Dvira Segal

List of Publications by Year
in descending order

127 papers	5,086 citations	87888 38 h-index	98798 67 g-index
129 all docs	129 docs citations	129 times ranked	2748 citing authors

#	Article	IF	Citations
1	Strong system-bath coupling effects in quantum absorption refrigerators. Physical Review E, 2022, 105, 034112.	2.1	13
2	Optimal control of quantum thermal machines using machine learning. Physical Review Research, 2022, 4, .	3.6	22
3	Absence and recovery of cost-precision tradeoff relations in quantum transport. Physical Review B, 2022, 105, .	3.2	6
4	Quantum phonon transport through channels and moleculesâ€"A Perspective. Applied Physics Letters, 2022, 120, .	3.3	11
5	Quantum thermal transport beyond second order with the reaction coordinate mapping. Journal of Chemical Physics, 2022, 156, .	3.0	3
6	Quantum Flicker Noise in Atomic and Molecular Junctions. Physical Review Letters, 2022, 128, .	7.8	9
7	Hamiltonian transformability, fast adiabatic dynamics and hidden adiabaticity. Scientific Reports, 2021, 11, 4648.	3.3	2
8	Reply to the â€œComment on â€˜Loss-Free Excitonic Quantum Batteryâ€™ â€• Journal of Physical Chemistry C, 2021, 125, 7521-7522.	3.1	0
9	Coherences and the thermodynamic uncertainty relation: Insights from quantum absorption refrigerators. Physical Review E, 2021, 103, 032138.	2.1	25
10	Harmonic chains and the thermal diode effect. Physical Review E, 2021, 103, 052130.	2.1	14
11	Strong coupling effects in quantum thermal transport with the reaction coordinate method. New Journal of Physics, 2021, 23, 063036.	2.9	15
12	Universal Bounds on Fluctuations in Continuous Thermal Machines. Physical Review Letters, 2021, 127, 190603.	7.8	31
13	Periodically Driven Quantum Thermal Machines from Warming up to Limit Cycle. Physical Review Letters, 2021, 127, 200602.	7.8	23
14	Capturing non-Markovian dynamics with the reaction coordinate method. Physical Review A, 2021, 104, .	2.5	10
15	On the definitions and simulations of vibrational heat transport in nanojunctions. Journal of Chemical Physics, 2020, 153, 174101.	3.0	6
16	Dissipation engineering of nonreciprocal quantum dot circuits: An input-output approach. Physical Review B, 2020, 102, .	3.2	1
17	Quantum nondemolition photon counting with a hybrid electromechanical probe. Physical Review A, 2020, 102, .	2.5	4
18	Thermodynamic uncertainty relation in atomic-scale quantum conductors. Physical Review B, 2020, 101, .	3.2	25

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19	Sharp Negative Differential Resistance from Vibrational Mode Softening in Molecular Junctions. Nano Letters, 2020, 20, 6128-6134.	9.1	10
20	Generalized input-output method to quantum transport junctions. I. General formulation. Physical Review B, 2020, 101, .	3.2	16
21	Generalized input-output method to quantum transport junctions. II. Applications. Physical Review B, 2020, 101, .	3.2	12
22	Experimental study of the thermodynamic uncertainty relation. Physical Review Research, 2020, 2, .	3.6	33
23	Loss-Free Excitonic Quantum Battery. Journal of Physical Chemistry C, 2019, 123, 18303-18314.	3.1	38
24	Interplay of Direct and Indirect Charge-Transfer Pathways in Donorâ€“Bridgeâ€“Acceptor Systems. Journal of Physical Chemistry B, 2019, 123, 6099-6110.	2.6	5
25	Thermodynamic uncertainty relation in quantum thermoelectric junctions. Physical Review E, 2019, 99, 062141.	2.1	56
26	Non-Markovian dynamics revealed at a bound state in the continuum. Physical Review A, 2019, 99, .	2.5	26
27	Origin of the Anomalous Electronic Shot Noise in Atomic-Scale Junctions. Journal of Physical Chemistry C, 2019, 123, 23853-23862.	3.1	6
28	Thermodynamic uncertainty relation in thermal transport. Physical Review E, 2019, 100, 042101.	2.1	49
29	Phononic heat transport in molecular junctions: Quantum effects and vibrational mismatch. Journal of Chemical Physics, 2019, 150, 024105.	3.0	26
30	Hybrid quantum-classical simulation of quantum speed limits in open quantum systems. Journal of Physics A: Mathematical and Theoretical, 2019, 52, 215301.	2.1	6
31	Machine Learning Prediction of DNA Charge Transport. Journal of Physical Chemistry C, 2019, , .	3.1	0
32	Path-integral methodology and simulations of quantum thermal transport: Full counting statistics approach. Journal of Chemical Physics, 2019, 150, 084111.	3.0	33
33	Machine Learning Prediction of DNA Charge Transport. Journal of Physical Chemistry B, 2019, 123, 2801-2811.	2.6	25
34	Cooling condition for multilevel quantum absorption refrigerators. Physical Review E, 2019, 100, 062112.	2.1	13
35	Principles of photothermal gas-phase heterogeneous CO₂ catalysis. Energy and Environmental Science, 2019, 12, 1122-1142.	30.8	300
36	Mean First-Passage Time and Steady-State Transfer Rate in Classical Chains. Journal of Physical Chemistry C, 2019, 123, 1021-1031.	3.1	3

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37	From Exhaustive Simulations to Key Principles in DNA Nanoelectronics. Journal of Physical Chemistry C, 2018, 122, 4206-4216.	3.1	16
38	ProbeZT: Simulation of transport coefficients of molecular electronic junctions under environmental effects using BÃ¼ttikerâ€™s probes. Computer Physics Communications, 2018, 224, 396-404.	7.5	10
39	Heat transfer statistics in mixed quantum-classical systems. Journal of Chemical Physics, 2018, 149, 224104.	3.0	14
40	Electronic noise due to temperature differences in atomic-scale junctions. Nature, 2018, 562, 240-244.	27.8	72
41	Assessing the validity of the thermodynamic uncertainty relation in quantum systems. Physical Review B, 2018, 98, .	3.2	89
42	Current fluctuations in quantum absorption refrigerators. Physical Review E, 2018, 97, 052145.	2.1	29
43	Coherence and decoherence in quantum absorption refrigerators. Physical Review E, 2018, 98, 012117.	2.1	46
44	Quantum energy exchange and refrigeration: a full-counting statistics approach. New Journal of Physics, 2018, 20, 083026.	2.9	38
45	Controlling charge transport mechanisms in molecular junctions: Distilling thermally induced hopping from coherent-resonant conduction. Journal of Chemical Physics, 2017, 146, 164702.	3.0	29
46	Probing the limits of heat flow. Science, 2017, 355, 1125-1126.	12.6	4
47	Effects of vibrational anharmonicity on molecular electronic conduction and thermoelectric efficiency. Journal of Chemical Physics, 2017, 146, 092303.	3.0	11
48	Quantum efficiency bound for continuous heat engines coupled to noncanonical reservoirs. Physical Review B, 2017, 96, .	3.2	67
49	The Anderson impurity model out-of-equilibrium: Assessing the accuracy of simulation techniques with an exact current-occupation relation. Journal of Chemical Physics, 2017, 147, 054104.	3.0	6
50	Qubit absorption refrigerator at strong coupling. New Journal of Physics, 2017, 19, 123034.	2.9	32
51	Energy current and its statistics in the nonequilibrium spin-boson model: Majorana fermion representation. New Journal of Physics, 2017, 19, 043030.	2.9	23
52	Thermopower of molecular junctions: Tunneling to hopping crossover in DNA. Journal of Chemical Physics, 2016, 145, 224702.	3.0	20
53	Inelastic effects in molecular transport junctions: The probe technique at high bias. Journal of Chemical Physics, 2016, 144, 124107.	3.0	22
54	Vibrational Heat Transport in Molecular Junctions. Annual Review of Physical Chemistry, 2016, 67, 185-209.	10.8	96

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55	Intermediate Coherentâ€“Incoherent Charge Transport: DNA as a Case Study. Journal of Physical Chemistry C, 2016, 120, 23951-23962.	3.1	27
56	Tunable photonic cavity coupled to a voltage-biased double quantum dot system: Diagrammatic nonequilibrium Green's function approach. Physical Review B, 2016, 94, .	3.2	17
57	Giant photon gain in large-scale quantum dot-circuit QED systems. Physical Review B, 2016, 94, .	3.2	14
58	Reconciling perturbative approaches in phonon-assisted transport junctions. Journal of Chemical Physics, 2016, 144, 074102.	3.0	9
59	Efficiency Statistics and Bounds for Systems with Broken Time-Reversal Symmetry. Physical Review Letters, 2015, 115, 040601.	7.8	43
60	Phonon thermoelectric transistors and rectifiers. Physical Review B, 2015, 92, .	3.2	83
61	Full counting statistics of vibrationally assisted electronic conduction: Transport and fluctuations of thermoelectric efficiency. Physical Review B, 2015, 92, .	3.2	84
62	Transient unidirectional energy flow and diode-like phenomenon induced by non-Markovian environments. Scientific Reports, 2015, 5, 15332.	3.3	9
63	Charge transport in molecular junctions: From tunneling to hopping with the probe technique. Journal of Chemical Physics, 2015, 143, 024111.	3.0	48
64	Thermoelectricity in molecular junctions with harmonic and anharmonic modes. Beilstein Journal of Nanotechnology, 2015, 6, 2129-2139.	2.8	11
65	Quantum Bounds on Heat Transport Through Nanojunctions. Physical Review Letters, 2015, 114, 220401.	7.8	29
66	Tunneling Diodes under Environmental Effects. Journal of Physical Chemistry C, 2015, 119, 25291-25297.	3.1	18
67	Can the Seebeck Coefficient Identify Quantum Interference in Molecular Conduction?. Journal of Physical Chemistry C, 2015, 119, 12097-12108.	3.1	23
68	Landau-Zener transitions mediated by an environment: Population transfer and energy dissipation. Journal of Chemical Physics, 2014, 140, 124709.	3.0	20
69	Magnetotransport in Aharonov-Bohm interferometers: Exact numerical simulations. Physical Review B, 2014, 90, .	3.2	6
70	Two-level system in spin baths: Non-adiabatic dynamics and heat transport. Journal of Chemical Physics, 2014, 140, 164110.	3.0	16
71	From Dissipative Dynamics to Studies of Heat Transfer at the Nanoscale: Analysis of the Spin-Boson Model. Journal of Physical Chemistry A, 2014, 118, 11323-11336.	2.5	39
72	Electron transport in nanoscale junctions with local anharmonic modes. Journal of Chemical Physics, 2014, 141, 014704.	3.0	14

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73	Heat transfer in the spin-boson model: A comparative study in the incoherent tunneling regime. Physical Review E, 2014, 90, 012148.	2.1	40
74	The probe technique far from equilibrium: Magnetic field symmetries of nonlinear transport. European Physical Journal B, 2013, 86, 1.	1.5	29
75	Path-integral simulations with fermionic and bosonic reservoirs: Transport and dissipation in molecular electronic junctions. Journal of Chemical Physics, 2013, 138, 214111.	3.0	63
76	Qubit-mediated energy transfer between thermal reservoirs: Beyond the Markovian master equation. Physical Review B, 2013, 87, .	3.2	26
77	Magnetic field symmetries of nonlinear transport with elastic and inelastic scattering. Physical Review B, 2013, 88, .	3.2	8
78	Exact dynamics of interacting qubits in a thermal environment: results beyond the weak coupling limit. New Journal of Physics, 2013, 15, 023044.	2.9	7
79	Full density matrix dynamics for large quantum systems: interactions, decoherence and inelastic effects. New Journal of Physics, 2013, 15, 013014.	2.9	12
80	Flux-dependent occupations and occupation difference in geometrically symmetric and energy degenerate double-dot Aharonov-Bohm interferometers. Physical Review B, 2013, 87, .	3.2	14
81	Vibrational cooling, heating, and instability in molecular conducting junctions: full counting statistics analysis. Physical Chemistry Chemical Physics, 2012, 14, 13820.	2.8	76
82	Analysis Technique for Exceptional Points in Open Quantum Systems and QPT Analogy for the Appearance of Irreversibility. International Journal of Theoretical Physics, 2012, 51, 3536-3550.	1.2	19
83	Towards equilibration and thermalization between finite quantum systems: Unitary emulation of dephasing effects and inelastic interactions. Physical Review B, 2012, 86, .	3.2	5
84	Dynamics of coherences in the interacting double-dot Aharonov-Bohm interferometer: Exact numerical simulations. Physical Review B, 2012, 85, .	3.2	26
85	Nonequilibrium transport in quantum impurity models: exact path integral simulations. Physical Chemistry Chemical Physics, 2011, 13, 14378.	2.8	24
86	Theory of quantum energy transfer in spin chains: Superexchange and ballistic motion. Journal of Chemical Physics, 2011, 135, 234508.	3.0	1
87	Quantum heat transfer in harmonic chains with self-consistent reservoirs: Exact numerical simulations. Physical Review E, 2011, 84, 011151.	2.1	47
88	Quantum effects in thermal conduction: Nonequilibrium quantum discord and entanglement. Physical Review A, 2011, 84, .	2.5	38
89	Quantum fluctuation theorem for heat exchange in the strong coupling regime. Physical Review B, 2011, 84, .	3.2	47
90	Quantum heat transfer: A Born-Oppenheimer method. Physical Review E, 2011, 83, 051114.	2.1	22

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91	Non-equilibrium spin-boson model: Counting statistics and the heat exchange fluctuation theorem. Journal of Chemical Physics, 2011, 135, 164106.	3.0	56
92	Symmetry properties of the heat current in non-ballistic asymmetric junctions: A case study. Physics Letters, Section A: General, Atomic and Solid State Physics, 2010, 374, 765-769.	2.1	0
93	Universality in exact quantum state population dynamics and control. Physical Review A, 2010, 82, .	2.5	2
94	Numerically exact path-integral simulation of nonequilibrium quantum transport and dissipation. Physical Review B, 2010, 82, .	3.2	138
95	Thermal conductance of the Fermi-Pasta-Ulam chains: Atomic to mesoscopic transition. Physical Review E, 2010, 81, 040102.	2.1	10
96	Interface effects in thermal conduction through molecular junctions: Numerical simulations. Journal of Chemical Physics, 2010, 133, 094101.	3.0	10
97	Minimal model of a heat engine: Information theory approach. Physical Review E, 2010, 82, 011120.	2.1	40
98	Absence of thermal rectification in asymmetric harmonic chains with self-consistent reservoirs. Physical Review E, 2009, 79, 012103.	2.1	41
99	Sufficient Conditions for Thermal Rectification in Hybrid Quantum Structures. Physical Review Letters, 2009, 102, 095503.	7.8	117
100	Nonlinear quantum heat transfer in hybrid structures: Sufficient conditions for thermal rectification. Physical Review E, 2009, 80, 041103.	2.1	61
101	Energy flux operator, current conservation and the formal Fourier's law. Journal of Physics A: Mathematical and Theoretical, 2009, 42, 025302.	2.1	48
102	Vibrational relaxation in the Kubo oscillator: Stochastic pumping of heat. Journal of Chemical Physics, 2009, 130, 134510.	3.0	16
103	Stochastic Pumping of Heat: Approaching the Carnot Efficiency. Physical Review Letters, 2008, 101, 260601.	7.8	63
104	Thermal conduction in molecular chains: Non-Markovian effects. Journal of Chemical Physics, 2008, 128, 224710.	3.0	10
105	Single Mode Heat Rectifier: Controlling Energy Flow Between Electronic Conductors. Physical Review Letters, 2008, 100, 105901.	7.8	122
106	Nonlinear thermal control in anN-terminal junction. Physical Review E, 2008, 77, 021103.	2.1	16
107	Electric Control on the Nanoscale Using Tubular Image States. Israel Journal of Chemistry, 2007, 47, 105-110.	2.3	1
108	Molecular heat pump. Physical Review E, 2006, 73, 026109.	2.1	139

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109	Nanoscale Paul Trapping of a Single Electron. Nano Letters, 2006, 6, 1622-1626.	9.1	17
110	Heat flow in nonlinear molecular junctions: Master equation analysis. Physical Review B, 2006, 73, .	3.2	123
111	Ultraslow phonon-assisted collapse of tubular image states. Surface Science, 2005, 577, 86-92.	1.9	8
112	Thermoelectric effect in molecular junctions: A tool for revealing transport mechanisms. Physical Review B, 2005, 72, .	3.2	87
113	Reentrant onset of chaos in tubular image states. Journal of Chemical Physics, 2005, 122, 134705.	3.0	5
114	Heat rectification in molecular junctions. Journal of Chemical Physics, 2005, 122, 194704.	3.0	99
115	Tunable Bands of Electronic Image States in Nanowire Lattices. Physical Review Letters, 2005, 94, 016402.	7.8	13
116	Bands of Image States in Nanowire Lattices and Infraredâ€Control of Proteins on Nanotube Ropes. Fullerenes Nanotubes and Carbon Nanostructures, 2005, 13, 267-274.	2.1	0
117	Spin-Boson Thermal Rectifier. Physical Review Letters, 2005, 94, 034301.	7.8	334
118	Shaping of detached image states above suspended nanowires. Physical Review B, 2004, 69, .	3.2	14
119	Electric and magnetic-field tuning of tubular image states above suspended nanowires. Chemical Physics Letters, 2004, 392, 314-318.	2.6	7
120	Thermal conductance through molecular wires. Journal of Chemical Physics, 2003, 119, 6840-6855.	3.0	338
121	Heating in current carrying molecular junctions. Journal of Chemical Physics, 2002, 117, 3915-3927.	3.0	99
122	Conduction in molecular junctions: inelastic effects. Chemical Physics, 2002, 281, 235-256.	1.9	61
123	Steady-state quantum mechanics of thermally relaxing systems. Chemical Physics, 2001, 268, 315-335.	1.9	56
124	Electron Transfer Rates in Bridged Molecular Systems 2. A Steady-State Analysis of Coherent Tunneling and Thermal Transitionsâ€. Journal of Physical Chemistry B, 2000, 104, 3817-3829.	2.6	298
125	Activated Conduction in Microscopic Molecular Junctions. Journal of Physical Chemistry B, 2000, 104, 2790-2793.	2.6	96
126	Perturbation theory approach to tunneling: Direct and resonance transmission in super-exchange models. Journal of Chemical Physics, 1999, 111, 1569-1579.	3.0	21

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127	Bounds on ï¬‚uctuations for ensembles of quantum thermal machines. Journal of Physics A: Mathematical and Theoretical, 0, , .	2.1	5