

Ahsan Nazir

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

56
papers

2,405
citations

29
h-index

48
g-index

65
ext. papers

2,704
ext. citations

4.9
avg, IF

5.6
L-index

#	Paper	IF	Citations
56	Phonon-induced Rabi-frequency renormalization of optically driven single InGaAs/GaAs quantum dots. <i>Physical Review Letters</i> , 2010 , 105, 177402	7.4	152
55	Correlation-dependent coherent to incoherent transitions in resonant energy transfer dynamics. <i>Physical Review Letters</i> , 2009 , 103, 146404	7.4	149
54	Optical schemes for quantum computation in quantum dot molecules. <i>Physical Review B</i> , 2003 , 68,	3.3	133
53	Environmental dynamics, correlations, and the emergence of noncanonical equilibrium states in open quantum systems. <i>Physical Review A</i> , 2014 , 90,	2.6	114
52	Quantum dot Rabi rotations beyond the weak exciton-phonon coupling regime. <i>New Journal of Physics</i> , 2010 , 12, 113042	2.9	114
51	Phonon scattering inhibits simultaneous near-unity efficiency and indistinguishability in semiconductor single-photon sources. <i>Nature Photonics</i> , 2017 , 11, 521-526	33.9	100
50	A general approach to quantum dynamics using a variational master equation: Application to phonon-damped Rabi rotations in quantum dots. <i>Physical Review B</i> , 2011 , 84,	3.3	100
49	Quantum State Tuning of Energy Transfer in a Correlated Environment. <i>Journal of Physical Chemistry Letters</i> , 2010 , 1, 2139-2143	6.4	98
48	Performance of a quantum heat engine at strong reservoir coupling. <i>Physical Review E</i> , 2017 , 95, 032139	2.4	94
47	Electronic excitation dynamics in multichromophoric systems described via a polaron-representation master equation. <i>Journal of Chemical Physics</i> , 2011 , 135, 154112	3.9	93
46	Energy transfer in structured and unstructured environments: Master equations beyond the Born-Markov approximations. <i>Journal of Chemical Physics</i> , 2016 , 144, 044110	3.9	76
45	Consistent treatment of coherent and incoherent energy transfer dynamics using a variational master equation. <i>Journal of Chemical Physics</i> , 2011 , 135, 114501	3.9	71
44	Anticrossings in Föster coupled quantum dots. <i>Physical Review B</i> , 2005 , 71,	3.3	67
43	Photon statistics from a resonantly driven quantum dot. <i>Physical Review B</i> , 2008 , 78,	3.3	65
42	Modelling exciton-phonon interactions in optically driven quantum dots. <i>Journal of Physics Condensed Matter</i> , 2016 , 28, 103002	1.8	64
41	Coherent and incoherent dynamics in excitonic energy transfer: Correlated fluctuations and off-resonance effects. <i>Physical Review B</i> , 2011 , 83,	3.3	64
40	Model of the optical emission of a driven semiconductor quantum dot: phonon-enhanced coherent scattering and off-resonant sideband narrowing. <i>Physical Review Letters</i> , 2013 , 110, 217401	7.4	62

39	Generalized multipolaron expansion for the spin-boson model: Environmental entanglement and the biased two-state system. <i>Physical Review B</i> , 2014 , 90,	3.3	51
38	Stabilizing spin coherence through environmental entanglement in strongly dissipative quantum systems. <i>Physical Review B</i> , 2014 , 89,	3.3	46
37	Selective spin coupling through a single exciton. <i>Physical Review Letters</i> , 2004 , 93, 150502	7.4	46
36	Vibronic resonances facilitate excited-state coherence in light-harvesting proteins at room temperature. <i>Journal of Physical Chemistry Letters</i> , 2015 , 6, 4573-80	6.4	42
35	Temperature-dependent Mollow triplet spectra from a single quantum dot: Rabi frequency renormalization and sideband linewidth insensitivity. <i>Physical Review Letters</i> , 2014 , 113, 097401	7.4	41
34	A multi-site variational master equation approach to dissipative energy transfer. <i>New Journal of Physics</i> , 2013 , 15, 075018	2.9	40
33	Long-lived spin entanglement induced by a spatially correlated thermal bath. <i>Physical Review A</i> , 2009 , 80,	2.6	36
32	Ground state and dynamics of the biased dissipative two-state system: Beyond variational polaron theory. <i>Physical Review B</i> , 2012 , 85,	3.3	32
31	Resonant transfer of excitons and quantum computation. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2003 , 315, 136-142	2.3	32
30	Gauge ambiguities imply Jaynes-Cummings physics remains valid in ultrastrong coupling QED. <i>Nature Communications</i> , 2019 , 10, 499	17.4	30
29	Creating excitonic entanglement in quantum dots through the optical Stark effect. <i>Physical Review A</i> , 2004 , 70,	2.6	30
28	Analysis of quantum coherence in bismuth-doped silicon: A system of strongly coupled spin qubits. <i>Physical Review B</i> , 2012 , 85,	3.3	29
27	High-fidelity all-optical control of quantum dot spins: Detailed study of the adiabatic approach. <i>Physical Review B</i> , 2008 , 77,	3.3	28
26	Anatomy of quantum critical wave functions in dissipative impurity problems. <i>Physical Review B</i> , 2017 , 95,	3.3	22
25	Quantum computing with spin qubits interacting through delocalized excitons: Overcoming hole mixing. <i>Physical Review B</i> , 2005 , 72,	3.3	22
24	Limits to coherent scattering and photon coalescence from solid-state quantum emitters. <i>Physical Review B</i> , 2017 , 95,	3.3	21
23	Light Scattering from Solid-State Quantum Emitters: Beyond the Atomic Picture. <i>Physical Review Letters</i> , 2019 , 123, 167403	7.4	20
22	Separation-dependent localization in a two-impurity spin-boson model. <i>Physical Review B</i> , 2010 , 81,	3.3	20

21	Robust adiabatic approach to optical spin entangling in coupled quantum dots. <i>New Journal of Physics</i> , 2008 , 10, 073016	2.9	18
20	Environmental Nonadditivity and Franck-Condon physics in Nonequilibrium Quantum Systems. <i>Physical Review Letters</i> , 2019 , 123, 093601	7.4	17
19	Quantum limit to nonequilibrium heat-engine performance imposed by strong system-reservoir coupling. <i>Physical Review E</i> , 2020 , 101, 052129	2.4	17
18	Effect of detuning on the phonon induced dephasing of optically driven InGaAs/GaAs quantum dots. <i>Journal of Applied Physics</i> , 2011 , 109, 102415	2.5	16
17	Overcoming non-Markovian dephasing in single-photon sources through postselection. <i>Physical Review A</i> , 2009 , 79,	2.6	15
16	Electron counting statistics for non-additive environments. <i>Journal of Chemical Physics</i> , 2019 , 151, 054104	3.9	12
15	Quantum correlations of light and matter through environmental transitions. <i>Optica</i> , 2016 , 3, 207	8.6	12
14	Dissipation enhanced vibrational sensing in an olfactory molecular switch. <i>Journal of Chemical Physics</i> , 2015 , 142, 025102	3.9	11
13	Exact quantum dynamics in structured environments. <i>Physical Review Research</i> , 2020 , 2,	3.9	11
12	Uniqueness of the Phase Transition in Many-Dipole Cavity Quantum Electrodynamical Systems. <i>Physical Review Letters</i> , 2020 , 125, 143603	7.4	10
11	A master equation for strongly interacting dipoles. <i>New Journal of Physics</i> , 2018 , 20, 043022	2.9	9
10	Quantum-coherent energy transfer: implications for biology and new energy technologies. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2012 , 370, 3613-7	3	9
9	The Reaction Coordinate Mapping in Quantum Thermodynamics. <i>Fundamental Theories of Physics</i> , 2018 , 551-577	0.8	9
8	Publisher's Note: General approach to quantum dynamics using a variational master equation: Application to phonon-damped Rabi rotations in quantum dots [Phys. Rev. B 84, 081305(R) (2011)]. <i>Physical Review B</i> , 2011 , 84,	3.3	7
7	Tradeoff between leakage and dephasing errors in the fluxonium qubit. <i>Physical Review B</i> , 2013 , 88,	3.3	6
6	Photon Statistics of Filtered Resonance Fluorescence. <i>Physical Review Letters</i> , 2020 , 125, 043603	7.4	5
5	Strong coupling in thermoelectric nanojunctions: a reaction coordinate framework. <i>New Journal of Physics</i> , 2022 , 24, 025002	2.9	4
4	Exact Dynamics of Nonadditive Environments in Non-Markovian Open Quantum Systems. <i>PRX Quantum</i> , 2022 , 3,	6.1	4

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| 3 | Ultrastrong time-dependent light-matter interactions are gauge relative. <i>Physical Review Research</i> , 2021 , 3, | 3.9 | 4 |
| 2 | Aspects of quantum coherence in nanosystems. <i>European Journal of Physics</i> , 2009 , 30, S89-S100 | 0.8 | 3 |
| 1 | Vibrational enhancement of quadrature squeezing and phase sensitivity in resonance fluorescence. <i>Nature Communications</i> , 2019 , 10, 3034 | 17.4 | 2 |