

Felix Ritort

List of Publications by Year in descending order

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102
papers

8,402
citations

87888

38
h-index

43889

91
g-index

102
all docs

102
docs citations

102
times ranked

5760
citing authors

#	ARTICLE	IF	CITATIONS
1	The Kuramoto model: A simple paradigm for synchronization phenomena. <i>Reviews of Modern Physics</i> , 2005, 77, 137-185.	45.6	2,547
2	Verification of the Crooks fluctuation theorem and recovery of RNA folding free energies. <i>Nature</i> , 2005, 437, 231-234.	27.8	891
3	Glassy dynamics of kinetically constrained models. <i>Advances in Physics</i> , 2003, 52, 219-342.	14.4	624
4	Single-molecule experiments in biological physics: methods and applications. <i>Journal of Physics Condensed Matter</i> , 2006, 18, R531-R583.	1.8	315
5	Bias and error in estimates of equilibrium free-energy differences from nonequilibrium measurements. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2003, 100, 12564-12569.	7.1	289
6	Single-molecule derivation of salt dependent base-pair free energies in DNA. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010, 107, 15431-15436.	7.1	215
7	Experimental test of Hatano and Sasa's nonequilibrium steady-state equality. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2004, 101, 15038-15041.	7.1	210
8	Glassiness in a Model without Energy Barriers. <i>Physical Review Letters</i> , 1995, 75, 1190-1193.	7.8	137
9	Force Unfolding Kinetics of RNA Using Optical Tweezers. I. Effects of Experimental Variables on Measured Results. <i>Biophysical Journal</i> , 2007, 92, 2996-3009.	0.5	134
10	Optical tweezers " from calibration to applications: a tutorial. <i>Advances in Optics and Photonics</i> , 2021, 13, 74.	25.5	127
11	Elastic properties and secondary structure formation of single-stranded DNA at monovalent and divalent salt conditions. <i>Nucleic Acids Research</i> , 2014, 42, 2064-2074.	14.5	126
12	Numerical Evidence for Spontaneously Broken Replica Symmetry in 3D Spin Glasses. <i>Physical Review Letters</i> , 1996, 76, 843-846.	7.8	118
13	A two-state kinetic model for the unfolding of single molecules by mechanical force. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2002, 99, 13544-13548.	7.1	104
14	Experimental free-energy measurements of kinetic molecular states using fluctuation theorems. <i>Nature Physics</i> , 2012, 8, 688-694.	16.7	90
15	Non-specific binding of Na ⁺ and Mg ²⁺ to RNA determined by force spectroscopy methods. <i>Nucleic Acids Research</i> , 2012, 40, 6922-6935.	14.5	78
16	Thermodynamic and Kinetic Aspects of RNA Pulling Experiments. <i>Biophysical Journal</i> , 2005, 88, 3224-3242.	0.5	72
17	Large work extraction and the Landauer limit in a continuous Maxwell demon. <i>Nature Physics</i> , 2019, 15, 660-664.	16.7	72
18	Force Unfolding Kinetics of RNA using Optical Tweezers. II. Modeling Experiments. <i>Biophysical Journal</i> , 2007, 92, 3010-3021.	0.5	69

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19	Improving Signal/Noise Resolution in Single-Molecule Experiments Using Molecular Constructs with Short Handles. <i>Biophysical Journal</i> , 2011, 100, 1765-1774.	0.5	67
20	Elastic Properties of Nucleic Acids by Single-Molecule Force Spectroscopy. <i>Annual Review of Biophysics</i> , 2016, 45, 65-84.	10.0	67
21	Single-molecule measurement of the effective temperature in non-equilibrium steady states. <i>Nature Physics</i> , 2015, 11, 971-977.	16.7	66
22	RecG and UvsW catalyse robust DNA rewinding critical for stalled DNA replication fork rescue. <i>Nature Communications</i> , 2013, 4, 2368.	12.8	65
23	Evidence of aging in spin-glass mean-field models. <i>Physical Review B</i> , 1994, 49, 6331-6334.	3.2	64
24	Matrix Models as Solvable Glass Models. <i>Physical Review Letters</i> , 1995, 74, 1012-1015.	7.8	63
25	Intermittency of glassy relaxation and the emergence of a non-equilibrium spontaneous measure in the aging regime. <i>Europhysics Letters</i> , 2004, 66, 253-259.	2.0	61
26	Force-Dependent Fragility in RNA Hairpins. <i>Physical Review Letters</i> , 2006, 96, 218301.	7.8	60
27	Condensation Transition in DNA-Polyaminoamide Dendrimer Fibers Studied Using Optical Tweezers. <i>Physical Review Letters</i> , 2006, 96, 118301.	7.8	59
28	Recovery of Free Energy Branches in Single Molecule Experiments. <i>Physical Review Letters</i> , 2009, 102, 070602.	7.8	59
29	Work and heat fluctuations in two-state systems: a trajectory thermodynamics formalism. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2004, 2004, P10016.	2.3	58
30	Improving Free-Energy Estimates from Unidirectional Work Measurements: Theory and Experiment. <i>Physical Review Letters</i> , 2011, 107, 060601.	7.8	54
31	A Temperature-Jump Optical Trap for Single-Molecule Manipulation. <i>Biophysical Journal</i> , 2015, 108, 2854-2864.	0.5	49
32	Experimental measurement of binding energy, selectivity, and allostery using fluctuation theorems. <i>Science</i> , 2017, 355, 412-415.	12.6	48
33	Static chaos and scaling behavior in the spin-glass phase. <i>Physical Review B</i> , 1994, 50, 6844-6853.	3.2	46
34	General Method to Determine Replica Symmetry Breaking Transitions. <i>Physical Review Letters</i> , 1998, 81, 1698-1701.	7.8	45
35	Potential energy landscape of finite-size mean-field models for glasses. <i>Europhysics Letters</i> , 2000, 51, 147-153.	2.0	45
36	Dynamic force spectroscopy of DNA hairpins: I. Force kinetics and free energy landscapes. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2009, 2009, P02060.	2.3	45

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37	Quantum phase transition in spin glasses with multi-spin interactions. <i>Physica A: Statistical Mechanics and Its Applications</i> , 1998, 250, 8-45.	2.6	40
38	Derivation of nearest-neighbor DNA parameters in magnesium from single molecule experiments. <i>Nucleic Acids Research</i> , 2017, 45, 12921-12931.	14.5	39
39	Inherent structures and nonequilibrium dynamics of one-dimensional constrained kinetic models: A comparison study. <i>Journal of Chemical Physics</i> , 2000, 113, 10615-10634.	3.0	38
40	Single molecule high-throughput footprinting of small and large DNA ligands. <i>Nature Communications</i> , 2017, 8, 304.	12.8	38
41	Activated processes and Inherent Structure dynamics of finite-size mean-field models for glasses. <i>Europhysics Letters</i> , 2000, 52, 640-646.	2.0	37
42	Experimental evidence of symmetry breaking of transition-path times. <i>Nature Communications</i> , 2019, 10, 55.	12.8	37
43	Aging in the linear harmonic oscillator. <i>Physica A: Statistical Mechanics and Its Applications</i> , 1998, 250, 315-326.	2.6	36
44	Dynamic force spectroscopy of DNA hairpins: II. Irreversibility and dissipation. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2009, 2009, P02061.	2.3	35
45	Fragile-glass behavior of a short-range-spin model. <i>Physical Review B</i> , 1996, 54, 9756-9764.	3.2	33
46	Dynamics of individual molecular shuttles under mechanical force. <i>Nature Communications</i> , 2018, 9, 4512.	12.8	33
47	Dynamical Solution of a Model without Energy Barriers. <i>Europhysics Letters</i> , 1995, 31, 507-512.	2.0	32
48	Aging effects and dynamic scaling in the 3D Edwards-Anderson spin glasses: a comparison with experiments. <i>European Physical Journal B</i> , 2001, 21, 211-217.	1.5	32
49	Measurement of work in single-molecule pulling experiments. <i>Journal of Chemical Physics</i> , 2009, 130, 234116.	3.0	32
50	Mechanical Folding and Unfolding of Protein Barnase at the Single-Molecule Level. <i>Biophysical Journal</i> , 2016, 110, 63-74.	0.5	31
51	Exactly Solvable Phase Oscillator Models with Synchronization Dynamics. <i>Physical Review Letters</i> , 1998, 81, 3643-3646.	7.8	30
52	Single-molecule kinetics and footprinting of DNA bis-intercalation: the paradigmatic case of Thio coraline. <i>Nucleic Acids Research</i> , 2015, 43, 2767-2779.	14.5	30
53	Determination of the elastic properties of short ssDNA molecules by mechanically folding and unfolding DNA hairpins. <i>Biopolymers</i> , 2014, 101, 1193-1199.	2.4	28
54	Continuous phase transition in a spin-glass model without time-reversal symmetry. <i>Physical Review E</i> , 1999, 60, 58-68.	2.1	26

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55	Electrostatic Binding and Hydrophobic Collapse of Peptide–Nucleic Acid Aggregates Quantified Using Force Spectroscopy. <i>ACS Nano</i> , 2013, 7, 5102-5113.	14.6	26
56	Direct detection of molecular intermediates from first-passage times. <i>Science Advances</i> , 2020, 6, eaaz4642.	10.3	26
57	Numerical Evidence of a Critical Line in the 4 d Ising Spin Glass. <i>Europhysics Letters</i> , 1993, 21, 495-499.	2.0	25
58	Free-energy inference from partial work measurements in small systems. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014, 111, E3386-94.	7.1	25
59	Glassy mean-field dynamics of the backgammon model. <i>Journal of Statistical Physics</i> , 1996, 85, 131-150.	1.2	22
60	Solvable Dynamics in a System of Interacting Random Tops. <i>Physical Review Letters</i> , 1998, 80, 6-9.	7.8	22
61	Evidence of a critical time in constrained kinetic Ising models. <i>Physical Review B</i> , 1996, 54, 930-937.	3.2	21
62	Statistical Properties of Metastable Intermediates in DNA Unzipping. <i>Physical Review Letters</i> , 2009, 103, 248106.	7.8	21
63	From free energy measurements to thermodynamic inference in nonequilibrium small systems. <i>New Journal of Physics</i> , 2015, 17, 075009.	2.9	21
64	Stem–loop formation drives RNA folding in mechanical unzipping experiments. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2022, 119, .	7.1	21
65	Fluctuation theorems in small systems: extending thermodynamics to the nanoscale. <i>Europhysics News</i> , 2010, 41, 27-30.	0.3	19
66	Are mean-field spin-glass models relevant for the structural glass transition?. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2000, 280, 155-160.	2.6	18
67	Molten globule–like transition state of protein barnase measured with calorimetric force spectroscopy. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2022, 119, e2112382119.	7.1	18
68	Force-Dependent Folding and Unfolding Kinetics in DNA Hairpins Reveals Transition-State Displacements along a Single Pathway. <i>Journal of Physical Chemistry Letters</i> , 2017, 8, 895-900.	4.6	17
69	Force feedback effects on single molecule hopping and pulling experiments. <i>Journal of Chemical Physics</i> , 2018, 148, 123327.	3.0	16
70	Closure of the Monte Carlo dynamical equations in the spherical Sherrington-Kirkpatrick model. <i>Physical Review B</i> , 1996, 54, 4170-4182.	3.2	15
71	Single-Molecule Stochastic Resonance. <i>Physical Review X</i> , 2012, 2, .	8.9	15
72	Counter-propagating dual-trap optical tweezers based on linear momentum conservation. <i>Review of Scientific Instruments</i> , 2013, 84, 043104.	1.3	14

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73	Experimental test of ensemble inequivalence and the fluctuation theorem in the force ensemble in DNA pulling experiments. <i>Physical Review E</i> , 2018, 98, .	2.1	14
74	Resonant Nonequilibrium Temperatures. <i>Journal of Physical Chemistry B</i> , 2005, 109, 6787-6792.	2.6	13
75	Folding and unfolding of a triple-branch DNA molecule with four conformational states. <i>Philosophical Magazine</i> , 2011, 91, 2049-2065.	1.6	13
76	Control of force through feedback in small driven systems. <i>Physical Review E</i> , 2016, 94, 012107.	2.1	13
77	Detection of single DNA mismatches by force spectroscopy in short DNA hairpins. <i>Journal of Chemical Physics</i> , 2020, 152, 074204.	3.0	13
78	Force Spectroscopy with Dual-Trap Optical Tweezers: Molecular Stiffness Measurements and Coupled Fluctuations Analysis. <i>Biophysical Journal</i> , 2012, 103, 1919-1928.	0.5	12
79	Lymph microvascularization as a prognostic indicator in neuroblastoma. <i>Oncotarget</i> , 2018, 9, 26157-26170.	1.8	12
80	Asymmetric Little spin-glass model. <i>Physical Review B</i> , 1992, 46, 5339-5350.	3.2	11
81	Efficient methods for determining folding free energies in single-molecule pulling experiments. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2019, 2019, 124001.	2.3	10
82	Force-induced misfolding in RNA. <i>Physical Review E</i> , 2008, 78, 061925.	2.1	9
83	Investigating the thermodynamics of small biosystems with optical tweezers. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2010, 42, 666-671.	2.7	9
84	Explicit Solution of the Generalised Langevin Equation. <i>Journal of Statistical Physics</i> , 2020, 181, 1609-1635.	1.2	9
85	Numerical study of the Ising spin glass in a magnetic field. <i>Journal De Physique, I</i> , 1994, 4, 1619-1625.	1.2	8
86	Study of non-covalent interactions on dendriplex formation: Influence of hydrophobic, electrostatic and hydrogen bonds interactions. <i>Colloids and Surfaces B: Biointerfaces</i> , 2018, 162, 380-388.	5.0	7
87	Work extraction, information-content and the Landauer bound in the continuous Maxwell Demon. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2019, 2019, 084013.	2.3	6
88	Sugar-Pucker Force-Induced Transition in Single-Stranded DNA. <i>International Journal of Molecular Sciences</i> , 2021, 22, 4745.	4.1	6
89	Force-Dependent Folding Kinetics of Single Molecules with Multiple Intermediates and Pathways. <i>Journal of Physical Chemistry Letters</i> , 2022, 13, 1025-1032.	4.6	6
90	Cooperativity-Dependent Folding of Single-Stranded DNA. <i>Physical Review X</i> , 2021, 11, .	8.9	5

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91	Dissipation Reduction and Information-to-Measurement Conversion in DNA Pulling Experiments with Feedback Protocols. <i>Physical Review X</i> , 2021, 11, .	8.9	5
92	The Noisy and Marvelous Molecular World of Biology. <i>Inventions</i> , 2019, 4, 24.	2.5	4
93	Open questions about DNA melting. <i>Physics of Life Reviews</i> , 2018, 25, 34-36.	2.8	3
94	Universal axial fluctuations in optical tweezers. <i>Optics Letters</i> , 2015, 40, 800.	3.3	2
95	Mechanical characterization of base analogue modified nucleic acids by force spectroscopy. <i>Physical Chemistry Chemical Physics</i> , 2021, 23, 14151-14155.	2.8	2
96	Force Dependence of Proteinsâ€™ Transition State Position and the Bellâ€™Evans Model. <i>Nanomaterials</i> , 2021, 11, 3023.	4.1	2
97	Configurational entropy and the one-step RSB scenario in glasses. <i>AIP Conference Proceedings</i> , 2001, , .	0.4	0
98	Title is missing!. <i>Journal of Statistical Physics</i> , 2001, 105, 403-404.	1.2	0
99	2P-111 Stochastic resonance in DNA hairpins(The 46th Annual Meeting of the Biophysical Society of) Tj ETQq1 1 0.784314 rgBT /Over	0.1	0
100	1P199 1YA1015 Innovation of new theory of non-equilibrium statistical mechanics and its application to single molecule experiments(Molecular motor,Early Research in Biophysics Award Candidate) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 382	0.1	0
101	Derivation of the spin-glass order parameter from stochastic thermodynamics. <i>Physical Review E</i> , 2018, 97, 052103.	2.1	0
102	Folding Free Energy Determination of an RNA Three-Way Junction Using Fluctuation Theorems. <i>Entropy</i> , 2022, 24, 895.	2.2	0