

Stephen A Lyon

List of Publications by Year in descending order

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67
papers

5,433
citations

101384

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118652

62
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68
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docs citations

68
times ranked

5907
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|---|------|-----------|
| 1 | Optically Detected Magnetic Resonance in Neutral Silicon Vacancy Centers in Diamond via Bound Exciton States. <i>Physical Review Letters</i> , 2020, 125, 237402. | 2.9 | 36 |
| 2 | New Host Materials for Rare Earth Ions. , 2020, , . | | 0 |
| 3 | Electron Spin Resonance of P Donors in Isotopically Purified Si Detected by Contactless Photoconductivity. <i>Physical Review Applied</i> , 2019, 11, . | 1.5 | 4 |
| 4 | Narrow Optical Line Widths in Erbium Implanted in TiO ₂ . <i>Nano Letters</i> , 2019, 19, 8928-8933. | 4.5 | 30 |
| 5 | Thermopower-Based Hot Electron Thermometry of Helium Surface States at 1.6ÅK. <i>Physical Review Letters</i> , 2018, 121, 236801. | 2.9 | 3 |
| 6 | Observation of an environmentally insensitive solid-state spin defect in diamond. <i>Science</i> , 2018, 361, 60-63. | 6.0 | 173 |
| 7 | Annealing shallow Si/SiO ₂ interface traps in electron-beam irradiated high-mobility metal-oxide-silicon transistors. <i>Applied Physics Letters</i> , 2017, 110, . | 1.5 | 32 |
| 8 | All-electric control of donor nuclear spin qubits in silicon. <i>Nature Nanotechnology</i> , 2017, 12, 958-962. | 15.6 | 47 |
| 9 | NLRP3 activation and mitosis are mutually exclusive events coordinated by NEK7, a new inflammasome component. <i>Nature Immunology</i> , 2016, 17, 250-258. | 7.0 | 532 |
| 10 | Spin relaxation and donor-acceptor recombination of ^{29}Si in 28-silicon. <i>Physical Review B</i> , 2015, 92, . | 1.1 | 10 |
| 11 | Electron Spin Coherence of Shallow Donors in Natural and Isotopically Enriched Germanium. <i>Physical Review Letters</i> , 2015, 115, 247601. | 2.9 | 35 |
| 12 | Comparison of predicted and actual consequences of missense mutations. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, E5189-98. | 3.3 | 200 |
| 13 | Real-time resolution of point mutations that cause phenovariance in mice. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, E440-9. | 3.3 | 75 |
| 14 | Hybrid optical-electrical detection of donor electron spins with bound excitons in silicon. <i>Nature Materials</i> , 2015, 14, 490-494. | 13.3 | 29 |
| 15 | Fast, low-power manipulation of spin ensembles in superconducting microresonators. <i>Applied Physics Letters</i> , 2014, 104, . | 1.5 | 63 |
| 16 | Atomic clock transitions in silicon-based spin qubits. <i>Nature Nanotechnology</i> , 2013, 8, 561-564. | 15.6 | 194 |
| 17 | Electrical activation and electron spin resonance measurements of implanted bismuth in isotopically enriched silicon-28. <i>Applied Physics Letters</i> , 2012, 100, . | 1.5 | 47 |
| 18 | Decoherence mechanisms of ^{29}Si Bi donor electron spins in isotopically pure ^{28}Si . <i>Physical Review B</i> , 2012, 86, . | 1.1 | 27 |

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|----|---|------|-----------|
| 19 | 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 |
| 20 | Embracing the quantum limit in silicon computing. Nature, 2011, 479, 345-353. | 13.7 | 228 |
| 21 | Efficient Clocked Electron Transfer on Superfluid Helium. Physical Review Letters, 2011, 107, 266803. | 2.9 | 32 |
| 22 | Electrically Detected Magnetic Resonance of Neutral Donors Interacting with a Two-Dimensional Electron Gas. Physical Review Letters, 2011, 106, 207601. | 2.9 | 25 |
| 23 | Coherent State Transfer between an Electron and Nuclear Spin in N^{15} C ₆₀ . Physical Review Letters, 2011, 106, 110504. | 2.9 | 34 |
| 24 | Mid-infrared surface plasmon coupled emitters utilizing intersublevel transitions in InAs quantum dots. Proceedings of SPIE, 2010, , . | 0.8 | 0 |
| 25 | Electron spin coherence of phosphorus donors in silicon: Effect of environmental nuclei. Physical Review B, 2010, 82, . | 1.1 | 76 |
| 26 | Mid-infrared Electroluminescence from Surface Plasmon Coupled InAs Quantum Dots. Materials Research Society Symposia Proceedings, 2009, 1208, 1. | 0.1 | 0 |
| 27 | Solid-state quantum memory using the ³¹ P nuclear spin. Nature, 2008, 455, 1085-1088. | 13.7 | 351 |
| 28 | Deterministic error model for quantum computer simulation. Physical Review A, 2008, 77, . | 1.0 | 5 |
| 29 | Spin-dependent scattering off neutral antimony donors in Si ₂₈ field-effect transistors. Applied Physics Letters, 2007, 91, . | 1.5 | 39 |
| 30 | Electrical activation and electron spin coherence of ultralow dose antimony implants in silicon. Applied Physics Letters, 2006, 88, 112101. | 1.5 | 69 |
| 31 | Davies electron-nuclear double resonance revisited: Enhanced sensitivity and nuclear spin relaxation. Journal of Chemical Physics, 2006, 124, 234508. | 1.2 | 33 |
| 32 | Towards a fullerene-based quantum computer. Journal of Physics Condensed Matter, 2006, 18, S867-S883. | 0.7 | 138 |
| 33 | The N@C ₆₀ nuclear spin qubit: Bang-bang decoupling and ultrafast phase gates. Physica Status Solidi (B): Basic Research, 2006, 243, 3028-3031. | 0.7 | 30 |
| 34 | Bang-bang control of fullerene qubits using ultrafast phase gates. Nature Physics, 2006, 2, 40-43. | 6.5 | 174 |
| 35 | Electron spin coherence in Si. Physica E: Low-Dimensional Systems and Nanostructures, 2006, 35, 257-263. | 1.3 | 24 |
| 36 | Spin Relaxation in SiGe Islands. Materials Research Society Symposia Proceedings, 2006, 958, 1. | 0.1 | 0 |

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|----|--|-----|-----------|
| 37 | Stark Tuning of Donor Electron Spins in Silicon. <i>Physical Review Letters</i> , 2006, 97, 176404. | 2.9 | 73 |
| 38 | Spin Manipulation of Free Two-Dimensional Electrons in Si/SiGe Quantum Wells. <i>Physical Review Letters</i> , 2005, 94, 126802. | 2.9 | 85 |
| 39 | High Fidelity Single Qubit Operations Using Pulsed Electron Paramagnetic Resonance. <i>Physical Review Letters</i> , 2005, 95, 200501. | 2.9 | 77 |
| 40 | 6 nm half-pitch lines and 0.04 μm^2 static random access memory patterns by nanoimprint lithography. <i>Nanotechnology</i> , 2005, 16, 1058-1061. | 1.3 | 142 |
| 41 | Negative differential Rashba effect in two-dimensional hole systems. <i>Applied Physics Letters</i> , 2004, 85, 3151-3153. | 1.5 | 29 |
| 42 | Fabrication of 5nm linewidth and 14nm pitch features by nanoimprint lithography. <i>Applied Physics Letters</i> , 2004, 84, 5299-5301. | 1.5 | 564 |
| 43 | Picosecond electrical excitation of a two-dimensional electron gas. , 2004, , . | | 2 |
| 44 | Relaxation of candidate electron spin qubits. , 2004, 5472, 97. | | 1 |
| 45 | Mid-infrared photoconductivity in InAs quantum dots. <i>Applied Physics Letters</i> , 1997, 70, 1861-1863. | 1.5 | 183 |
| 46 | Optimally designed potentials for control of electron-wave scattering in semiconductor nanodevices. <i>Physical Review B</i> , 1994, 49, 11100-11110. | 1.1 | 30 |
| 47 | Silicide/strained Si/sub 1-x/Ge/sub x/ Schottky-barrier infrared detectors. <i>IEEE Electron Device Letters</i> , 1993, 14, 199-201. | 2.2 | 63 |
| 48 | Simple method to start and maintain self-mode-locking of a Ti:sapphire laser. <i>Optics Letters</i> , 1992, 17, 1219. | 1.7 | 40 |
| 49 | Observation of hot-electron energy loss through the emission of phonon-plasmon coupled modes in GaAs. <i>Physical Review Letters</i> , 1990, 65, 760-763. | 2.9 | 49 |
| 50 | Mid-infrared reflectivity and ellipsometry measurements on single-crystal $\text{YBa}_2\text{Cu}_3\text{O}_7$ and $\text{Bi}_2\text{Sr}_2\text{CuO}_{6+y}$. <i>Physical Review B</i> , 1989, 40, 6884-6889. | 1.1 | 28 |
| 51 | Relationship between trapped holes, positive ions, and interface states in irradiated $\text{Si}\hat{\infty}\text{SiO}_2$ structures. <i>Applied Physics Letters</i> , 1989, 55, 2328-2330. | 1.5 | 35 |
| 52 | Voltage tunable quantum well infrared detector. <i>Applied Physics Letters</i> , 1989, 55, 2417-2419. | 1.5 | 61 |
| 53 | Electroluminescence of ballistically injected electrons in AlGaAs/GaAs heterodiodes. <i>Physical Review Letters</i> , 1989, 63, 2849-2852. | 2.9 | 33 |
| 54 | Photovoltaic quantum well infrared detector. <i>Applied Physics Letters</i> , 1988, 52, 1701-1703. | 1.5 | 55 |

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|----|---|-----|-----------|
| 55 | Relationship between hole trapping and interface state generation in metal-oxide-silicon structures. Applied Physics Letters, 1988, 52, 1431-1433. | 1.5 | 93 |
| 56 | Performance aspects of a quantum-well detector. Journal of Applied Physics, 1988, 63, 5149-5153. | 1.1 | 35 |
| 57 | Grating enhancement of quantum well detector response. Applied Physics Letters, 1988, 53, 1027-1029. | 1.5 | 49 |
| 58 | Cycling of defects between trapped negative charge and interface states at the Si-SiO ₂ interface. Applied Physics Letters, 1987, 50, 1152-1154. | 1.5 | 27 |
| 59 | Spectroscopy of hot carriers in semiconductors. Journal of Luminescence, 1986, 35, 121-154. | 1.5 | 240 |
| 60 | Location of positive charge trapped near the Si-SiO ₂ interface at low temperature. Applied Physics Letters, 1986, 48, 136-138. | 1.5 | 53 |
| 61 | Amphoteric defects at the Si-SiO ₂ interface. Applied Physics Letters, 1986, 48, 662-664. | 1.5 | 72 |
| 62 | Hot-Electron Relaxation in GaAs Quantum Wells. Physical Review Letters, 1985, 55, 2359-2361. | 2.9 | 137 |
| 63 | New model of the rapid initial oxidation of silicon. Applied Physics Letters, 1985, 47, 154-156. | 1.5 | 34 |
| 64 | Grating enhanced quantum well detector. Applied Physics Letters, 1985, 47, 1257-1259. | 1.5 | 106 |
| 65 | 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 |
| 66 | Role of Electromagnetic Resonances in the Surface-Enhanced Raman Effect. Physical Review Letters, 1983, 51, 593-596. | 2.9 | 38 |
| 67 | Microstrain in laser-crystallized silicon islands on fused silica. Applied Physics Letters, 1982, 40, 316-318. | 1.5 | 67 |