

# Massimiliano Esposito

## 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.

130  
papers

7,253  
citations

42  
h-index

83  
g-index

142  
ext. papers

8,468  
ext. citations

4.4  
avg, IF

6.82  
L-index

#	Paper	IF	Citations
130	Nonequilibrium fluctuations, fluctuation theorems, and counting statistics in quantum systems. <i>Reviews of Modern Physics</i> , <b>2009</b> , 81, 1665-1702	40.5	842
129	Efficiency at maximum power of low-dissipation Carnot engines. <i>Physical Review Letters</i> , <b>2010</b> , 105, 150602	7.4	362
128	Universality of efficiency at maximum power. <i>Physical Review Letters</i> , <b>2009</b> , 102, 130602	7.4	311
127	Three detailed fluctuation theorems. <i>Physical Review Letters</i> , <b>2010</b> , 104, 090601	7.4	268
126	Thermoelectric efficiency at maximum power in a quantum dot. <i>Europhysics Letters</i> , <b>2009</b> , 85, 60010	1.6	255
125	Entropy production as correlation between system and reservoir. <i>New Journal of Physics</i> , <b>2010</b> , 12, 013013	1.6	214
124	Second law and Landauer principle far from equilibrium. <i>Europhysics Letters</i> , <b>2011</b> , 95, 40004	1.6	212
123	Three faces of the second law. I. Master equation formulation. <i>Physical Review E</i> , <b>2010</b> , 82, 011143	2.4	202
122	Stochastic thermodynamics under coarse graining. <i>Physical Review E</i> , <b>2012</b> , 85, 041125	2.4	198
121	Ensemble and trajectory thermodynamics: A brief introduction. <i>Physica A: Statistical Mechanics and Its Applications</i> , <b>2015</b> , 418, 6-16	3.3	190
120	Quantum master equation for electron transport through quantum dots and single molecules. <i>Physical Review B</i> , <b>2006</b> , 74,	3.3	187
119	Quantum-dot Carnot engine at maximum power. <i>Physical Review E</i> , <b>2010</b> , 81, 041106	2.4	183
118	Thermodynamics of a physical model implementing a Maxwell demon. <i>Physical Review Letters</i> , <b>2013</b> , 110, 040601	7.4	154
117	Quantum and Information Thermodynamics: A Unifying Framework Based on Repeated Interactions. <i>Physical Review X</i> , <b>2017</b> , 7,	9.1	153
116	Thermodynamics with Continuous Information Flow. <i>Physical Review X</i> , <b>2014</b> , 4,	9.1	139
115	Three faces of the second law. II. Fokker-Planck formulation. <i>Physical Review E</i> , <b>2010</b> , 82, 011144	2.4	139
114	The unlikely Carnot efficiency. <i>Nature Communications</i> , <b>2014</b> , 5, 4721	17.4	134

113	Fluctuation theorems for quantum master equations. <i>Physical Review E</i> , <b>2006</b> , 73, 046129	2.4	119
112	Quantum thermodynamics: a nonequilibrium Green's function approach. <i>Physical Review Letters</i> , <b>2015</b> , 114, 080602	7.4	113
111	Entropy fluctuation theorems in driven open systems: application to electron counting statistics. <i>Physical Review E</i> , <b>2007</b> , 76, 031132	2.4	103
110	Efficiency statistics at all times: Carnot limit at finite power. <i>Physical Review Letters</i> , <b>2015</b> , 114, 050601	7.4	97
109	Reaching optimal efficiencies using nanosized photoelectric devices. <i>Physical Review B</i> , <b>2009</b> , 80,	3.3	91
108	Nature of heat in strongly coupled open quantum systems. <i>Physical Review B</i> , <b>2015</b> , 92,	3.3	82
107	Transport in molecular states language: Generalized quantum master equation approach. <i>Physical Review B</i> , <b>2009</b> , 79,	3.3	78
106	Tightening the uncertainty principle for stochastic currents. <i>Physical Review E</i> , <b>2016</b> , 94, 052104	2.4	77
105	Stochastic thermodynamics for Maxwell demon feedbacks. <i>Europhysics Letters</i> , <b>2012</b> , 99, 30003	1.6	76
104	Finite-time thermodynamics for a single-level quantum dot. <i>Europhysics Letters</i> , <b>2010</b> , 89, 20003	1.6	71
103	Universal theory of efficiency fluctuations. <i>Physical Review E</i> , <b>2014</b> , 90, 052145	2.4	70
102	Irreversible thermodynamics of open chemical networks. I. Emergent cycles and broken conservation laws. <i>Journal of Chemical Physics</i> , <b>2014</b> , 141, 024117	3.9	62
101	Fermionic reaction coordinates and their application to an autonomous Maxwell demon in the strong-coupling regime. <i>Physical Review B</i> , <b>2018</b> , 97,	3.3	56
100	Stochastic thermodynamics in the strong coupling regime: An unambiguous approach based on coarse graining. <i>Physical Review E</i> , <b>2017</b> , 95, 062101	2.4	56
99	Fluctuation theorem for counting statistics in electron transport through quantum junctions. <i>Physical Review B</i> , <b>2007</b> , 75,	3.3	56
98	Nonequilibrium Thermodynamics of Chemical Reaction Networks: Wisdom from Stochastic Thermodynamics. <i>Physical Review X</i> , <b>2016</b> , 6,	9.1	56
97	Fluctuation theorems for capacitively coupled electronic currents. <i>Physical Review B</i> , <b>2011</b> , 84,	3.3	54
96	Self-Consistent Quantum Master Equation Approach to Molecular Transport $\square$ <i>Journal of Physical Chemistry C</i> , <b>2010</b> , 114, 20362-20369	3.8	54

95	Stochastically driven single-level quantum dot: a nanoscale finite-time thermodynamic machine and its various operational modes. <i>Physical Review E</i> , <b>2012</b> , 85, 031117	2.4	53
94	Quantum master equation for a system influencing its environment. <i>Physical Review E</i> , <b>2003</b> , 68, 066112	2.4	52
93	Interference effects in the counting statistics of electron transfers through a double quantum dot. <i>Physical Review B</i> , <b>2008</b> , 77,	3.3	48
92	Efficiency fluctuations in quantum thermoelectric devices. <i>Physical Review B</i> , <b>2015</b> , 91,	3.3	46
91	Pulse propagation in tapered granular chains: an analytic study. <i>Physical Review E</i> , <b>2009</b> , 80, 031303	2.4	45
90	Continuous-time random walk for open systems: fluctuation theorems and counting statistics. <i>Physical Review E</i> , <b>2008</b> , 77, 051119	2.4	45
89	Finite-time erasing of information stored in fermionic bits. <i>Physical Review E</i> , <b>2013</b> , 87, 012111	2.4	42
88	Single-electron transistor strongly coupled to vibrations: counting statistics and fluctuation theorem. <i>New Journal of Physics</i> , <b>2013</b> , 15, 033032	2.9	40
87	Pulse propagation in decorated granular chains: An analytical approach. <i>Physical Review E</i> , <b>2009</b> , 80, 051302	2.4	40
86	Spin relaxation in a complex environment. <i>Physical Review E</i> , <b>2003</b> , 68, 066113	2.4	40
85	Carnot efficiency at divergent power output. <i>Europhysics Letters</i> , <b>2017</b> , 118, 40003	1.6	39
84	Non-Markovianity and negative entropy production rates. <i>Physical Review E</i> , <b>2019</b> , 99, 012120	2.4	39
83	Unifying thermodynamic uncertainty relations. <i>New Journal of Physics</i> , <b>2020</b> , 22, 053046	2.9	38
82	Stochastic thermodynamics of rapidly driven systems. <i>New Journal of Physics</i> , <b>2015</b> , 17, 055002	2.9	35
81	Exact fluctuation theorem without ensemble quantities. <i>Physical Review E</i> , <b>2014</b> , 89, 052119	2.4	33
80	Effective Thermodynamics for a Marginal Observer. <i>Physical Review Letters</i> , <b>2017</b> , 119, 240601	7.4	32
79	Thermodynamics of Quantum Information Flows. <i>Physical Review Letters</i> , <b>2019</b> , 122, 150603	7.4	31
78	Work statistics in stochastically driven systems. <i>New Journal of Physics</i> , <b>2014</b> , 16, 095001	2.9	31

77	Entropy production in quantum Brownian motion. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , <b>2013</b> , 2013, P04005	1.9	30
76	Emergence of diffusion in finite quantum systems. <i>Physical Review B</i> , <b>2005</b> , 71,	3.3	30
75	Collective Power: Minimal Model for Thermodynamics of Nonequilibrium Phase Transitions. <i>Physical Review X</i> , <b>2018</b> , 8,	9.1	28
74	Conservation laws shape dissipation. <i>New Journal of Physics</i> , <b>2018</b> , 20, 023007	2.9	27
73	Statistics and fluctuation theorem for boson and fermion transport through mesoscopic junctions. <i>Physical Review B</i> , <b>2007</b> , 76,	3.3	27
72	Information Thermodynamics of Turing Patterns. <i>Physical Review Letters</i> , <b>2018</b> , 121, 108301	7.4	26
71	Entropy Production in Open Systems: The Predominant Role of Intraenvironment Correlations. <i>Physical Review Letters</i> , <b>2019</b> , 123, 200603	7.4	25
70	Mutual entropy production in bipartite systems. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , <b>2014</b> , 2014, P04010	1.9	25
69	Extracting chemical energy by growing disorder: efficiency at maximum power. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , <b>2010</b> , 2010, P01008	1.9	25
68	Conservation laws and symmetries in stochastic thermodynamics. <i>Physical Review E</i> , <b>2016</b> , 94, 052117	2.4	24
67	Dissipation in noisy chemical networks: The role of deficiency. <i>Journal of Chemical Physics</i> , <b>2015</b> , 143, 184103	3.9	24
66	Thermodynamics of quantum-jump-conditioned feedback control. <i>Physical Review E</i> , <b>2013</b> , 88, 062107	2.4	23
65	Thermodynamically consistent coarse graining of biocatalysts beyond Michaelis-Menten. <i>New Journal of Physics</i> , <b>2018</b> , 20, 042002	2.9	23
64	Quantum thermodynamics of the resonant-level model with driven system-bath coupling. <i>Physical Review B</i> , <b>2018</b> , 97,	3.3	22
63	Nonconvexity of the relative entropy for Markov dynamics: a Fisher information approach. <i>Physical Review E</i> , <b>2013</b> , 88, 012112	2.4	22
62	Stochastic thermodynamics of hidden pumps. <i>Physical Review E</i> , <b>2015</b> , 91, 052114	2.4	22
61	Effective fluctuation theorems for electron transport in a double quantum dot coupled to a quantum point contact. <i>Physical Review B</i> , <b>2013</b> , 88,	3.3	22
60	Dissipation-Time Uncertainty Relation. <i>Physical Review Letters</i> , <b>2020</b> , 125, 120604	7.4	22

59	Quantum Thermodynamics with Degenerate Eigenstate Coherences. <i>Entropy</i> , <b>2016</b> , 18, 447	2.8	22
58	Fluctuation-Dissipation Relations Far from Equilibrium. <i>Physical Review Letters</i> , <b>2016</b> , 117, 180601	7.4	20
57	Large deviations and dynamical phase transitions in stochastic chemical networks. <i>Journal of Chemical Physics</i> , <b>2019</b> , 151, 064117	3.9	20
56	Modulated two-level system: exact work statistics. <i>Physical Review E</i> , <b>2013</b> , 88, 032137	2.4	20
55	Single-electron counting spectroscopy: simulation study of porphyrin in a molecular junction. <i>Nano Letters</i> , <b>2008</b> , 8, 1137-41	11.5	19
54	Thermodynamic efficiency in dissipative chemistry. <i>Nature Communications</i> , <b>2019</b> , 10, 3865	17.4	18
53	Overdamped stochastic thermodynamics with multiple reservoirs. <i>Physical Review E</i> , <b>2016</b> , 94, 062148	2.4	18
52	Conservation laws and work fluctuation relations in chemical reaction networks. <i>Journal of Chemical Physics</i> , <b>2018</b> , 149, 245101	3.9	18
51	Work Statistics across a Quantum Phase Transition. <i>Physical Review Letters</i> , <b>2020</b> , 124, 170603	7.4	17
50	Work producing reservoirs: Stochastic thermodynamics with generalized Gibbs ensembles. <i>Physical Review E</i> , <b>2016</b> , 94, 020102	2.4	17
49	Universality in driven Potts models. <i>Physical Review E</i> , <b>2019</b> , 99, 022135	2.4	16
48	Detailed Fluctuation Theorems: A Unifying Perspective. <i>Entropy</i> , <b>2018</b> , 20,	2.8	16
47	Thermodynamics of the polaron master equation at finite bias. <i>Journal of Chemical Physics</i> , <b>2015</b> , 142, 134106	3.9	15
46	Transient fluctuation theorems for the currents and initial equilibrium ensembles. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , <b>2014</b> , 2014, P10033	1.9	15
45	Response Functions as Quantifiers of Non-Markovianity. <i>Physical Review Letters</i> , <b>2018</b> , 121, 040601	7.4	13
44	Quantum master equation for the microcanonical ensemble. <i>Physical Review E</i> , <b>2007</b> , 76, 041134	2.4	13
43	Thermodynamics of chemical waves. <i>Journal of Chemical Physics</i> , <b>2019</b> , 151, 234103	3.9	13
42	Negative differential response in chemical reactions. <i>New Journal of Physics</i> , <b>2019</b> , 21, 073005	2.9	12

41	Collective effects enhancing power and efficiency. <i>Europhysics Letters</i> , <b>2017</b> , 120, 30009	1.6	12
40	Double quantum dot coupled to a quantum point contact: a stochastic thermodynamics approach. <i>New Journal of Physics</i> , <b>2015</b> , 17, 095005	2.9	12
39	Thermodynamics of a stochastic twin elevator. <i>Physical Review E</i> , <b>2011</b> , 84, 051134	2.4	12
38	Exactly Solvable Model of Quantum Diffusion. <i>Journal of Statistical Physics</i> , <b>2005</b> , 121, 463-496	1.5	12
37	Efficiency Fluctuations of Stochastic Machines Undergoing a Phase Transition. <i>Physical Review Letters</i> , <b>2020</b> , 124, 250603	7.4	11
36	Kinetics and thermodynamics of a driven open quantum system. <i>Physical Review E</i> , <b>2017</b> , 96, 052132	2.4	10
35	Kinetics and thermodynamics of reversible polymerization in closed systems. <i>New Journal of Physics</i> , <b>2015</b> , 17, 085008	2.9	10
34	Effective Fluctuation and Response Theory. <i>Journal of Statistical Physics</i> , <b>2019</b> , 176, 94-168	1.5	8
33	Measurability of nonequilibrium thermodynamics in terms of the Hamiltonian of mean force. <i>Physical Review E</i> , <b>2020</b> , 101, 050101	2.4	8
32	Nonequilibrium thermodynamics and Nose-Hoover dynamics. <i>Journal of Physical Chemistry B</i> , <b>2011</b> , 115, 5144-7	3.4	8
31	Thermodynamics of optical Bloch equations. <i>New Journal of Physics</i> , <b>2020</b> , 22, 103039	2.9	8
30	Micro-reversibility and thermalization with collisional baths. <i>Physica A: Statistical Mechanics and Its Applications</i> , <b>2020</b> , 552, 122108	3.3	8
29	Effective thermodynamics of two interacting underdamped Brownian particles. <i>Physical Review E</i> , <b>2020</b> , 101, 022116	2.4	7
28	Thermodynamics of Majority-Logic Decoding in Information Erasure. <i>Entropy</i> , <b>2019</b> , 21,	2.8	6
27	Dissipation in small systems: Landau-Zener approach. <i>Physical Review E</i> , <b>2016</b> , 93, 062118	2.4	6
26	Entropy-generated power and its efficiency. <i>Physical Review E</i> , <b>2013</b> , 88, 042115	2.4	6
25	Glucans monomer-exchange dynamics as an open chemical network. <i>Journal of Chemical Physics</i> , <b>2015</b> , 143, 244903	3.9	6
24	Thermodynamics of non-elementary chemical reaction networks. <i>New Journal of Physics</i> , <b>2020</b> , 22, 093040	4.0	6

23	Stochastic and Quantum Thermodynamics of Driven RLC Networks. <i>Physical Review X</i> , <b>2020</b> , 10,	9.1	6
22	Insights from an information thermodynamics analysis of a synthetic molecular motor.. <i>Nature Chemistry</i> , <b>2022</b> ,	17.6	6
21	Chemical cloaking. <i>Physical Review E</i> , <b>2020</b> , 101, 060102	2.4	5
20	On the relation between event-based and time-based current statistics. <i>Europhysics Letters</i> , <b>2010</b> , 89, 10008	1.6	5
19	Dissipative quantum dynamics in terms of a reduced density matrix distributed over the environment energy. <i>Europhysics Letters</i> , <b>2004</b> , 65, 742-748	1.6	5
18	Landau-Zener Lindblad equation and work extraction from coherences. <i>Physical Review E</i> , <b>2019</b> , 99, 042142	1.4	4
17	Stochastic thermodynamics of all-to-all interacting many-body systems. <i>New Journal of Physics</i> , <b>2020</b> , 22, 063005	2.9	4
16	Nonequilibrium thermodynamics of non-ideal chemical reaction networks. <i>Journal of Chemical Physics</i> , <b>2021</b> , 154, 094114	3.9	4
15	Local detailed balance across scales: From diffusions to jump processes and beyond. <i>Physical Review E</i> , <b>2021</b> , 103, 042114	2.4	4
14	Stochastic Thermodynamics of Nonlinear Electronic Circuits: A Realistic Framework for Computing Around kT. <i>Physical Review X</i> , <b>2021</b> , 11,	9.1	4
13	Nonequilibrium thermodynamics of light-induced reactions. <i>Journal of Chemical Physics</i> , <b>2021</b> , 155, 114101	9.1	3
12	Overdamping by weakly coupled environments. <i>Physical Review A</i> , <b>2005</b> , 72,	2.6	2
11	Reply to "Comment on 'Measurability of nonequilibrium thermodynamics in terms of the Hamiltonian of mean force'". <i>Physical Review E</i> , <b>2020</b> , 102, 066102	2.4	2
10	Thermalization Induced by Quantum Scattering. <i>PRX Quantum</i> , <b>2021</b> , 2,	6.1	2
9	Decoherence and kinetic processes in quantum nanosystems. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , <b>2005</b> , 341, 435-440	2.3	1
8	Heat transport in overdamped quantum systems. <i>Physical Review B</i> , <b>2020</b> , 102,	3.3	1
7	Quantum collisional thermostats. <i>New Journal of Physics</i> ,	2.9	1
6	Characterizing autonomous Maxwell demons. <i>Physical Review E</i> , <b>2021</b> , 103, 032118	2.4	1



5	Linear response in large deviations theory: a method to compute non-equilibrium distributions. <i>New Journal of Physics</i> , <b>2021</b> , 23, 093003	2.9	1
4	Strong current response to slow modulation: A metabolic case-study. <i>Journal of Chemical Physics</i> , <b>2020</b> , 152, 134101	3.9	0
3	Thermodynamics of concentration vs flux control in chemical reaction networks.. <i>Journal of Chemical Physics</i> , <b>2022</b> , 156, 014116	3.9	0
2	Finite-Time Dynamical Phase Transition in Nonequilibrium Relaxation.. <i>Physical Review Letters</i> , <b>2022</b> , 128, 110603	7.4	0
1	Reliability and entropy production in nonequilibrium electronic memories.. <i>Physical Review E</i> , <b>2022</b> , 105, 034107	2.4	0