

David Lacoste

List of Publications by Year in descending order

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Version: 2024-02-01

64
papers

1,563
citations

279778

23
h-index

330122

37
g-index

70
all docs

70
docs citations

70
times ranked

1317
citing authors

#	ARTICLE	IF	CITATIONS
1	Depolarization of backscattered linearly polarized light. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , 2004, 21, 1799.	1.5	105
2	Shape matters in protein mobility within membranes. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014, 111, 5083-5087.	7.1	89
3	Nonequilibrium Fluctuations and Mechanochemical Couplings of a Molecular Motor. <i>Physical Review Letters</i> , 2007, 99, 158102.	7.8	83
4	Membrane Tension Lowering Induced by Protein Activity. <i>Physical Review Letters</i> , 2009, 102, 038102.	7.8	76
5	Sonoluminescence from Single Bubbles in Nonaqueous Liquids: New Parameter Space for Sonochemistry. <i>The Journal of Physical Chemistry</i> , 1995, 99, 14195-14197.	2.9	66
6	Fluctuation theorem and large deviation function for a solvable model of a molecular motor. <i>Physical Review E</i> , 2008, 78, 011915.	2.1	66
7	Fluctuation Spectrum of Fluid Membranes Coupled to an Elastic Meshwork: Jump of the Effective Surface Tension at the Mesh Size. <i>Physical Review Letters</i> , 2004, 92, 018102.	7.8	60
8	Random Hydrolysis Controls the Dynamic Instability of Microtubules. <i>Biophysical Journal</i> , 2012, 102, 1274-1283.	0.5	58
9	Universal motifs and the diversity of autocatalytic systems. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 25230-25236.	7.1	54
10	Nonequilibrium Self-Assembly of a Filament Coupled to ATP/GTP Hydrolysis. <i>Biophysical Journal</i> , 2009, 96, 2146-2159.	0.5	53
11	Electrostatic and electrokinetic contributions to the elastic moduli of a driven membrane. <i>European Physical Journal E</i> , 2009, 28, 243-264.	1.6	51
12	Optics of a Faraday-active Mie sphere. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , 1998, 15, 1636.	1.5	41
13	Modified fluctuation-dissipation theorem for non-equilibrium steady states and applications to molecular motors. <i>Europhysics Letters</i> , 2011, 93, 10002.	2.0	41
14	Role of ATP-Hydrolysis in the Dynamics of a Single Actin Filament. <i>Biophysical Journal</i> , 2010, 98, 1418-1427.	0.5	38
15	Effective zero-thickness model for a conductive membrane driven by an electric field. <i>Physical Review E</i> , 2010, 81, 031912.	2.1	37
16	Fluctuation theorem for the flashing ratchet model of molecular motors. <i>Physical Review E</i> , 2009, 80, 021923.	2.1	33
17	Modified fluctuation-dissipation theorem for general non-stationary states and application to the Glauber-Ising chain. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2011, 2011, P10025.	2.3	33
18	Condensation of actin filaments pushing against a barrier. <i>New Journal of Physics</i> , 2011, 13, 103032.	2.9	32

#	ARTICLE	IF	CITATIONS
19	Emergence of homochirality in large molecular systems. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	32
20	Linking lineage and population observables in biological branching processes. Physical Review E, 2019, 99, 042413.	2.1	31
21	Measuring colloidal forces with the magnetic chaining technique. European Physical Journal E, 2009, 28, 113-123.	1.6	28
22	Fluctuations of a driven membrane in an electrolyte. Europhysics Letters, 2007, 77, 18006.	2.0	25
23	Coherent backscattering of light in a magnetic field. Physical Review E, 2000, 61, 4556-4565.	2.1	24
24	Photonic Hall effect in ferrofluids: Theory and experiments. Physical Review E, 2000, 62, 3934-3943.	2.1	24
25	Fluctuation relations and fitness landscapes of growing cell populations. Scientific Reports, 2020, 10, 11889.	3.3	23
26	Dynamics of active membranes with internal noise. Europhysics Letters, 2005, 70, 418-424.	2.0	21
27	Selection Dynamics in Transient Compartmentalization. Physical Review Letters, 2018, 120, 158101.	7.8	21
28	Isometric Fluctuation Relations for Equilibrium States with Broken Symmetry. Physical Review Letters, 2014, 113, 240602.	7.8	20
29	A Poisson-Boltzmann approach for a lipid membrane in an electric field. New Journal of Physics, 2010, 12, 095002.	2.9	18
30	Non-invasive estimation of dissipation from non-equilibrium fluctuations in chemical reactions. Journal of Chemical Physics, 2013, 139, 124109.	3.0	18
31	Transport mean free path for magneto-transverse light diffusion. Europhysics Letters, 1999, 45, 721-725.	2.0	15
32	Geometric depolarization in patterns formed by backscattered light. Optics Letters, 2004, 29, 2040.	3.3	15
33	Energy versus Information Based Estimations of Dissipation Using a Pair of Magnetic Colloidal Particles. Physical Review Letters, 2014, 112, 180604.	7.8	15
34	Inequalities Generalizing the Second Law of Thermodynamics for Transitions between Nonstationary States. Physical Review Letters, 2012, 108, 120601.	7.8	14
35	Length and sequence relaxation of copolymers under recombination reactions. Journal of Chemical Physics, 2017, 147, 094905.	3.0	14
36	Reaction kinetics in open reactors and serial transfers between closed reactors. Journal of Chemical Physics, 2018, 148, 144902.	3.0	14

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37	Stochastic model for nucleosome sliding under an external force. <i>Physical Review E</i> , 2009, 79, 031922.	2.1	12
38	A Planar Lipid Bilayer in an Electric Field. <i>Behavior Research Methods</i> , 2011, 14, 63-95.	4.0	12
39	Fluctuation theorems and inequalities generalizing the second law of thermodynamics out of equilibrium. <i>Physical Review E</i> , 2012, 86, 051127.	2.1	12
40	Information-theoretic analysis of the directional influence between cellular processes. <i>PLoS ONE</i> , 2017, 12, e0187431.	2.5	12
41	Kinetics and thermodynamics of reversible polymerization in closed systems. <i>New Journal of Physics</i> , 2015, 17, 085008.	2.9	11
42	Thermodynamic bounds on equilibrium fluctuations of a global or local order parameter. <i>Europhysics Letters</i> , 2016, 115, 60007.	2.0	11
43	Phase transitions in optimal betting strategies. <i>Europhysics Letters</i> , 2020, 131, 60005.	2.0	11
44	Thermodynamic inference based on coarse-grained data or noisy measurements. <i>Physical Review E</i> , 2016, 93, 032103.	2.1	9
45	The generality of transient compartmentalization and its associated error thresholds. <i>Journal of Theoretical Biology</i> , 2020, 487, 110110.	1.7	9
46	Photonic Hall effect in absorbing media. <i>Physical Review E</i> , 2000, 62, 8636-8639.	2.1	8
47	Magneto-optics with diffuse light. <i>Physica B: Condensed Matter</i> , 2000, 279, 13-16.	2.7	7
48	Glucans monomer-exchange dynamics as an open chemical network. <i>Journal of Chemical Physics</i> , 2015, 143, 244903.	3.0	7
49	Fluctuation relations for equilibrium states with broken discrete or continuous symmetries. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2015, 2015, P11018.	2.3	7
50	Survival of Self-Replicating Molecules under Transient Compartmentalization with Natural Selection. <i>Life</i> , 2019, 9, 78.	2.4	6
51	Fluctuation Relations for Molecular Motors. , 2011, , 61-88.		6
52	Fluctuations and response from a Hatano and Sasa approach. <i>Physica Scripta</i> , 2012, 86, 058505.	2.5	5
53	Stochastic thermodynamics of a tagged particle within a harmonic chain. <i>Physical Review E</i> , 2015, 91, 022114.	2.1	5
54	Universal constraints on selection strength in lineage trees. <i>Physical Review Research</i> , 2021, 3, .	3.6	5

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55	Branching processes with resetting as a model for cell division. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2022, 55, 074001.	2.1	4
56	A robust transition to homochirality in complex chemical reaction networks. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2022, 478, .	2.1	4
57	Stokes parameters for light scattering from a Faraday-active sphere. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 1999, 63, 305-319.	2.3	3
58	Effective index of refraction, optical rotation, and circular dichroism in isotropic chiral liquid crystals. <i>Physical Review E</i> , 2002, 65, 031717.	2.1	3
59	Thermal expansion within a chain of magnetic colloidal particles. <i>Physical Review E</i> , 2009, 80, 011401.	2.1	3
60	Mechanical Factors Affecting the Mobility of Membrane Proteins. , 2018, , 191-211.		1
61	Transport mean free path for magneto-transverse light diffusion: an alternative approach. <i>Waves in Random and Complex Media</i> , 2000, 10, 367-372.	1.5	1
62	Depolarization of Multiple Scattered Reflected Light. <i>AIP Conference Proceedings</i> , 2007, , .	0.4	0
63	History-Dependent Depolymerization of Actin Filaments. <i>Biochemistry</i> , 2012, 51, 7580-7587.	2.5	0
64	Random Hydrolysis Controls Dynamic Instability of Microtubules. <i>Biophysical Journal</i> , 2012, 102, 698a.	0.5	0