

# Edwin

## List of Publications by Year in descending order

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Version: 2024-02-01

61  
papers

2,683  
citations

236925  
25  
h-index

189892  
50  
g-index

63  
all docs

63  
docs citations

63  
times ranked

1882  
citing authors

#	ARTICLE	IF	CITATIONS
1	An adaptive variational algorithm for exact molecular simulations on a quantum computer. Nature Communications, 2019, 10, 3007.	12.8	461
2	Noise Suppression Using Symmetric Exchange Gates in Spin Qubits. Physical Review Letters, 2016, 116, 116801.	7.8	186
3	Qubit-ADAPT-VQE: An Adaptive Algorithm for Constructing Hardware-Efficient Ansätze on a Quantum Processor. PRX Quantum, 2021, 2, .	9.2	180
4	Efficient symmetry-preserving state preparation circuits for the variational quantum eigensolver algorithm. Npj Quantum Information, 2020, 6, .	6.7	145
5	Composite pulses for robust universal control of singlet-triplet qubits. Nature Communications, 2012, 3, 997.	12.8	140
6	Analytically Solvable Driven Time-Dependent Two-Level Quantum Systems. Physical Review Letters, 2012, 109, 060401.	7.8	125
7	Is the Trotterized UCCSD Ansatz Chemically Well-Defined?. Journal of Chemical Theory and Computation, 2020, 16, 1-6.	5.3	96
8	Nonperturbative Master Equation Solution of Central Spin Dephasing Dynamics. Physical Review Letters, 2012, 109, 140403.	7.8	83
9	Noise-Resistant Control for a Spin Qubit Array. Physical Review Letters, 2013, 110, 140502.	7.8	80
10	Notch filtering the nuclear environment of a spin qubit. Nature Nanotechnology, 2017, 12, 16-20.	31.5	80
11	Robust quantum gates for singlet-triplet spin qubits using composite pulses. Physical Review A, 2014, 89, .	2.5	77
12	Deterministic Generation of All-Photonic Quantum Repeaters from Solid-State Emitters. Physical Review X, 2017, 7, .	8.9	67
13	Why Does Graphene Behave as a Weakly Interacting System?. Physical Review Letters, 2014, 113, 105502.	7.8	62
14	Effective field theory, three-loop perturbative expansion, and their experimental implications in graphene many-body effects. Physical Review B, 2014, 89, .	3.2	58
15	Screening of charged impurities with multielectron singlet-triplet spin qubits in quantum dots. Physical Review B, 2011, 84, .	3.2	44
16	Analytical approach to swift nonleaky entangling gates in superconducting qubits. Physical Review B, 2015, 91, .	3.2	40
17	Robust quantum control using smooth pulses and topological winding. Scientific Reports, 2015, 5, 12685.	3.3	37
18	Electron-Nuclear Dynamics in a Quantum Dot under Nonunitary Electron Control. Physical Review Letters, 2011, 107, 047601.	7.8	35

#	ARTICLE	IF	CITATIONS
19	Randomized Benchmarking of Barrier versus Tilt Control of a Singlet-Triplet Qubit. Physical Review Letters, 2017, 118, 216802.	7.8	32
20	Master equation approach to the central spin decoherence problem: Uniform coupling model and role of projection operators. Physical Review B, 2011, 84, .	3.2	31
21	Fastest pulses that implement dynamically corrected single-qubit phase gates. Physical Review A, 2018, 98, .	2.5	31
22	Geometric formalism for constructing arbitrary single-qubit dynamically corrected gates. Physical Review A, 2019, 99, .	2.5	31
23	Theory of dynamic nuclear polarization and feedback in quantum dots. Physical Review B, 2014, 89, .	3.2	29
24	Strong hyperfine-induced modulation of an optically driven hole spin in an InAs quantum dot. Physical Review B, 2014, 89, .	3.2	27
25	Resource requirements for efficient quantum communication using all-photonic graph states generated from a few matter qubits. Quantum - the Open Journal for Quantum Science, 0, 5, 397.	0.0	27
26	Filter function formalism beyond pure dephasing and non-Markovian noise in singlet-triplet qubits. Physical Review B, 2016, 93, .	3.2	25
27	Six-electron semiconductor double quantum dot qubits. Physical Review B, 2013, 88, .	3.2	24
28	Fast high-fidelity entangling gates for spin qubits in Si double quantum dots. Physical Review B, 2019, 100, .	3.2	22
29	Toward Long-Range Entanglement between Electrically Driven Single-Molecule Magnets. Journal of Physical Chemistry Letters, 2019, 10, 7347-7355.	4.6	21
30	Coherent Multispin Exchange Coupling in a Quantum-Dot Spin Chain. Physical Review X, 2020, 10, .	8.9	21
31	Electromagnetic Signatures of the Chiral Anomaly in Weyl Semimetals. Physical Review Letters, 2016, 117, 217204.	7.8	20
32	Geometrical Formalism for Dynamically Corrected Gates in Multiqubit Systems. PRX Quantum, 2021, 2, .	9.2	20
33	Doubly Geometric Quantum Control. PRX Quantum, 2021, 2, .	9.2	20
34	Improving the gate fidelity of capacitively coupled spin qubits. Npj Quantum Information, 2015, 1, .	6.7	19
35	Fast microwave-driven three-qubit gates for cavity-coupled superconducting qubits. Physical Review B, 2017, 96, .	3.2	18
36	Noise-compensating pulses for electrostatically controlled silicon spin qubits. Physical Review B, 2014, 90, .	3.2	17

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37	Preparing Bethe Ansatz Eigenstates on a Quantum Computer. PRX Quantum, 2021, 2, .	9.2	17
38	Fast pulse sequences for dynamically corrected gates in singlet-triplet qubits. Physical Review B, 2017, 96, .	3.2	16
39	Preserving Symmetries for Variational Quantum Eigensolvers in the Presence of Noise. Physical Review Applied, 2021, 16, .	3.8	16
40	Environmental noise effects on entanglement fidelity of exchange-coupled semiconductor spin qubits. Physical Review B, 2017, 95, .	3.2	15
41	Negative exchange interactions in coupled few-electron quantum dots. Physical Review B, 2018, 97, .	3.2	15
42	Stabilization and manipulation of multispin states in quantum-dot time crystals with Heisenberg interactions. Physical Review B, 2019, 99, .	3.2	15
43	Floquet-enhanced spin swaps. Nature Communications, 2021, 12, 2142.	12.8	15
44	Engineering and Probing Topological Properties of Dirac Semimetal Films by Asymmetric Charge Transfer. Nano Letters, 2017, 17, 963-972.	9.1	14
45	Noise-induced collective quantum state preservation in spin qubit arrays. Physical Review B, 2016, 93, .	3.2	11
46	Single qubit operations using microwave hyperbolic secant pulses. Physical Review A, 2017, 96, .	2.5	11
47	Dynamically corrected gates from geometric space curves. Quantum Science and Technology, 2022, 7, 023001.	5.8	11
48	Interplay of exchange and superexchange in triple quantum dots. Physical Review B, 2020, 102, .	3.2	10
49	Protecting quantum information in quantum dot spin chains by driving exchange interactions periodically. Physical Review B, 2021, 103, .	3.2	10
50	Topological insulator ring with magnetic impurities. Physical Review B, 2018, 98, .	3.2	9
51	Error-correcting entanglement swapping using a practical logical photon encoding. Physical Review A, 2021, 104, .	2.5	9
52	Preparing exact eigenstates of the open XXZ chain on a quantum computer. Journal of Physics A: Mathematical and Theoretical, 2022, 55, 055301.	2.1	9
53	Photonic resource state generation from a minimal number of quantum emitters. Npj Quantum Information, 2022, 8, .	6.7	9
54	Noise-resistant Landau-Zener sweeps from geometrical curves. Quantum - the Open Journal for Quantum Science, 0, 6, 639.	0.0	8

#	ARTICLE	IF	CITATIONS
55	Fast noise-resistant control of donor nuclear spin qubits in silicon. Physical Review B, 2020, 101, .	3.2	5
56	Enhancement of nuclear spin coherence times by driving dynamic nuclear polarization at defect centers in solids. Physical Review B, 2019, 99, .	3.2	4
57	Designing arbitrary single-axis rotations robust against perpendicular time-dependent noise. New Journal of Physics, 2021, 23, 093032.	2.9	4
58	Robust photon-mediated entangling gates between quantum dot spin qubits. Physical Review B, 2021, 104, .	3.2	4
59	Solvable quantum model of dynamic nuclear polarization in optically driven quantum dots. Physical Review B, 2019, 99, .	3.2	3
60	Landau poles in condensed matter systems. Physical Review Research, 2020, 2, .	3.6	3
61	Driven dynamics of a quantum dot electron spin coupled to a bath of higher-spin nuclei. Physical Review B, 2021, 103, .	3.2	2