

David Bensimon

List of Publications by Year in descending order

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70
papers

5,128
citations

117625

34
h-index

95266

68
g-index

77
all docs

77
docs citations

77
times ranked

4220
citing authors

#	ARTICLE	IF	CITATIONS
1	Viscous flows in two dimensions. <i>Reviews of Modern Physics</i> , 1986, 58, 977-999.	45.6	674
2	Single-molecule analysis of DNA uncoiling by a type II topoisomerase. <i>Nature</i> , 2000, 404, 901-904.	27.8	325
3	Twisting and stretching single DNA molecules. <i>Progress in Biophysics and Molecular Biology</i> , 2000, 74, 115-140.	2.9	317
4	Solutions to the Schrödinger equation on some fractal lattices. <i>Physical Review B</i> , 1983, 28, 3110-3123.	3.2	223
5	How to control proteins with light in living systems. <i>Nature Chemical Biology</i> , 2014, 10, 533-541.	8.0	216
6	Single-molecule assay reveals strand switching and enhanced processivity of UvrD. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2004, 101, 6439-6444.	7.1	177
7	Preferential relaxation of positively supercoiled DNA by <i>E. coli</i> topoisomerase IV in single-molecule and ensemble measurements. <i>Genes and Development</i> , 2000, 14, 2881-2892.	5.9	175
8	Measurement of the Torque on a Single Stretched and Twisted DNA Using Magnetic Tweezers. <i>Physical Review Letters</i> , 2009, 102, 078301.	7.8	171
9	Extended chaos and disappearance of KAM trajectories. <i>Physica D: Nonlinear Phenomena</i> , 1984, 13, 82-89.	2.8	159
10	Direct Observation of DNA Distortion by the RSC Complex. <i>Molecular Cell</i> , 2006, 21, 417-425.	9.7	146
11	Wringing Out DNA. <i>Physical Review Letters</i> , 2006, 96, 178102.	7.8	144
12	Real-time observation of bacteriophage T4 gp41 helicase reveals an unwinding mechanism. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007, 104, 19790-19795.	7.1	139
13	The Eckhaus instability for traveling waves. <i>Physica D: Nonlinear Phenomena</i> , 1992, 55, 269-286.	2.8	130
14	Active and passive mechanisms of helicases. <i>Nucleic Acids Research</i> , 2010, 38, 5518-5526.	14.5	129
15	Cell-cell contacts confine public goods diffusion inside <i>Pseudomonas aeruginosa</i> clonal microcolonies. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013, 110, 12577-12582.	7.1	122
16	Stability of viscous fingering. <i>Physical Review A</i> , 1986, 33, 1302-1308.	2.5	120
17	Supercoiling and denaturation in Gal repressor/heat unstable nucleoid protein (HU)-mediated DNA looping. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2003, 100, 11373-11377.	7.1	105
18	Nonadiabatic effects in convection. <i>Physical Review A</i> , 1988, 38, 5461-5464.	2.5	96

#	ARTICLE	IF	CITATIONS
19	A Blue-Absorbing Photolabile Protecting Group for <i>in Vivo</i> Chromatically Orthogonal Photoactivation. ACS Chemical Biology, 2013, 8, 1528-1536.	3.4	96
20	Stretching DNA and RNA to probe their interactions with proteins. Current Opinion in Structural Biology, 2003, 13, 266-274.	5.7	92
21	Structure and mechanics of single biomolecules: experiment and simulation. Journal of Physics Condensed Matter, 2002, 14, R383-R414.	1.8	88
22	A Caged Retinoic Acid for One- and Two-Photon Excitation in Zebrafish Embryos. Angewandte Chemie - International Edition, 2008, 47, 3744-3746.	13.8	83
23	The Manipulation of Single Biomolecules. Physics Today, 2001, 54, 46-51.	0.3	81
24	Photocontrol of Protein Activity in Cultured Cells and Zebrafish with One- and Two-Photon Illumination. ChemBioChem, 2010, 11, 653-663.	2.6	72
25	Allosteric inhibition of individual enzyme molecules trapped in lipid vesicles. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, E1437-E1443.	7.1	70
26	Asymmetric adhesion of rod-shaped bacteria controls microcolony morphogenesis. Nature Communications, 2018, 9, 1120.	12.8	69
27	Mechanism of strand displacement synthesis by DNA replicative polymerases. Nucleic Acids Research, 2012, 40, 6174-6186.	14.5	68
28	Fluctuating vesicles of nonspherical topology. Physical Review Letters, 1994, 72, 168-171.	7.8	63
29	Photoactivation of the CreER ^{T2} Recombinase for Conditional Site-Specific Recombination with High Spatiotemporal Resolution. Zebrafish, 2010, 7, 199-204.	1.1	61
30	Strange objects in the complex plane. Journal of Statistical Physics, 1983, 32, 443-454.	1.2	57
31	DNA mechanics as a tool to probe helicase and translocase activity. Nucleic Acids Research, 2006, 34, 4232-4244.	14.5	56
32	Single-molecule mechanical identification and sequencing. Nature Methods, 2012, 9, 367-372.	19.0	51
33	Single-Molecule Studies Using Magnetic Traps. Cold Spring Harbor Protocols, 2012, 2012, pdb.top067488.	0.3	39
34	Renormalization-group analysis of the global structure of the period-doubling attractor. Physical Review A, 1986, 33, 3622-3624.	2.5	36
35	Magnetic Tweezers for the Study of DNA Tracking Motors. Methods in Enzymology, 2010, 475, 297-320.	1.0	34
36	Force: a new structural control parameter?. Structure, 1996, 4, 885-889.	3.3	33

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37	Tip-splitting solutions to a Stefan problem. <i>Physical Review A</i> , 1986, 33, 4477-4478.	2.5	31
38	Single DNA/protein studies with magnetic traps. <i>Current Opinion in Structural Biology</i> , 2009, 19, 615-622.	5.7	27
39	Some nonlinear challenges in biology. <i>Nonlinearity</i> , 2008, 21, T131-T147.	1.4	26
40	Magnetic Trap Construction: Figure 1.. <i>Cold Spring Harbor Protocols</i> , 2012, 2012, pdb.prot067496.	0.3	26
41	Single molecule studies of helicases with magnetic tweezers. <i>Methods</i> , 2016, 105, 3-15.	3.8	23
42	Optical Control of Tumor Induction in the Zebrafish. <i>Scientific Reports</i> , 2017, 7, 9195.	3.3	22
43	Single-molecule Visualization of Binding Modes of Helicase to DNA on PEGylated Surfaces. <i>Chemistry Letters</i> , 2009, 38, 308-309.	1.3	20
44	The antiparallel loops in gal DNA. <i>Nucleic Acids Research</i> , 2008, 36, 4204-4210.	14.5	19
45	Single-Molecule Manipulation Measurements of DNA Transport Proteins. <i>ChemPhysChem</i> , 2005, 6, 813-818.	2.1	15
46	Control of brain patterning by Engrailed paracrine transfer: a new function of the Pbx interaction domain. <i>Development (Cambridge)</i> , 2015, 142, 1840-1849.	2.5	15
47	Tracking enzymatic steps of DNA topoisomerases using single-molecule micromanipulation. <i>Comptes Rendus Physique</i> , 2002, 3, 595-618.	0.9	14
48	Optical control and study of biological processes at the single-cell level in a live organism. <i>Reports on Progress in Physics</i> , 2013, 76, 072601.	20.1	14
49	Nucleosome remodelling machines and other molecular motors observed at the single molecule level. <i>FEBS Journal</i> , 2011, 278, 3596-3607.	4.7	12
50	Detection and Quantification through a Lipid Membrane Using the Molecularly Controlled Semiconductor Resistor. <i>Langmuir</i> , 2012, 28, 1020-1028.	3.5	12
51	Spatiotemporal manipulation of retinoic acid activity in zebrafish hindbrain development via photo-isomerization. <i>Development (Cambridge)</i> , 2012, 139, 3355-3362.	2.5	12
52	A mechanistic study of helicases with magnetic traps. <i>Protein Science</i> , 2017, 26, 1314-1336.	7.6	12
53	Control of Protein Activity and Gene Expression by Cyclofenol Uncaging. <i>ChemBioChem</i> , 2018, 19, 1232-1238.	2.6	12
54	Pattern selection in thermal convection: Experimental results in an annulus. <i>Physical Review A</i> , 1988, 37, 200-206.	2.5	11

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55	Monogalactopyranosides of fluorescein and fluorescein methyl ester: synthesis, enzymatic hydrolysis by biotinylated β -galactosidase, and determination of translational diffusion coefficient. Carbohydrate Research, 2012, 358, 40-46.	2.3	10
56	Monitoring microbial population dynamics at low densities. Review of Scientific Instruments, 2012, 83, 074301.	1.3	8
57	ATP-Independent Cooperative Binding of Yeast Isw1a to Bare and Nucleosomal DNA. PLoS ONE, 2012, 7, e31845.	2.5	8
58	Study of DNA Motors by Single Molecule Micromanipulation. Single Molecules, 2000, 1, 145-151.	0.9	7
59	Gene regulation under growth conditions. A model for the regulation of initiation of replication in Escherichia coli. Journal of Theoretical Biology, 1991, 151, 359-366.	1.7	6
60	Fgf8 dynamics and critical slowing down may account for the temperature independence of somitogenesis. Communications Biology, 2022, 5, 113.	4.4	5
61	A Model of Somitogenesis. Journal of Statistical Physics, 2019, 175, 729-742.	1.2	4
62	Optical control of protein activity and gene expression by photoactivation of caged cyclofen. Methods in Enzymology, 2019, 624, 1-23.	1.0	3
63	The manipulation of single biomolecules. Interdisciplinary Science Reviews, 2007, 32, 149-161.	1.4	2
64	Single Cell Physiology. Springer Series in Chemical Physics, 2010, , 305-316.	0.2	2
65	Fast combinatorial cartography by FISH on combed genomic DNA. , 1999, 106, 93-94.		1
66	Le jokari moléculaire. Biofutur, 1999, 1999, 26-27.	0.0	1
67	Detection of genetic variation and base modifications at base-pair resolution on both DNA and RNA. Communications Biology, 2021, 4, 128.	4.4	1
68	Twisting and stretching single DNA molecules. , 2001, , 115-140.		1
69	Critical slowing down may account for the robustness of development. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, .	7.1	1
70	Photo-Control of Protein Activity in a Single Cell of a Live Organism. Biophysical Journal, 2010, 98, 612a.	0.5	0