John J L Morton

List of Publications by Citations

71 papers	4,927 citations	30 h-index	70 g-index
75 ext. papers	5,818 ext. citations	13.6 avg, IF	5.28 L-index

#	Paper	IF	Citations
71	A single-atom electron spin qubit in silicon. *Nature*, **2012**, 489, 541-5	50.4	538
70	Electron spin coherence exceeding seconds in high-purity silicon. *Nature Materials*, **2011**, 11, 143-7	27	456
69	High-fidelity readout and control of a nuclear spin qubit in silicon. *Nature*, **2013**, 496, 334-8	50.4	348
68	High-cooperativity coupling of electron-spin ensembles to superconducting cavities. *Physical Review Letters*, **2010**, 105, 140501	7.4	334
67	Solid-state quantum memory using the 31P nuclear spin. *Nature*, **2008**, 455, 1085-1088	50.4	295
66	Room-temperature quantum bit storage exceeding 39 minutes using ionized donors in silicon-28. *Science*, **2013**, 342, 830-3	33.3	267
65	Quantum information storage for over 180 s using donor spins in a 28Si "semiconductor vacuum". *Science*, **2012**, 336, 1280-3	33.3	217
64	Sustained quantum coherence and entanglement in the avian compass. *Physical Review Letters*, **2011**, 106, 040503	7.4	204
63	Embracing the quantum limit in silicon computing. *Nature*, **2011**, 479, 345-53	50.4	202
62	Quantum computing with an electron spin ensemble. *Physical Review Letters*, **2009**, 103, 070502	7.4	181
61	Atomic clock transitions in silicon-based spin qubits. *Nature Nanotechnology*, **2013**, 8, 561-4	28.7	154
60	Storage of multiple coherent microwave excitations in an electron spin ensemble. *Physical Review Letters*, **2010**, 105, 140503	7.4	135
59	Entanglement in a solid-state spin ensemble. *Nature*, **2011**, 470, 69-72	50.4	109
58	Reaching the quantum limit of sensitivity in electron spin resonance. *Nature Nanotechnology*, **2016**, 11, 253-7	28.7	106
57	Coherence of spin qubits in silicon. *Journal of Physics Condensed Matter*, **2006**, 18, S783-S794	1.8	97
56	Controlling spin relaxation with a cavity. *Nature*, **2016**, 531, 74-7	50.4	95
55	Electron spin relaxation of N@C60 in CS2 in CS2. *Journal of Chemical Physics*, **2006**, 124, 14508	3.9	88

54	Spin-enhanced nanodiamond biosensing for ultrasensitive diagnostics. *Nature*, **2020**, 587, 588-593	50.4	82
53	Electron spin coherence and electron nuclear double resonance of Bi donors in natural Si. *Physical Review Letters*, **2010**, 105, 067601	7.4	75
52	Electron spin coherence of phosphorus donors in silicon: Effect of environmental nuclei. *Physical Review B*, **2010**, 82,	3.3	69
51	Electron spin ensemble strongly coupled to a three-dimensional microwave cavity. *Applied Physics Letters*, **2011**, 98, 251108	3.4	63
50	Coherent storage of microwave excitations in rare-earth nuclear spins. *Physical Review Letters*, **2015**, 114, 170503	7.4	55
49	Fast, low-power manipulation of spin ensembles in superconducting microresonators. *Applied Physics Letters*, **2014**, 104, 222407	3.4	48
48	Inductive-detection electron-spin resonance spectroscopy with 65 spins/ Hz sensitivity. *Applied Physics Letters*, **2017**, 111, 202604	3.4	44
47	Electrical activation and electron spin resonance measurements of implanted bismuth in isotopically enriched silicon-28. *Applied Physics Letters*, **2012**, 100, 172104	3.4	41
46	Hyperfine Stark effect of shallow donors in silicon. *Physical Review B*, **2014**, 90,	3.3	36
45	Radio-Frequency Capacitive Gate-Based Sensing. *Physical Review Applied*, **2018**, 10,	4.3	34
44	Geometric phase gates with adiabatic control in electron spin resonance. *Physical Review A*, **2013**, 87,	2.6	34
43	Davies electron-nuclear double resonance revisited: enhanced sensitivity and nuclear spin relaxation. *Journal of Chemical Physics*, **2006**, 124, 234508	3.9	32
42	Coherent state transfer between an electron and nuclear spin in (15)N@C(60). *Physical Review Letters*, **2011**, 106, 110504	7.4	30
41	Quantum-bath-driven decoherence of mixed spin systems. *Physical Review B*, **2014**, 89,	3.3	26
40	Decoherence mechanisms of 209Bi donor electron spins in isotopically pure 28Si. *Physical Review B*, **2012**, 86,	3.3	26
39	Hybrid optical-electrical detection of donor electron spins with bound excitons in silicon. *Nature Materials*, **2015**, 14, 490-4	27	25
38	Linear Hyperfine Tuning of Donor Spins in Silicon Using Hydrostatic Strain. *Physical Review Letters*, **2018**, 120, 167701	7.4	25
37	Conditional control of donor nuclear spins in silicon using stark shifts. *Physical Review Letters*, **2014**, 113, 157601	7.4	24

36	Uncovering many-body correlations in nanoscale nuclear spin baths by central spin decoherence. *Nature Communications*, **2014**, 5, 4822	17.4	24
35	A CMOS dynamic random access architecture for radio-frequency readout of quantum devices. *Nature Electronics*, **2019**, 2, 236-242	28.4	23
34	Storing quantum information in spins and high-sensitivity ESR. *Journal of Magnetic Resonance*, **2018**, 287, 128-139	3	22
33	Synthesis and investigation of donor-porphyrin-acceptor triads with long-lived photo-induced charge-separate states. *Chemical Science*, **2015**, 6, 6468-6481	9.4	20
32	Fast Gate-Based Readout of Silicon Quantum Dots Using Josephson Parametric Amplification. *Physical Review Letters*, **2020**, 124, 067701	7.4	18
31	Classical nature of nuclear spin noise near clock transitions of Bi donors in silicon. *Physical Review B*, **2015**, 92,	3.3	16
30	29Si nuclear spins as a resource for donor spin qubits in silicon. *New Journal of Physics*, **2016**, 18, 023021	2.9	16
29	Coherent spin dynamics of ytterbium ions in yttrium orthosilicate. *Physical Review B*, **2018**, 97,	3.3	15
28	Stark shift and field ionization of arsenic donors in 28Si-silicon-on-insulator structures. *Applied Physics Letters*, **2014**, 104, 193502	3.4	15
27	Probing the C□triplet state coupling to nuclear spins inside and out. *Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences*, **2013**, 371, 20120475	3	12
26	Nuclear relaxation effects in Davies ENDOR variants. *Journal of Magnetic Resonance*, **2008**, 191, 315-21	3	11
25	Electron spin resonance spectroscopy with femtoliter detection volume. *Applied Physics Letters*, **2020**, 116, 184002	3.4	10
24	Pulse Techniques for Quantum Information Processing **2016**, 1515-1528		10
23	Pulsed electron spin resonance spectroscopy in the Purcell regime. *Journal of Magnetic Resonance*, **2020**, 310, 106662	3	9
22	First-principles calculations of hyperfine interaction, binding energy, and quadrupole coupling for shallow donors in silicon. *Npj Computational Materials*, **2020**, 6,	10.9	9
21	Primary thermometry of a single reservoir using cyclic electron tunneling to a quantum dot. *Communications Physics*, **2018**, 1,	5.4	9
20	High-Cooperativity Coupling of a Rare-Earth Spin Ensemble to a Superconducting Resonator Using Yttrium Orthosilicate as a Substrate. *Physical Review Applied*, **2019**, 11,	4.3	8
19	Spin Readout of a CMOS Quantum Dot by Gate Reflectometry and Spin-Dependent Tunneling. *PRX Quantum*, **2021**, 2,	6.1	8

18	Radiative cooling of a spin ensemble. *Nature Physics*, **2020**, 16, 751-755	16.2	8
17	Spin relaxation and donor-acceptor recombination of Se+ in 28-silicon. *Physical Review B*, **2015**, 92,	3.3	7
16	Quantum information: Spin memories in for the long haul. *Nature*, **2015**, 517, 153-4	50.4	7
15	Using Deep Learning to Understand and Mitigate the Qubit Noise Environment. *PRX Quantum*, **2021**, 2,	6.1	7
14	A Silicon Surface Code Architecture Resilient Against Leakage Errors. *Quantum - the Open Journal for Quantum Science*,3, 212		6
13	Multimode Storage of Quantum Microwave Fields in Electron Spins over 100 ms. *Physical Review Letters*, **2020**, 125, 210505	7.4	5
12	Host isotope mass effects on the hyperfine interaction of group-V donors in silicon. *Physical Review B*, **2014**, 90,	3.3	5
11	Self-Stimulated Pulse Echo Trains from Inhomogeneously Broadened Spin Ensembles. *Physical Review Letters*, **2020**, 125, 137702	7.4	5
10	Remote Capacitive Sensing in Two-Dimensional Quantum-Dot Arrays. *Nano Letters*, **2020**, 20, 7123-7128	11.5	5
9	A sensitivity leap for X-band EPR using a probehead with a cryogenic preamplifier. *Journal of Magnetic Resonance*, **2021**, 322, 106876	3	5
8	Quantum computing: Three of diamonds. *Nature Nanotechnology*, **2014**, 9, 167-9	28.7	4
7	Tuning high-Q superconducting resonators by magnetic field reorientation. *AIP Advances*, **2019**, 9, 125225	1.55	4
6	Hyperfine spectroscopy in a quantum-limited spectrometer. *Magnetic Resonance*, **2020**, 1, 315-330	2.9	2
5	Functional basis of electron transport within photosynthetic complex I. *Nature Communications*, **2021**, 12, 5387	17.4	2
4	Electron Spin Resonance of P Donors in Isotopically Purified Si Detected by Contactless Photoconductivity. *Physical Review Applied*, **2019**, 11,	4.3	1
3	Quantum information. A gem of a quantum teleporter. *Science*, **2014**, 345, 510-1	33.3	1
2	Dispersive readout of reconfigurable ambipolar quantum dots in a silicon-on-insulator nanowire. *Applied Physics Letters*, **2021**, 118, 164002	3.4	1
1	Quantum registers hit the right wavelength. *Nature Materials*, **2020**, 19, 1259-1260	27	