotechnology</i> , 2012 , 7, 242-6	28.7	587
247	Quantum phase transitions of light. <i>Nature Physics</i> , 2006 , 2, 856-861	16.2	563
246	Single-shot readout of an electron spin in silicon. <i>Nature</i> , 2010 , 467, 687-91	50.4	505
245	Quantum measurement and orientation tracking of fluorescent nanodiamonds inside living cells. <i>Nature Nanotechnology</i> , 2011 , 6, 358-63	28.7	452
244	Ohm's law survives to the atomic scale. <i>Science</i> , 2012 , 335, 64-7	33.3	246
243	Gate-induced quantum-confinement transition of a single dopant atom in a silicon FinFET. <i>Nature Physics</i> , 2008 , 4, 656-661	16.2	244
242	Charge-based quantum computing using single donors in semiconductors. <i>Physical Review B</i> , 2004 , 69,	3.3	237
241	Coherent electronic transfer in quantum dot systems using adiabatic passage. <i>Physical Review B</i> , 2004 , 70,	3.3	218
240	Stark shift control of single optical centers in diamond. <i>Physical Review Letters</i> , 2006 , 97, 083002	7.4	217
239	Electronic properties and metrology applications of the diamond NV- center under pressure. <i>Physical Review Letters</i> , 2014 , 112, 047601	7.4	208
238	Theory of the ground-state spin of the NV center in diamond. <i>Physical Review B</i> , 2012 , 85,	3.3	180
237	Surface code quantum computing with error rates over 1%. <i>Physical Review A</i> , 2011 , 83,	2.6	177
236	Two-dimensional architectures for donor-based quantum computing. <i>Physical Review B</i> , 2006 , 74,	3.3	177
235	Dynamical decoupling of a single-electron spin at room temperature. <i>Physical Review B</i> , 2011 , 83,	3.3	174

234	Electrostatically defined serial triple quantum dot charged with few electrons. <i>Physical Review B</i> , 2007 , 76,	3.3	150
233	The negatively charged nitrogen-vacancy centre in diamond: the electronic solution. <i>New Journal of Physics</i> , 2011 , 13, 025019	2.9	143
232	A surface code quantum computer in silicon. <i>Science Advances</i> , 2015 , 1, e1500707	14.3	137
231	Quantum imaging of current flow in graphene. <i>Science Advances</i> , 2017 , 3, e1602429	14.3	118
230	High spatial and temporal resolution wide-field imaging of neuron activity using quantum NV-diamond. <i>Scientific Reports</i> , 2012 , 2, 401	4.9	114
229	Sensing of fluctuating nanoscale magnetic fields using nitrogen-vacancy centers in diamond. <i>Physical Review Letters</i> , 2009 , 103, 220802	7.4	112
228	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, 18777-82	11.5	92
227	Temperature shifts of the resonances of the NV center in diamond. <i>Physical Review B</i> , 2014 , 90,	3.3	90
226	Spin blockade and exchange in Coulomb-confined silicon double quantum dots. <i>Nature Nanotechnology</i> , 2014 , 9, 430-5	28.7	89
225	Detection of atomic spin labels in a lipid bilayer using a single-spin nanodiamond probe. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013 , 110, 10894-8	11.5	89
224	Surface code quantum communication. <i>Physical Review Letters</i> , 2010 , 104, 180503	7.4	88
223	Towards practical classical processing for the surface code. <i>Physical Review Letters</i> , 2012 , 108, 180501	7.4	87
222	High precision quantum control of single donor spins in silicon. <i>Physical Review Letters</i> , 2007 , 99, 036403	7.4	87
221	Scanning quantum decoherence microscopy. <i>Nanotechnology</i> , 2009 , 20, 495401	3.4	79
220	Architectural design for a topological cluster state quantum computer. <i>New Journal of Physics</i> , 2009 , 11, 083032	2.9	74
219	Spatial coherent transport of interacting dilute Bose gases. <i>Physical Review A</i> , 2008 , 77,	2.6	74
218	Non-Neurotoxic Nanodiamond Probes for Intraneuronal Temperature Mapping. <i>ACS Nano</i> , 2017 , 11, 12077-12086	16.7	73
217	Architecture for high-sensitivity single-shot readout and control of the electron spin of individual donors in silicon. <i>Physical Review B</i> , 2009 , 80,	3.3	70

216	Spatially resolving valley quantum interference of a donor in silicon. <i>Nature Materials</i> , 2014 , 13, 605-10	27	68
215	Global control and fast solid-state donor electron spin quantum computing. <i>Physical Review B</i> , 2005 , 72,	3.3	67
214	Scanning Nanospin Ensemble Microscope for Nanoscale Magnetic and Thermal Imaging. <i>Nano Letters</i> , 2016 , 16, 326-33	11.5	65
213	Detection of nanoscale electron spin resonance spectra demonstrated using nitrogen-vacancy centre probes in diamond. <i>Nature Communications</i> , 2016 , 7, 10211	17.4	65
212	Ab initio electronic and optical properties of the N - v- center in diamond. <i>Physical Review Letters</i> , 2008 , 101, 226403	7.4	63
211	Nash equilibria in quantum games with generalized two-parameter strategies. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2007 , 363, 381-388	2.3	63
210	Donor electron wave functions for phosphorus in silicon: Beyond effective-mass theory. <i>Physical Review B</i> , 2005 , 72,	3.3	63
209	Nano-manipulation of diamond-based single photon sources. <i>Optics Express</i> , 2009 , 17, 11287-93	3.3	62
208	Towards a picosecond transform-limited nitrogen-vacancy based single photon source. <i>Optics Express</i> , 2008 , 16, 6240-50	3.3	62
207	Electron exchange coupling for single-donor solid-state spin qubits. <i>Physical Review B</i> , 2003 , 68,	3.3	60
206	Quantum phase transitions in photonic cavities with two-level systems. <i>Physical Review A</i> , 2008 , 77,	2.6	59
205	Photonic module: An on-demand resource for photonic entanglement. <i>Physical Review A</i> , 2007 , 76,	2.6	58
204	Ambient nanoscale sensing with single spins using quantum decoherence. <i>New Journal of Physics</i> , 2013 , 15, 073042	2.9	56
203	Magneto-optical imaging of thin magnetic films using spins in diamond. <i>Scientific Reports</i> , 2016 , 6, 227974.9	4.9	55
202	Identifying an experimental two-state Hamiltonian to arbitrary accuracy. <i>Physical Review A</i> , 2005 , 71,	2.6	55
201	Spin properties of dense near-surface ensembles of nitrogen-vacancy centers in diamond. <i>Physical Review B</i> , 2018 , 97,	3.3	54
200	Quantum simulation of the Hubbard model with dopant atoms in silicon. <i>Nature Communications</i> , 2016 , 7, 11342	17.4	54
199	Ultrasensitive diamond magnetometry using optimal dynamic decoupling. <i>Physical Review B</i> , 2010 , 82,	3.3	52

198	Spatial mapping of band bending in semiconductor devices using in situ quantum sensors. <i>Nature Electronics</i> , 2018 , 1, 502-507	28.4	50
197	Charge State Control and Relaxation in an Atomically Doped Silicon Device. <i>Nano Letters</i> , 2007 , 7, 2000-2003		49
196	Maximizing the Hilbert space for a finite number of distinguishable quantum states. <i>Physical Review Letters</i> , 2004 , 92, 097901	7.4	49
195	Progress in silicon-based quantum computing. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2003 , 361, 1451-71	3	49
194	Orbital Stark effect and quantum confinement transition of donors in silicon. <i>Physical Review B</i> , 2009 , 80,	3.3	48
193	A highly efficient two level diamond based single photon source. <i>Applied Physics Letters</i> , 2009 , 94, 203103	7.4	48
192	Measurable quantum geometric phase from a rotating single spin. <i>Physical Review Letters</i> , 2012 , 108, 240403	7.4	48
191	Loss of spin entanglement for accelerated electrons in electric and magnetic fields. <i>Physical Review A</i> , 2009 , 79,	2.6	46
190	Two loop calculation of the omega - rho mass splitting. <i>Physical Review C</i> , 1992 , 46, 2057-2065	2.7	45
189	Electron paramagnetic resonance microscopy using spins in diamond under ambient conditions. <i>Nature Communications</i> , 2017 , 8, 458	17.4	44
188	Spatial adiabatic passage in a realistic triple well structure. <i>Physical Review B</i> , 2008 , 77,	3.3	44
187	Quantum gate for Q switching in monolithic photonic-band-gap cavities containing two-level atoms. <i>Physical Review A</i> , 2006 , 73,	2.6	44
186	Numerical study of hydrogenic effective mass theory for an impurity P donor in Si in the presence of an electric field and interfaces. <i>Physical Review B</i> , 2003 , 68,	3.3	43
185	Tuning a spin bath through the quantum-classical transition. <i>Physical Review Letters</i> , 2012 , 108, 200402	7.4	41
184	Quantum-information transport to multiple receivers. <i>Physical Review A</i> , 2006 , 73,	2.6	40
183	Quantum-error correction on linear-nearest-neighbor qubit arrays. <i>Physical Review A</i> , 2004 , 69,	2.6	40
182	Evidence for Primal sp ² Defects at the Diamond Surface: Candidates for Electron Trapping and Noise Sources. <i>Advanced Materials Interfaces</i> , 2019 , 6, 1801449	4.6	40
181	Two-electron spin correlations in precision placed donors in silicon. <i>Nature Communications</i> , 2018 , 9, 980	17.4	39

180	Reconfigurable quantum metamaterials. <i>Optics Express</i> , 2011 , 19, 11018-33	3.3	38
179	High-speed quantum gates with cavity quantum electrodynamics. <i>Physical Review A</i> , 2008 , 78,	2.6	38
178	Spatial metrology of dopants in silicon with exact lattice site precision. <i>Nature Nanotechnology</i> , 2016 , 11, 763-8	28.7	37
177	Deterministic optical quantum computer using photonic modules. <i>Physical Review A</i> , 2008 , 78,	2.6	37
176	Quantum probe hyperpolarisation of molecular nuclear spins. <i>Nature Communications</i> , 2018 , 9, 1246	17.4	35
175	Gate-induced g-factor control and dimensional transition for donors in multivalley semiconductors. <i>Physical Review B</i> , 2009 , 80,	3.3	35
174	Entanglement in a 20-Qubit Superconducting Quantum Computer. <i>Scientific Reports</i> , 2019 , 9, 13465	4.9	33
173	Atomically engineered electron spin lifetimes of 30 s in silicon. <i>Science Advances</i> , 2017 , 3, e1602811	14.3	32
172	In vivo imaging and tracking of individual nanodiamonds in drosophila melanogaster embryos. <i>Biomedical Optics Express</i> , 2014 , 5, 1250-61	3.5	32
171	Time evolution of the one-dimensional Jaynes-Cummings-Hubbard Hamiltonian. <i>Physical Review A</i> , 2009 , 80,	2.6	32
170	Single-spin readout for buried dopant semiconductor qubits. <i>Physical Review B</i> , 2004 , 69,	3.3	32
169	Magnetically sensitive nanodiamond-doped tellurite glass fibers. <i>Scientific Reports</i> , 2018 , 8, 1268	4.9	31
168	Highly tunable exchange in donor qubits in silicon. <i>Npj Quantum Information</i> , 2016 , 2,	8.6	31
167	Analytic solutions to the central-spin problem for nitrogen-vacancy centers in diamond. <i>Physical Review B</i> , 2014 , 90,	3.3	31
166	High-performance diamond-based single-photon sources for quantum communication. <i>Physical Review A</i> , 2009 , 80,	2.6	30
165	Asymmetric quantum error correction via code conversion. <i>Physical Review A</i> , 2008 , 77,	2.6	30
164	Scheme for direct measurement of a general two-qubit Hamiltonian. <i>Physical Review A</i> , 2006 , 73,	2.6	30
163	Impact of Surface Functionalization on the Quantum Coherence of Nitrogen-Vacancy Centers in Nanodiamonds. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 13143-13149	9.5	29

162	Slot-waveguide cavities for optical quantum information applications. <i>Optics Express</i> , 2009 , 17, 7295-3033,	3.3	29
161	Identifying a two-state Hamiltonian in the presence of decoherence. <i>Physical Review A</i> , 2006 , 73,	2.6	29
160	Wide-band nanoscale magnetic resonance spectroscopy using quantum relaxation of a single spin in diamond. <i>Physical Review B</i> , 2016 , 94,	3.3	29
159	Electronic structure of realistically extended atomistically resolved disordered Si:P δ -doped layers. <i>Physical Review B</i> , 2011 , 84,	3.3	28
158	Microscopic Imaging of the Stress Tensor in Diamond Using in Situ Quantum Sensors. <i>Nano Letters</i> , 2019 , 19, 4543-4550	11.5	27
157	Experimental implementation of a four-player quantum game. <i>New Journal of Physics</i> , 2010 , 12, 063031	2.9	27
156	Plaquette expansion in lattice Hamiltonian models. <i>Physical Review D</i> , 1993 , 47, 1640-1644	4.9	27
155	Engineered valley-orbit splittings in quantum-confined nanostructures in silicon. <i>Physical Review B</i> , 2011 , 83,	3.3	26
154	Band structure, phase transitions, and semiconductor analogs in one-dimensional solid light systems. <i>Physical Review A</i> , 2009 , 80,	2.6	26
153	Noninvasive spatial metrology of single-atom devices. <i>Nano Letters</i> , 2013 , 13, 1903-9	11.5	25
152	Atomistic simulations of adiabatic coherent electron transport in triple donor systems. <i>Physical Review B</i> , 2009 , 80,	3.3	25
151	Scalability of Shor's algorithm with a limited set of rotation gates. <i>Physical Review A</i> , 2004 , 70,	2.6	24
150	Towards practical classical processing for the surface code: Timing analysis. <i>Physical Review A</i> , 2012 , 86,	2.6	23
149	Scalable error correction in distributed ion trap computers. <i>Physical Review A</i> , 2006 , 74,	2.6	23
148	Robust controlled-NOT gate in the presence of large fabrication-induced variations of the exchange interaction strength. <i>Physical Review A</i> , 2007 , 76,	2.6	22
147	Ab initio calculation of valley splitting in monolayer δ -doped phosphorus in silicon. <i>Nanoscale Research Letters</i> , 2013 , 8, 111	5	21
146	Towards single-molecule NMR detection and spectroscopy using single spins in diamond. <i>Physical Review B</i> , 2014 , 89,	3.3	21
145	Superadiabatic quantum state transfer in spin chains. <i>Physical Review A</i> , 2017 , 95,	2.6	20

- 144 Microwave-free nuclear magnetic resonance at molecular scales. *Nature Communications*, **2017**, 8, 15950 7.4 20
- 143 Lifetime-enhanced transport in silicon due to spin and valley blockade. *Physical Review Letters*, **2011**, 107, 136602 7.4 20
- 142 Probe and control of the reservoir density of states in single-electron devices. *Physical Review B*, **2010**, 81, 3.3 20
- 141 Top-down pathways to devices with few and single atoms placed to high precision. *New Journal of Physics*, **2010**, 12, 065016 2.9 20
- 140 Coherent tunneling adiabatic passage with the alternating coupling scheme. *Nanotechnology*, **2009**, 20, 405402 3.4 20
- 139 Vocal tract resonances and the sound of the Australian didgeridu (yidaki) I. experiment. *Journal of the Acoustical Society of America*, **2006**, 119, 1194-204 2.2 20
- 138 Electrical readout of a spin qubit without double occupancy. *Physical Review B*, **2005**, 71, 3.3 20
- 137 Quantum measurement of a rapidly rotating spin qubit in diamond. *Science Advances*, **2018**, 4, eaar7691 14.3 19
- 136 Effective mass theory of monolayer π -doping in the high-density limit. *Physical Review B*, **2012**, 85, 3.3 19
- 135 Acoustics: the vocal tract and the sound of a didgeridoo. *Nature*, **2005**, 436, 39 50.4 19
- 134 Quantum-dot cellular automata using buried dopants. *Physical Review B*, **2005**, 71, 3.3 19
- 133 Nanoscale magnetometry through quantum control of nitrogen-vacancy centres in rotationally diffusing nanodiamonds. *New Journal of Physics*, **2013**, 15, 013041 2.9 18
- 132 Nanoscale sensing and imaging in biology using the nitrogen-vacancy center in diamond. *MRS Bulletin*, **2013**, 38, 162-167 3.2 18
- 131 Equivalence between Bell inequalities and quantum minority games. *Physics Letters, Section A: General, Atomic and Solid State Physics*, **2009**, 373, 521-524 2.3 18
- 130 Electric field reduced charging energies and two-electron bound excited states of single donors in silicon. *Physical Review B*, **2011**, 84, 3.3 18
- 129 Single-qubit operations on the Kane quantum computer. *Nanotechnology*, **2002**, 13, 570-575 3.4 18
- 128 Imaging Domain Reversal in an Ultrathin Van der Waals Ferromagnet. *Advanced Materials*, **2020**, 32, e2003314 18
- 127 Enhanced Widefield Quantum Sensing with Nitrogen-Vacancy Ensembles Using Diamond Nanopillar Arrays. *ACS Applied Materials & Interfaces*, **2020**, 12, 13421-13427 9.5 17

126	A quantum spin-probe molecular microscope. <i>Nature Communications</i> , 2016 , 7, 12667	17.4	17
125	Coherent electron transport by adiabatic passage in an imperfect donor chain. <i>Physical Review B</i> , 2010 , 82,	3.3	17
124	Atomistic modeling of metallic nanowires in silicon. <i>Nanoscale</i> , 2013 , 5, 8666-74	7.7	16
123	Magnetic pseudo-fields in a rotating electron-nuclear spin system. <i>Nature Physics</i> , 2017 , 13, 1070-1073	16.2	15
122	Spin-lattice relaxation times of single donors and donor clusters in silicon. <i>Physical Review Letters</i> , 2014 , 113, 246406	7.4	15
121	Ab Initio electronic properties of monolayer phosphorus nanowires in silicon. <i>Physical Review Letters</i> , 2013 , 110, 126802	7.4	15
120	Precision characterization of two-qubit Hamiltonians via entanglement mapping. <i>Journal of Physics A</i> , 2006 , 39, 14649-14658		15
119	Subspace confinement: how good is your qubit?. <i>New Journal of Physics</i> , 2007 , 9, 384-384	2.9	15
118	Ab initio thermodynamics calculation of the relative concentration of NV ⁻ and NV ⁰ defects in diamond. <i>Physical Review B</i> , 2012 , 85,	3.3	14
117	Analytic solution for the ground-state energy of the extensive many-body problem. <i>Physical Review B</i> , 1996 , 54, 16309-16312	3.3	14
116	Plaquette expansion proof and interpretation. <i>European Physical Journal B</i> , 1994 , 95, 531-539	1.2	14
115	Quantum Magnetic Imaging of Iron Biomineralization in Teeth of the Chiton <i>Acanthopleura hirtosa</i> . <i>Small Methods</i> , 2020 , 4, 1900754	12.8	13
114	Imaging Graphene Field-Effect Transistors on Diamond Using Nitrogen-Vacancy Microscopy. <i>Physical Review Applied</i> , 2019 , 12,	4.3	13
113	Information Free Quantum Bus for Generating Stabiliser States. <i>Quantum Information Processing</i> , 2007 , 6, 229-242	1.6	13
112	Error rate of the Kane quantum computer controlled-NOT gate in the presence of dephasing. <i>Physical Review A</i> , 2003 , 67,	2.6	13
111	Optically induced spin-to-charge transduction in donor-spin readout. <i>Physical Review B</i> , 2005 , 72,	3.3	13
110	Apparent delocalization of the current density in metallic wires observed with diamond nitrogen-vacancy magnetometry. <i>Physical Review B</i> , 2019 , 99,	3.3	12
109	Laser Modulation of Superconductivity in a Cryogenic Wide-field Nitrogen-Vacancy Microscope. <i>Nano Letters</i> , 2020 , 20, 1855-1861	11.5	12

108	Strain and electric field control of hyperfine interactions for donor spin qubits in silicon. <i>Physical Review B</i> , 2015 , 91,	3.3	12
107	Pulse shaping by coupled cavities: Single photons and qubits. <i>Physical Review A</i> , 2009 , 80,	2.6	12
106	Single photon quantum non-demolition measurements in the presence of inhomogeneous broadening. <i>New Journal of Physics</i> , 2009 , 11, 093005	2.9	12
105	Two-dimensional XXZ model ground-state properties using an analytic Lanczos expansion. <i>Physical Review B</i> , 1997 , 55, 10412-10419	3.3	12
104	Theory of the microwave spectroscopy of a phosphorus-donor charge qubit in silicon: Coherent control in the Si:P quantum-computer architecture. <i>Physical Review B</i> , 2006 , 74,	3.3	12
103	General nonperturbative estimate of the energy density of lattice Hamiltonians. <i>Physical Review D</i> , 1994 , 50, 3382-3386	4.9	12
102	A tight-binding study of single-atom transistors. <i>Small</i> , 2015 , 11, 374-81	11	11
101	Two-electron states of a group-V donor in silicon from atomistic full configuration interactions. <i>Physical Review B</i> , 2018 , 97,	3.3	11
100	Proximity-Induced Artefacts in Magnetic Imaging with Nitrogen-Vacancy Ensembles in Diamond. <i>Sensors</i> , 2018 , 18,	3.8	11
99	Voltage control of exchange coupling in phosphorus doped silicon. <i>Journal of Physics Condensed Matter</i> , 2004 , 16, 5697-5704	1.8	11
98	Surface code quantum error correction incorporating accurate error propagation. <i>Quantum Information and Computation</i> , 2011 , 11, 8-18	0.9	11
97	Improved Current Density and Magnetization Reconstruction Through Vector Magnetic Field Measurements. <i>Physical Review Applied</i> , 2020 , 14,	4.3	11
96	Rapid, High-Resolution Magnetic Microscopy of Single Magnetic Microbeads. <i>Small</i> , 2019 , 15, e1805159	11	10
95	Non-Abelian geometric phase in the diamond nitrogen-vacancy center. <i>Physical Review A</i> , 2014 , 90,	2.6	10
94	Electronic properties of multiple adjacent doped Si:P layers: The approach to monolayer confinement. <i>Physical Review B</i> , 2012 , 86,	3.3	10
93	Vocal tract resonances and the sound of the Australian didjeridu (yidaki). III. Determinants of playing quality. <i>Journal of the Acoustical Society of America</i> , 2007 , 121, 547-58	2.2	10
92	Fast quantum search algorithms in protein sequence comparisons: quantum bioinformatics. <i>Physical Review E</i> , 2000 , 62, 7532-5	2.4	10
91	Nonvanishing effect of detuning errors in dynamical-decoupling-based quantum sensing experiments. <i>Physical Review A</i> , 2019 , 99,	2.6	9

90	Observation of a Quantum Phase from Classical Rotation of a Single Spin. <i>Physical Review Letters</i> , 2020 , 124, 020401	7.4	9
89	Thermodynamic stability of neutral Xe defects in diamond. <i>Physical Review B</i> , 2010 , 82,	3.3	9
88	Stark tuning of the charge states of a two-donor molecule in silicon. <i>Nanotechnology</i> , 2011 , 22, 225202	3.4	9
87	Cross-talk compensation of hyperfine control in donor-qubit architectures. <i>Nanotechnology</i> , 2006 , 17, 4572-80	3.4	9
86	Plaquette expansion of the two-dimensional antiferromagnetic Heisenberg model. <i>Physical Review B</i> , 1994 , 50, 1275-1277	3.3	9
85	Magnetic noise from ultrathin abrasively deposited materials on diamond. <i>Physical Review Materials</i> , 2018 , 2,	3.2	9
84	Quantum computed moments correction to variational estimates. <i>Quantum - the Open Journal for Quantum Science</i> , 4 , 373		9
83	Spin-orbit coupling in silicon for electrons bound to donors. <i>Npj Quantum Information</i> , 2018 , 4,	8.6	9
82	Simulations of Shor's algorithm using matrix product states. <i>Quantum Information Processing</i> , 2017 , 16, 1	1.6	8
81	Ab initio calculation of energy levels for phosphorus donors in silicon. <i>Scientific Reports</i> , 2017 , 7, 6010	4.9	8
80	Mapping donor electron wave function deformations at a sub-Bohr orbit resolution. <i>Physical Review Letters</i> , 2009 , 103, 106802	7.4	8
79	The effects of J-gate potential and interfaces on donor exchange coupling in the Kane quantum computer architecture. <i>Journal of Physics Condensed Matter</i> , 2004 , 16, 1011-1023	1.8	8
78	Modelling of electrostatic gate operations in the Kane solid state quantum computer. <i>Microelectronics Journal</i> , 2002 , 33, 1053-1058	1.8	8
77	Velocity-tuned resonances in the diffraction of atoms by an evanescent field. <i>Physical Review A</i> , 1994 , 49, 3100-3103	2.6	8
76	Plaquette expansion of the Heisenberg and XY chains. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1993 , 182, 238-243	2.3	8
75	Demonstration of non-Markovian process characterisation and control on a quantum processor. <i>Nature Communications</i> , 2020 , 11, 6301	17.4	7
74	Environmentally Mediated Coherent Control of a Spin Qubit in Diamond. <i>Physical Review Letters</i> , 2017 , 118, 167204	7.4	7
73	Thermal noise in a solid state quantum computer. <i>Journal Physics D: Applied Physics</i> , 2002 , 35, 2499-2502		7

72	General non-perturbative mass gap to first order in. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 1995 , 361, 81-86	4.2	7
71	Valley interference and spin exchange at the atomic scale in silicon. <i>Nature Communications</i> , 2020 , 11, 6124	17.4	7
70	Framework for atomic-level characterisation of quantum computer arrays by machine learning. <i>Npj Computational Materials</i> , 2020 , 6,	10.9	7
69	Prospects for nuclear spin hyperpolarization of molecular samples using nitrogen-vacancy centers in diamond. <i>Physical Review B</i> , 2021 , 103,	3.3	7
68	High precision single qubit tuning via thermo-magnetic field control. <i>Applied Physics Letters</i> , 2018 , 112, 103103	3.4	6
67	Plaquette expansion study of compact U(1) lattice gauge theory in (2 + 1) dimensions. <i>Zeitschrift für Physik C-Particles and Fields</i> , 1997 , 76, 175-179		6
66	Transport-based dopant metrology in advanced FinFETs 2008 ,		6
65	Multiplexing single electron transistors for application in scalable solid-state quantum computing. <i>Applied Physics Letters</i> , 2007 , 90, 043109	3.4	6
64	Vocal tract resonances and the sound of the Australian didgeridu (yidaki) II. Theory. <i>Journal of the Acoustical Society of America</i> , 2006 , 119, 1205-13	2.2	6
63	COUPLED CLUSTER METHODS FOR LATTICE GAUGE THEORIES. <i>International Journal of Modern Physics B</i> , 2000 , 14, 2023-2037	1.1	6
62	Advances in the Surface Functionalization of Nanodiamonds for Biological Applications: A Review. <i>ACS Applied Nano Materials</i> , 2021 , 4, 9985-10005	5.6	6
61	Ab initio electronic properties of dual phosphorus monolayers in silicon. <i>Nanoscale Research Letters</i> , 2014 , 9, 443	5	5
60	Modeling two-spin dynamics in a noisy environment. <i>Physical Review A</i> , 2009 , 80,	2.6	5
59	Parallel interaction-free measurement using spatial adiabatic passage. <i>New Journal of Physics</i> , 2011 , 13, 125002	2.9	5
58	Modelling single-electron-transistor-based readout in the Kane solid-state quantum computer. <i>Nanotechnology</i> , 2003 , 14, 161-164	3.4	5
57	Nonadiabatic controlled-NOT gate for the Kane solid-state quantum computer. <i>Physical Review A</i> , 2002 , 65,	2.6	5
56	Hamiltonian of SU(2) lattice gauge theory in approximate tridiagonal form. <i>Physical Review D</i> , 1994 , 50, 2293-2296	4.9	5
55	First order analytic diagonalization of lattice QCD. <i>Physical Review D</i> , 1994 , 50, 6917-6920	4.9	5

54	Polarization Transfer to External Nuclear Spins Using Ensembles of Nitrogen-Vacancy Centers. <i>Physical Review Applied</i> , 2021 , 15,	4.3	5
53	Quantum Bath Control with Nuclear Spin State Selectivity via Pulse-Adjusted Dynamical Decoupling. <i>Physical Review Letters</i> , 2019 , 123, 210401	7.4	5
52	T2-limited sensing of static magnetic fields via fast rotation of quantum spins. <i>Physical Review B</i> , 2018 , 98,	3.3	5
51	Whole-Device Entanglement in a 65-Qubit Superconducting Quantum Computer. <i>Advanced Quantum Technologies</i> , 2021 , 4, 2100061	4.3	5
50	Generation and verification of 27-qubit Greenberger-Horne-Zeilinger states in a superconducting quantum computer. <i>Journal of Physics Communications</i> , 2021 , 5, 095004	1.2	5
49	Visualizing a silicon quantum computer. <i>New Journal of Physics</i> , 2008 , 10, 125005	2.9	4
48	Improved meson mass spectrum calculation in the static cavity. <i>Journal of Physics G: Nuclear and Particle Physics</i> , 1990 , 16, 31-38	2.9	4
47	Comparison of different methods of nitrogen-vacancy layer formation in diamond for wide-field quantum microscopy. <i>Physical Review Materials</i> , 2020 , 4,	3.2	4
46	Optimising Matrix Product State Simulations of Shor's Algorithm. <i>Quantum - the Open Journal for Quantum Science</i> , 3 , 116		4
45	Towards visualisation of central-cell-effects in scanning tunnelling microscope images of subsurface dopant qubits in silicon. <i>Nanoscale</i> , 2017 , 9, 17013-17019	7.7	4
44	Performance Optimization for Drift-Robust Fidelity Improvement of Two-Qubit Gates. <i>Physical Review Applied</i> , 2021 , 15,	4.3	4
43	Spectroscopy of a deterministic single-donor device in silicon 2012 ,		3
42	Scaling of coherent tunneling adiabatic passage in solid-state coherent quantum systems 2005 ,		3
41	First order in the plaquette expansion. <i>Zeitschrift für Physik B-Condensed Matter</i> , 1995 , 99, 101-110		3
40	LARGE-BASIS MESON WAVEFUNCTIONS. <i>International Journal of Modern Physics A</i> , 1989 , 04, 1949-1981	1.2	3
39	Analysis and Geometric Optimization of Single Electron Transistors for Read-Out in Solid-State Quantum Computing. <i>Journal of Computational and Theoretical Nanoscience</i> , 2005 , 2, 214-226	0.3	3
38	Quantum Support Vector Machines for Continuum Suppression in B Meson Decays. <i>Computing and Software for Big Science</i> , 2021 , 5, 1	6	3
37	Investigation of charge carrier trapping in H-terminated diamond devices. <i>Applied Physics Letters</i> , 2020 , 117, 143507	3.4	3

36	Fan-out Estimation in Spin-based Quantum Computer Scale-up. <i>Scientific Reports</i> , 2017 , 7, 13386	4.9	2
35	Measurements and atomistic theory of electron g-factor anisotropy for phosphorus donors in strained silicon. <i>Physical Review B</i> , 2018 , 98,	3.3	2
34	Surface code continuous quantum error correction using feedback 2015 ,		2
33	Accessing diamond waveguides and future applications 2010 ,		2
32	Single atom-scale diamond defect allows a large Aharonov-Casher phase. <i>Physical Review A</i> , 2009 , 80,	2.6	2
31	Accurate calculation of ground-state energies in an analytic Lanczos expansion. <i>Journal of Physics Condensed Matter</i> , 1997 , 9, 2031-2042	1.8	2
30	Atomistic Understanding of a Single Gated Dopant Atom in a MOSFET. <i>Materials Research Society Symposia Proceedings</i> , 2008 , 1067, 1		2
29	Implementation of Quantum Gates via Optimal Control in the Presence of Cross-talk. <i>AIP Conference Proceedings</i> , 2007 ,	0	2
28	Cavity QED Deutsch quantum computer. <i>Physical Review A</i> , 2001 , 64,	2.6	2
27	Lanczos cluster expansion for non-extensive systems. <i>Zeitschrift für Physik D-Atoms Molecules and Clusters</i> , 1996 , 38, 249-252		2
26	Hamiltonian Moments and the Lanczos Method in the Heisenberg Model. <i>Australian Journal of Physics</i> , 1992 , 45, 717		2
25	One-loop calculation of meson charge radii in the static cavity: The large-basis model. <i>Physical Review D</i> , 1989 , 40, 145-156	4.9	2
24	Glueball Spectrum of SU(3) Lattice Gauge Theory by Plaquette Expansion. <i>Australian Journal of Physics</i> , 1998 , 51, 35		2
23	Constructing Large-basis Meson Wavefunctions from Perturbative Cavity Dynamics. <i>Australian Journal of Physics</i> , 1989 , 42, 11		2
22	Staggered Magnetisation in the Heisenberg Antiferromagnet. <i>Australian Journal of Physics</i> , 1994 , 47, 137		2
21	Interplay between geometric and dynamic phases in a single-spin system. <i>Physical Review B</i> , 2020 , 102,	3.3	2
20	Long-Range Surface-Assisted Molecule-Molecule Hybridization. <i>Small</i> , 2021 , 17, e2005974	11	2
19	Epitaxial Formation of SiC on (100) Diamond. <i>ACS Applied Electronic Materials</i> , 2020 , 2, 2003-2009	4	1

18	Designing a large scale quantum computer with atomistic simulations 2014 ,		1
17	Coupling slot-waveguide cavities for large-scale quantum optical devices. <i>Optics Express</i> , 2011 , 19, 6354-655	6.5	1
16	Analytic variational study of the mass spectrum in (2+1)-dimensional SU(3) Hamiltonian lattice gauge theory. <i>Physical Review D</i> , 2003 , 67,	4.9	1
15	Investigating Immersive Virtual Reality as an Educational Tool for Quantum Computing 2020 ,		1
14	Measuring the Charge and Spin States of Electrons on Individual Dopant Atoms in Silicon. <i>Topics in Applied Physics</i> , 2009 , 169-182	0.5	1
13	Valley population of donor states in highly strained silicon. <i>Materials for Quantum Technology</i> , 2022 , 2, 025002		1
12	An integrated widefield probe for practical diamond nitrogen-vacancy microscopy. <i>Applied Physics Letters</i> , 2021 , 119, 254002	3.4	0
11	Magnetic Materials: Rapid, High-Resolution Magnetic Microscopy of Single Magnetic Microbeads (Small 18/2019). <i>Small</i> , 2019 , 15, 1970097	11	
10	Level spectrum of a single gated arsenic donor in a three terminal geometry. <i>Materials Research Society Symposia Proceedings</i> , 2008 , 1117, 103		
9	Transport spectroscopy of a single atom in a FinFET. <i>Journal of Physics: Conference Series</i> , 2008 , 109, 012003	0.3	
8	QUANTUM COMPUTATION IN SILICON DEVICE MODELING, TRANSPORT AND FAULT-TOLERANCE. <i>International Journal of Modern Physics A</i> , 2007 , 22, 4999-5009	1.2	
7	Analytic calculation of the mass gap in U(1)2+1 lattice gauge theory.. <i>Nuclear Physics, Section B, Proceedings Supplements</i> , 2002 , 106-107, 257-259		
6	Measuring decoherence properties of charge qubits using buried donor cellular automata 2005 , 5650, 504		
5	Fast donor-based electron spin quantum computing 2005 , 5650, 44		
4	KaonB parameter with static cavity QCD corrections. <i>Zeitschrift für Physik C-Particles and Fields</i> , 1990 , 46, 609-619		
3	Static cavity calculation of heavy meson neutral mixing with QCD corrections. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 1990 , 237, 265-267	4.2	
2	Cost-optimal single-qubit gate synthesis in the Clifford hierarchy. <i>Quantum - the Open Journal for Quantum Science</i> , 5, 396		
1	The Yidaki: A Triumph of Mind over Matter in Tribute to Joe Gumbula. <i>Preservation, Digital Technology and Culture</i> , 2018 , 47, 163-165	0.5	

