Hans Frauenfelder

List of Publications by Year
in descending order

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63	5,145	236925	206112
papers	citations	25 h-index	48 g-index

66	66	66	2913
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	The role of momentum transfer during incoherent neutron scattering is explained by the energy landscape model. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 5130-5135.	7.1	8
2	Reply to Wuttke: Our reinterpretation of QENS does not violate scattering theory. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E8319-E8319.	7.1	1
3	Physical concepts in biologyâ€"past and future. Physical Biology, 2017, 14, 010402.	1.8	2
4	A wave-mechanical model of incoherent quasielastic scattering in complex systems. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 12764-12768.	7.1	12
5	Ask not what physics can do for biologyâ€"ask what biology can do for physics. Physical Biology, 2014, 11, 053004.	1.8	8
6	The role of continuous and discrete water structures in protein function. European Physical Journal: Special Topics, 2014, 223, 915-926.	2.6	7
7	Concepts and problems in protein dynamics. Chemical Physics, 2013, 424, 2-6.	1.9	45
8	Dynamics and the Free-Energy Landscape of Proteins, Explored with the MÃ¶ssbauer Effect and Quasi-Elastic Neutron Scattering. Journal of Physical Chemistry B, 2013, 117, 13301-13307.	2.6	19
9	Giorgio Careri: A physicist in the life sciences. Journal of Biological Physics, 2012, 38, 3-3.	1.5	0
10	MÃ¶ssbauer Effect in Proteins. Physical Review Letters, 2011, 107, 158102.	7.8	27
11	Proteins, supercooled liquids, and glasses: A micro-review. Physica E: Low-Dimensional Systems and Nanostructures, 2010, 42, 662-665.	2.7	8
12	Myoglobin as an example of protein complexity. Chemical Physics, 2010, 375, 612-615.	1.9	4
13	Neutron scattering and protein dynamics. Acta Crystallographica Section D: Biological Crystallography, 2010, 66, 1229-1231.	2.5	7
14	Conformational Substates. Biological and Medical Physics Series, 2010, , 97-112.	0.4	1
15	Creative Homework: Dynamics and Function. Biological and Medical Physics Series, 2010, , 209-236.	0.4	0
16	Protein Quantum Dynamics? (R. H. Austin1). Biological and Medical Physics Series, 2010, , 199-208.	0.4	0
17	Protein Dynamics. Biological and Medical Physics Series, 2010, , 175-196.	0.4	0
18	A unified model of protein dynamics. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 5129-5134.	7.1	662

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19	What determines the speed limit on enzyme catalysis?. Nature Chemical Biology, 2008, 4, 21-22.	8.0	17
20	Protein dynamics and function: Insights from the energy landscape and solvent slaving. IUBMB Life, 2007, 59, 506-512.	3.4	63
21	Energy Landscape and Dynamics of Biomolecules Extended Abstract. Journal of Biological Physics, 2005, 31, 413-416.	1.5	8
22	Picosecond Thermometer in the Amide I Band of Myoglobin. Physical Review Letters, 2005, 94, 128101.	7.8	38
23	Mosaic Energy Landscapes of Liquids and the Control of Protein Conformational Dynamics by Glass-Forming Solvents. Journal of Physical Chemistry B, 2005, 109, 7488-7499.	2.6	73
24	Bulk-solvent and hydration-shell fluctuations, similar to Â- and Â-fluctuations in glasses, control protein motions and functions. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 14408-14413.	7.1	490
25	Hydration, slaving and protein function. Biophysical Chemistry, 2002, 98, 35-48.	2.8	121
26	Relaxations and fluctuations in myoglobin. BioSystems, 2001, 62, 3-8.	2.0	14
27	Biological Physics. Reviews of Modern Physics, 1999, 71, S419-S430.	45.6	185
28	The energy landscape in non-biological and biological molecules. Nature Structural Biology, 1998, 5, 757-759.	9.7	83
29	Protein Dynamics and Function. , 1998, , 95-102.		1
30	Exploring the conformational energy landscape of proteins. Physica D: Nonlinear Phenomena, 1997, 107, 297-311.	2.8	83
31	Variations on a theme by Debye and Waller: From simple crystals to proteins. , 1997, 29, 153-160.		62
32	Picturing the Working Protein. , 1997, , 231-236.		0
33	Proteins and Glasses. Materials Research Society Symposia Proceedings, 1996, 455, 343.	0.1	1
34	Proteins: A challenging many-body problem. The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties, 1996, 74, 579-585.	0.6	1
35	Complexity in proteins. Nature Structural Biology, 1995, 2, 821-823.	9.7	64
36	Ligand Binding to Heme Proteins: The Effect of Light on Ligand Binding in Myoglobin. Biochemistry, 1994, 33, 13413-13430.	2.5	111

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37	Biomolecules: Where the Physics of Complexity and Simplicity Meet. Physics Today, 1994, 47, 58-64.	0.3	194
38	Protein dynamics. Physica A: Statistical Mechanics and Its Applications, 1993, 201, 332-345.	2.6	51
39	Ligand binding to heme proteins: connection between dynamics and function. Biochemistry, 1991, 30, 3988-4001.	2.5	392
40	Rate Processes in Proteins. Zeitschrift Fur Elektrotechnik Und Elektrochemie, 1991, 95, 272-278.	0.9	51
41	Time- and temperature dependence of large-scale conformational transitions in myoglobin. Chemical Physics, 1991, 158, 315-327.	1.9	94
42	Physics from Proteins. NATO ASI Series Series B: Physics, 1991, , 1-14.	0.2	3
43	Protein dynamics: A brief overview. , 1991, , 173-176.		1
44	Proteins and pressure. The Journal of Physical Chemistry, 1990, 94, 1024-1037.	2.9	302
45	The Debye-Waller factor: From villain to hero in protein crystallography. International Journal of Quantum Chemistry, 1989, 35, 711-715.	2.0	28
46	New looks at protein motions. Nature, 1989, 338, 623-624.	27.8	17
47	Protein Dynamics and Function. , 1988, , 15-22.		2
48	The protein as a physics laboratory. , 1987, , 1-14.		0
49	Function and Dynamics of Myoglobin. Annals of the New York Academy of Sciences, 1987, 504, 151-167.	3.8	25
50	Recombination of carbon monoxide to ferrous horseradish peroxidase types A and C. Journal of Molecular Biology, 1987, 194, 299-312.	4.2	37
51	Rebinding and relaxation in the myoglobin pocket. Biophysical Chemistry, 1987, 26, 337-355.	2.8	372
52	Heme Protein Reactions: Models, Concepts, and Problems. Springer Series in Biophysics, 1987, , 10-14.	0.4	1
53	Ligand binding to heme proteins: relevance of low-temperature data. Biochemistry, 1986, 25, 3139-3146.	2.5	89
54	[14] Protein dynamics and hydration. Methods in Enzymology, 1986, 127, 207-216.	1.0	47

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55	Proteins and Glasses. , 1986, , 169-177.		8
56	Ligand Binding as a Probe of Protein Dynamics. , 1983, , 227-236.		1
57	Introduction to Hemoproteins. , 1982, , 321-337.		1
58	Dynamic Proteins. , 1982, , 327-345.		2
59	Dynamics of Heme Proteins. , 1982, , 33-41.		0
60	Structural fluctuations in proteins. Biophysics of Structure and Mechanism, 1981, 7, 226-227.	1.9	2
61	Temperature-dependent X-ray diffraction as a probe of protein structural dynamics. Nature, 1979, 280, 558-563.	27.8	1,184
62	[28] Principles of ligand binding to heme proteins. Methods in Enzymology, 1978, 54, 506-532.	1.0	13
63	THE RESEARCH FRONTIER: Time Reversal Tests in Electromagnetic Transitions. Physics Teacher, 1969, 7, 119-119.	0.3	0