Stephen A Lyon

List of Publications by Year
in descending order

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67	5,433	101384	118652
papers	citations	36 h-index	62 g-index

68	68	68	5907
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Fabrication of 5nm linewidth and 14nm pitch features by nanoimprint lithography. Applied Physics Letters, 2004, 84, 5299-5301.	1.5	564
2	NLRP3 activation and mitosis are mutually exclusive events coordinated by NEK7, a new inflammasome component. Nature Immunology, 2016, 17, 250-258.	7.0	532
3	Solid-state quantum memory using the 31P nuclear spin. Nature, 2008, 455, 1085-1088.	13.7	351
4	Spectroscopy of hot carriers in semiconductors. Journal of Luminescence, 1986, 35, 121-154.	1.5	240
5	Embracing the quantum limit in silicon computing. Nature, 2011, 479, 345-353.	13.7	228
6	Comparison of predicted and actual consequences of missense mutations. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, E5189-98.	3.3	200
7	Atomic clock transitions in silicon-based spin qubits. Nature Nanotechnology, 2013, 8, 561-564.	15.6	194
8	Mid-infrared photoconductivity in InAs quantum dots. Applied Physics Letters, 1997, 70, 1861-1863.	1.5	183
9	Bangâ€“bang control of fullerene qubits using ultrafast phase gates. Nature Physics, 2006, 2, 40-43.	6.5	174
10	Observation of an environmentally insensitive solid-state spin defect in diamond. Science, 2018, 361, 60-63.	6.0	173
11	6 nm half-pitch lines and 0.04 Âµm2static random access memory patterns by nanoimprint lithography. Nanotechnology, 2005, 16, 1058-1061.	1.3	142
12	Towards a fullerene-based quantum computer. Journal of Physics Condensed Matter, 2006, 18, S867-S883.	0.7	138
13	Hot-Electron Relaxation in GaAs Quantum Wells. Physical Review Letters, 1985, 55, 2359-2361.	2.9	137
14	Grating enhanced quantum well detector. Applied Physics Letters, 1985, 47, 1257-1259.	1.5	106
15	Capture and tunnel emission of electrons by deep levels in ultrathin nitrided oxides on silicon. Applied Physics Letters, 1984, 44, 316-318.	1.5	101
16	Relationship between hole trapping and interface state generation in metalâ€oxideâ€silicon structures. Applied Physics Letters, 1988, 52, 1431-1433.	1.5	93
17	Spin Manipulation of Free Two-Dimensional Electrons inSi/SiGeQuantum Wells. Physical Review Letters, 2005, 94, 126802.	2.9	85
18	High Fidelity Single Qubit Operations Using Pulsed Electron Paramagnetic Resonance. Physical Review Letters, 2005, 95, 200501.	2.9	77

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19	Electron spin coherence of phosphorus donors in silicon: Effect of environmental nuclei. Physical Review B, 2010, 82, .	1.1	76
20	Real-time resolution of point mutations that cause phenovariance in mice. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, E440-9.	3.3	75
21	Stark Tuning of Donor Electron Spins in Silicon. Physical Review Letters, 2006, 97, 176404.	2.9	73
22	Amphoteric defects at the Siâ€“SiO2interface. Applied Physics Letters, 1986, 48, 662-664.	1.5	72
23	Electrical activation and electron spin coherence of ultralow dose antimony implants in silicon. Applied Physics Letters, 2006, 88, 112101.	1.5	69
24	Microstrain in laserâ€crystallized silicon islands on fused silica. Applied Physics Letters, 1982, 40, 316-318.	1.5	67
25	Silicide/strained Si/sub 1-x/Ge/sub x/ Schottky-barrier infrared detectors. IEEE Electron Device Letters, 1993, 14, 199-201.	2.2	63
26	Fast, low-power manipulation of spin ensembles in superconducting microresonators. Applied Physics Letters, 2014, 104, .	1.5	63
27	Voltage tunable quantum well infrared detector. Applied Physics Letters, 1989, 55, 2417-2419.	1.5	61
28	Photovoltaic quantum well infrared detector. Applied Physics Letters, 1988, 52, 1701-1703.	1.5	55
29	Location of positive charge trapped near the Siâ€“SiO2interface at low temperature. Applied Physics Letters, 1986, 48, 136-138.	1.5	53
30	Grating enhancement of quantum well detector response. Applied Physics Letters, 1988, 53, 1027-1029.	1.5	49
31	Observation of hot-electron energy loss through the emission of phonon-plasmon coupled modes in GaAs. Physical Review Letters, 1990, 65, 760-763.	2.9	49
32	Electrical activation and electron spin resonance measurements of implanted bismuth in isotopically enriched silicon-28. Applied Physics Letters, 2012, 100, .	1.5	47
33	All-electric control of donor nuclear spin qubits in silicon. Nature Nanotechnology, 2017, 12, 958-962.	15.6	47
34	Simple method to start and maintain self-mode-locking of a Ti:sapphire laser. Optics Letters, 1992, 17, 1219.	1.7	40
35	Spin-dependent scattering off neutral antimony donors in Si28 field-effect transistors. Applied Physics Letters, 2007, 91, .	1.5	39
36	Role of Electromagnetic Resonances in the Surface-Enhanced Raman Effect. Physical Review Letters, 1983, 51, 593-596.	2.9	38

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37	Optically Detected Magnetic Resonance in Neutral Silicon Vacancy Centers in Diamond via Bound Exciton States. Physical Review Letters, 2020, 125, 237402.	2.9	36
38	Performance aspects of a quantumâ€well detector. Journal of Applied Physics, 1988, 63, 5149-5153.	1.1	35
39	Relationship between trapped holes, positive ions, and interface states in irradiated Siâ€SiO2structures. Applied Physics Letters, 1989, 55, 2328-2330.	1.5	35
40	Electron Spin Coherence of Shallow Donors in Natural and Isotopically Enriched Germanium. Physical Review Letters, 2015, 115, 247601.	2.9	35
41	New model of the rapid initial oxidation of silicon. Applied Physics Letters, 1985, 47, 154-156.	1.5	34
42	Coherent State Transfer between an Electron and Nuclear Spin in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mmultiscripts><mml:mi mathvariant="bold">N</mml:mi><mml:mprescripts /><mml:none /><mml:mn mathvariant="bold">15</mml:mn></mml:mmultiscripts><mml:mo mathvariant="bold">@</mml:mo><mml:msub><mml:mi mathvariant="bold">C</mml:mi><mml:mn mathvariant="bold">60</mml:mn></mml:msub></mml:math>. Physical Review Letters, 2011, 106, 110504.	2.9	34
43	Electroluminescence of ballistically injected electrons in AlGaAs/GaAs heterodiodes. Physical Review Letters, 1989, 63, 2849-2852.	2.9	33
44	Davies electron-nuclear double resonance revisited: Enhanced sensitivity and nuclear spin relaxation. Journal of Chemical Physics, 2006, 124, 234508.	1.2	33
45	Efficient Clocked Electron Transfer on Superfluid Helium. Physical Review Letters, 2011, 107, 266803.	2.9	32
46	Annealing shallow Si/SiO2 interface traps in electron-beam irradiated high-mobility metal-oxide-silicon transistors. Applied Physics Letters, 2017, 110, .	1.5	32
47	Optimally designed potentials for control of electron-wave scattering in semiconductor nanodevices. Physical Review B, 1994, 49, 11100-11110.	1.1	30
48	The N@C60 nuclear spin qubit: Bang-bang decoupling and ultrafast phase gates. Physica Status Solidi (B): Basic Research, 2006, 243, 3028-3031.	0.7	30
49	Narrow Optical Line Widths in Erbium Implanted in TiO₂. Nano Letters, 2019, 19, 8928-8933.	4.5	30
50	Negative differential Rashba effect in two-dimensional hole systems. Applied Physics Letters, 2004, 85, 3151-3153.	1.5	29
51	Hybrid opticalâ€“electrical detection of donor electron spins with bound excitons in silicon. Nature Materials, 2015, 14, 490-494.	13.3	29
52	Mid-infrared reflectivity and ellipsometry measurements on single-crystalYBa2Cu3O7andBi2Sr2CuO6+y. Physical Review B, 1989, 40, 6884-6889.	1.1	28
53	Cycling of defects between trapped negative charge and interface states at the Siâ€SiO2interface. Applied Physics Letters, 1987, 50, 1152-1154.	1.5	27
54	Decoherence mechanisms of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msup><mml:mrow /><mml:mn>209</mml:mn></mml:msup></mml:math>Bi donor electron spins in isotopically pure<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msup><mml:mrow /><mml:mn>28</mml:mn></mml:msup></mml:math>Si. Physical Review B, 2012, 86, .	1.1	27

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55	Observation of Rabi Splitting from Surface Plasmon Coupled Conduction State Transitions in Electrically Excited InAs Quantum Dots. Nano Letters, 2011, 11, 338-342.	4.5	25
56	Electrically Detected Magnetic Resonance of Neutral Donors Interacting with a Two-Dimensional Electron Gas. Physical Review Letters, 2011, 106, 207601.	2.9	25
57	Electron spin coherence in Si. Physica E: Low-Dimensional Systems and Nanostructures, 2006, 35, 257-263.	1.3	24
58	Spin relaxation and donor-acceptor recombination of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msup><mml:mi mathvariant="normal">Se</mml:mi><mml:mo>+</mml:mo></mml:msup></mml:math>in 28-silicon. Physical Review B, 2015, 92, .	1.1	10
59	Deterministic error model for quantum computer simulation. Physical Review A, 2008, 77, .	1.0	5
60	Electron Spin Resonance of P Donors in Isotopically Purified Si Detected by Contactless Photoconductivity. Physical Review Applied, 2019, 11, .	1.5	4
61	Thermopower-Based Hot Electron Thermometry of Helium Surface States at 1.6ÂK. Physical Review Letters, 2018, 121, 236801.	2.9	3
62	Picosecond electrical excitation of a two-dimensional electron gas. , 2004, , .		2
63	Relaxation of candidate electron spin qubits. , 2004, 5472, 97.		1
64	Spin Relaxation in SiGe Islands. Materials Research Society Symposia Proceedings, 2006, 958, 1.	0.1	0
65	Mid-infrared Electroluminescence from Surface Plasmon Coupled InAs Quantum Dots. Materials Research Society Symposia Proceedings, 2009, 1208, 1.	0.1	0
66	Mid-infrared surface plasmon coupled emitters utilizing intersublevel transitions in InAs quantum dots. Proceedings of SPIE, 2010, , .	0.8	0
67	New Host Materials for Rare Earth Ions. , 2020, , .		0