Jonathan Baugh

List of Publications by Year
in descending order

74 papers	1,983 citations	270111 25 h-index	299063 42 g-index
77 all docs	77 docs citations	77 times ranked	2671 citing authors

#	Article	IF	Citations
1	Effects of biased and unbiased illuminations on two-dimensional electron gases in dopant-free GaAs/AlGaAs. Physical Review B, 2022, 105, .	1.1	2
2	Observation and Manipulation of a Phase Separated State in a Charge Density Wave Material. Nano Letters, 2022, 22, 1929-1936.	4.5	3
3	Charge transport through extended molecular wires with strongly correlated electrons. Chemical Science, 2021, 12, 11121-11129.	3.7	8
4	Graphene nanogaps for the directed assembly of single-nanoparticle devices. Nanoscale, 2021, 13, 6513-6520.	2.8	8
5	Roadmap on quantum nanotechnologies. Nanotechnology, 2021, 32, 162003.	1.3	45
6	Estimation of MOSFET Channel Noise and Noise Performance of CMOS LNAs at Cryogenic Temperatures. , 2021, , .		8
7	Role of dephasing on the conductance signatures of Majorana zero modes. Journal of Physics Condensed Matter, 2021, 33, 365301.	0.7	9
8	Non-adiabatic single-electron pumps in a dopant-free GaAs/AlGaAs 2DEG. Applied Physics Letters, 2021, 119, .	1.5	5
9	Simulated coherent electron shuttling in silicon quantum dots. Physical Review B, 2020, 102, .	1.1	18
10	Few-electrode design for silicon MOS quantum dots. Semiconductor Science and Technology, 2020, 35, 015002.	1.0	3
11	Self-driven oscillation in Coulomb blockaded suspended carbon nanotubes. Physical Review Research, 2020, 2, .	1.3	5
12	Charge-state assignment of nanoscale single-electron transistors from their currentâ€“voltage characteristics. Nanoscale, 2019, 11, 14820-14827.	2.8	15
13	Understanding resonant charge transport through weakly coupled single-molecule junctions. Nature Communications, 2019, 10, 4628.	5.8	51
14	Supercurrent interference in semiconductor nanowire Josephson junctions. Physical Review B, 2019, 100, .	1.1	20
15	Hillock-free and atomically smooth InSb QWs grown on GaAs substrates by MBE. Journal of Crystal Growth, 2019, 513, 15-19.	0.7	5
16	Network architecture for a topological quantum computer in silicon. Quantum Science and Technology, 2019, 4, 025003.	2.6	21
17	Gradient-based closed-loop quantum optimal control in a solid-state two-qubit system. Physical Review A, 2018, 98, .	1.0	21
18	Nonequilibrium Green's function study of magnetoconductance features and oscillations in clean and disordered nanowires. Physical Review B, 2018, 98, .	1.1	14

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19	Efficient continuous-wave noise spectroscopy beyond weak coupling. Physical Review A, 2018, 98, .	1.0	10
20	Special session on quantum systems: Next challenges in design, test, integration. , 2018, , .		0
21	Optimization of metamorphic buffers for MBE growth of high quality AlInSb/InSb quantum structures: Suppression of hillock formation. Journal of Crystal Growth, 2017, 477, 7-11.	0.7	8
22	Nb/InAs nanowire proximity junctions from Josephson to quantum dot regimes. Nanotechnology, 2017, 28, 085202.	1.3	17
23	Double quantum dot memristor. Physical Review B, 2017, 96, .	1.1	15
24	Probing the non-linear transient response of a carbon nanotube mechanical oscillator. Applied Physics Letters, 2017, 111, .	1.5	9
25	Enhancing quantum control by bootstrapping a quantum processor of 12 qubits. Npj Quantum Information, 2017, 3, .	2.8	68
26	Estimating the Coherence of Noise in Quantum Control of a Solid-State Qubit. Physical Review Letters, 2016, 117, 260501.	2.9	31
27	Randomized benchmarking of quantum gates implemented by electron spin resonance. Journal of Magnetic Resonance, 2016, 267, 68-78.	1.2	14
28	Chiral quantum walks. Physical Review A, 2016, 93, .	1.0	36
29	Readout of Majorana parity states using a quantum dot. Physical Review B, 2016, 94, .	1.1	28
30	Electrical Breakdown in Thin Si Oxide Modeled by a Quantum Point Contact Network. IEEE Transactions on Electron Devices, 2016, , 1-6.	1.6	3
31	Direct Evidence of Solution-Mediated Superoxide Transport and Organic Radical Formation in Sodium-Oxygen Batteries. Journal of the American Chemical Society, 2016, 138, 11219-11226.	6.6	90
32	Tomography is Necessary for Universal Entanglement Detection with Single-Copy Observables. Physical Review Letters, 2016, 116, 230501.	2.9	36
33	Heat Bath Algorithmic Cooling with Spins: Review and Prospects. Biological Magnetic Resonance, 2016, , 227-255.	0.4	11
34	Electrical characterization of chemical and dielectric passivation of InAs nanowires. Semiconductor Science and Technology, 2016, 31, 114004.	1.0	15
35	Orbital Josephson interference in a nanowire proximity-effect junction. Physical Review B, 2015, 91, .	1.1	9
36	Hyperfine spin qubits in irradiated malonic acid: heat-bath algorithmic cooling. Quantum Information Processing, 2015, 14, 2435-2461.	1.0	19

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37	Magnetoconductance signatures of subband structure in semiconductor nanowires. Physical Review B, 2015, 91, .	1.1	14
38	Experimental Estimation of Average Fidelity of a Clifford Gate on a 7-Qubit Quantum Processor. Physical Review Letters, 2015, 114, 140505.	2.9	50
39	Sensitive magnetic force detection with a carbon nanotube resonator. Journal of Applied Physics, 2014, 115, 114501.	1.1	3
40	Electron transport in InAs-InAlAs core-shell nanowires. Applied Physics Letters, 2013, 102, 043115.	1.5	18
41	Temperature-dependent electron mobility in InAs nanowires. Nanotechnology, 2013, 24, 225202.	1.3	26
42	Trapped charge dynamics in InAs nanowires. Journal of Applied Physics, 2013, 113, .	1.1	18
43	Critical shell thickness for InAs-AlxIn1â^'xAs(P) core-shell nanowires. Journal of Applied Physics, 2012, 112, .	1.1	29
44	Digital quantum simulation of the statistical mechanics of a frustrated magnet. Nature Communications, 2012, 3, 880.	5.8	50
45	Facilitating growth of InAsâ€“InP coreâ€“shell nanowires through the introduction of Al. Journal of Crystal Growth, 2012, 345, 11-15.	0.7	14
46	Demonstration of Sufficient Control for Two Rounds of Quantum Error Correction in a Solid State Ensemble Quantum Information Processor. Physical Review Letters, 2011, 107, 160501.	2.9	38
47	Coherent Control of Two Nuclear Spins Using the Anisotropic Hyperfine Interaction. Physical Review Letters, 2011, 107, 170503.	2.9	56
48	Building a spin quantum bit register using semiconductor nanowires. Nanotechnology, 2010, 21, 134018.	1.3	9
49	Quantum data bus in dipolar coupled nuclear spin qubits. Physical Review A, 2009, 80, .	1.0	16
50	Nuclear spins in nanostructures. Physica Status Solidi (B): Basic Research, 2009, 246, 2203-2215.	0.7	133
51	Dynamic nuclear polarization in a double quantum dot device: electrical induction and detection. Physica Status Solidi C: Current Topics in Solid State Physics, 2008, 5, 302-305.	0.8	12
52	Magnetic and Electrical Control of Electron-Nuclear Spin Coupling in GaAs Double Quantum Dots. Journal of the Physical Society of Japan, 2008, 77, 031011.	0.7	5
53	Spin Based Heat Engine: Demonstration of Multiple Rounds of Algorithmic Cooling. Physical Review Letters, 2008, 100, 140501.	2.9	57
54	Using error correction to determine the noise model. Physical Review A, 2007, 75, .	1.0	31

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55	Large Nuclear Overhauser Fields Detected in Vertically Coupled Double Quantum Dots. Physical Review Letters, 2007, 99, 096804.	2.9	99
56	Symmetrized Characterization of Noisy Quantum Processes. Science, 2007, 317, 1893-1896.	6.0	181
57	Low temperature probe for dynamic nuclear polarization and multiple-pulse solid-state NMR. Journal of Magnetic Resonance, 2007, 187, 242-250.	1.2	19
58	Time-reversal formalism applied to maximal bipartite entanglement: Theoretical and experimental exploration. Physical Review A, 2006, 73, .	1.0	21
59	Solid-state NMR three-qubit homonuclear system for quantum-information processing: Control and characterization. Physical Review A, 2006, 73, .	1.0	35
60	Experimental implementation of heat-bath algorithmic cooling using solid-state nuclear magnetic resonance. Nature, 2005, 438, 470-473.	13.7	112
61	Selective coherence transfers in homonuclear dipolar coupled spin systems. Physical Review A, 2005, 71, .	1.0	14
62	Multispin dynamics of the solid-state NMR free induction decay. Physical Review B, 2005, 72, .	1.1	59
63	Hydrogen distribution, nanostructures and optical properties of high deposition rate hot-wire CVD a-Si:H. Thin Solid Films, 2003, 430, 95-99.	0.8	3
64	Electrons and nuclei get entangled. Physics World, 2003, 16, 23-23.	0.0	0
65	Two-domain model of light-induced structural changes in hydrogenated amorphous silicon. Physical Review B, 2002, 66, .	1.1	15
66	Nanovoid-related large redshift of photoluminescence peak energy in hydrogenated amorphous silicon. Applied Physics Letters, 2002, 80, 40-42.	1.5	11
67	Proton NMR and Magnetic Susceptibility in a-Si:H. Materials Research Society Symposia Proceedings, 2001, 664, 2741.	0.1	4
68	Model of Hydrogen-Mediated Metastable Changes in a Two-Domain Amorphous Silicon Network. Materials Research Society Symposia Proceedings, 2001, 664, 1911.	0.1	3
69	Confinement Effect on Dipole-Dipole Interactions in Nanofluids. Science, 2001, 294, 1505-1507.	6.0	82
70	Magnetic susceptibility and microstructure of hydrogenated amorphous silicon measured by nuclear magnetic resonance on a single thin film. Applied Physics Letters, 2001, 78, 466-468.	1.5	25
71	Diamagnetic Susceptibility of Micron Thick a-Si:H Films Measured via Proton NMR: A Probe of Structural Disorder. Materials Research Society Symposia Proceedings, 2000, 609, 1631.	0.1	0
72	Light-induced structural changes and their correlation to metastable defect creation in intrinsic hydrogenated amorphous silicon films. Physical Review B, 2000, 62, 7169-7178.	1.1	33

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73	Structural Changes and Hydrogen Motion in A-SI:H Observed by Proton Nmr. Materials Research Society Symposia Proceedings, 1999, 557, 383.	0.1	5
74	Light-Induced Change of Si-H Bond Absorption in Hydrogenated Amorphous Silicon. Materials Research Society Symposia Proceedings, 1998, 507, 685.	0.1	0