Giuseppe Zaccai

List of Publications by Year
in descending order

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111	5,049	76196	95083
papers	citations	40 h-index	68 g-index

114	114	114	3484
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Determination of molecular weight by neutron scattering. Biopolymers, 1981, 20, 2413-2426.	1.2	360
2	Protein dynamics studied by neutron scattering. Quarterly Reviews of Biophysics, 2002, 35, 327-367.	2.4	314
3	Harmonic Behavior of Trehalose-Coated Carbon-Monoxy-Myoglobin at High Temperature. Biophysical Journal, 1999, 76, 1043-1047.	0.2	225
4	Coincidence of Dynamical Transitions in a Soluble Protein and Its Hydration Water:â€‰ Direct Measurements by Neutron Scattering and MD Simulations. Journal of the American Chemical Society, 2008, 130, 4586-4587.	6.6	184
5	Water molecules and exchangeable hydrogen ions at the active centre of bacteriorhodopsin localized by neutron diffraction. Journal of Molecular Biology, 1990, 214, 15-19.	2.0	171
6	Structural insights into substrate traffic and inhibition in acetylcholinesterase. EMBO Journal, 2006, 25, 2746-2756.	3.5	160
7	Thermal Motions in Bacteriorhodopsin at Different Hydration Levels Studied by Neutron Scattering: Correlation with Kinetics and Light-Induced Conformational Changes. Biophysical Journal, 1998, 75, 1945-1952.	0.2	144
8	Biochemical, Structural, and Molecular Genetic Aspects of Halophilism. Advances in Protein Chemistry, 1992, 43, 1-62.	4.4	129
9	Adaptation to extreme environments: macromolecular dynamics in bacteria compared in vivo by neutron scattering. EMBO Reports, 2004, 5, 66-70.	2.0	118
10	Stabilization of halophilic malate dehydrogenase. Journal of Molecular Biology, 1989, 208, 491-500.	2.0	116
11	Stability against Denaturation Mechanisms in Halophilic Malate Dehydrogenase "Adapt" to Solvent Conditions. Journal of Molecular Biology, 1994, 244, 436-447.	2.0	109
12	Halophilic Adaptation:Â Novel Solvent Protein Interactions Observed in the 2.9 and 2.6 Ã… Resolution Structures of the Wild Type and a Mutant of Malate Dehydrogenase fromHaloarcula marismortuiâ€¡. Biochemistry, 2000, 39, 992-1000.	1.2	104
13	Neutron scattering reveals extremely slow cell water in a Dead Sea organism. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 766-771.	3.3	95
14	Areas of hydration in the purple membrane of Halobacterium halobium: A neutron diffraction study. Journal of Molecular Biology, 1979, 132, 181-191.	2.0	86
15	Double Superhelix Model of High Density Lipoprotein. Journal of Biological Chemistry, 2009, 284, 36605-36619.	1.6	85
16	Relative Role of Anions and Cations in the Stabilization of Halophilic Malate Dehydrogenase. Biochemistry, 1999, 38, 9039-9047.	1.2	84
17	Localization of Glycolipids in Membranes by In Vivo Labeling and Neutron Diffraction. Molecular Cell, 1998, 1, 411-419.	4.5	83
18	Down to atomic-scale intracellular water dynamics. EMBO Journal, 2008, 9, 543-547.	3.5	83

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19	Halophilic proteins and the influence of solvent on protein stabilization. Trends in Biochemical Sciences, 1990, 15, 333-337.	3.7	73
20	Neutron Scattering Reveals the Dynamic Basis of Protein Adaptation to Extreme Temperature. Journal of Biological Chemistry, 2005, 280, 40974-40979.	1.6	69
21	Interactions of yeast valyl-tRNA synthetase with RNAs and conformational changes of the enzyme. Journal of Molecular Biology, 1979, 129, 483-500.	2.0	65
22	Mutation at a Single Acidic Amino Acid Enhances the Halophilic Behaviour of Malate Dehydrogenase from Haloarcula Marismortui in Physiological Salts. FEBS Journal, 1995, 230, 1088-1095.	0.2	63
23	Biophysical study of halophilic malate dehydrogenase in solution: revised subunit structure and solvent interactions of native and recombinant enzyme. Journal of the Chemical Society, Faraday Transactions, 1993, 89, 2659-2666.	1.7	61
24	Small angle neutron scattering of the mitochondrial ADPATP carrier protein in detergent. Biochemical and Biophysical Research Communications, 1982, 109, 471-477.	1.0	59
25	Tertiary structure of bacteriorhodopsin. Journal of Molecular Biology, 1989, 210, 829-847.	2.0	59
26	The search for traces of life: the protective effect of salt on biological macromolecules. Extremophiles, 2002, 6, 427-430.	0.9	59
27	Solvent Interactions of Halophilic Malate Dehydrogenase. Biochemistry, 2002, 41, 13234-13244.	1.2	58
28	Cytoplasmic Water and Hydration Layer Dynamics in Human Red Blood Cells. Journal of the American Chemical Society, 2008, 130, 16852-16853.	6.6	58
29	Antico-operative binding of initiator transfer RNAMet to methionyl-transfer RNA synthetase from Escherichia coli: Neutron scattering studies. Journal of Molecular Biology, 1978, 126, 293-313.	2.0	57
30	The Oligomeric States of Haloarcula marismortui Malate Dehydrogenase are Modulated by Solvent Components as Shown by Crystallographic and Biochemical Studies. Journal of Molecular Biology, 2003, 326, 859-873.	2.0	57
31	Structure and hydration of purple membranes in different conditions. Journal of Molecular Biology, 1987, 194, 569-572.	2.0	53
32	The Low-Temperature Inflection Observed in Neutron Scattering Measurements of Proteins Is Due to Methyl Rotation: Direct Evidence Using Isotope Labeling and Molecular Dynamics Simulations. Journal of the American Chemical Society, 2010, 132, 4990-4991.	6.6	52
33	Structure of phenylalanine-accepting transfer ribonucleic acid and of its environment in aqueous solvents with different salts. Biochemistry, 1983, 22, 4380-4388.	1.2	51
34	Functional implications related to the gene structure of the elongation factor EF-Tu fromHalobacterium marismortui. Nucleic Acids Research, 1990, 18, 507-511.	6.5	49
35	Neutron and light-scattering studies of DNA gyrase and its complex with DNA. Journal of Molecular Biology, 1990, 211, 211-220.	2.0	49
36	Specific cellular water dynamics observed in vivo by neutron scattering and NMR. Physical Chemistry Chemical Physics, 2010, 12, 10154.	1.3	49

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37	Molecular adaptation: the malate dehydrogenase from the extreme halophilic bacterium Salinibacter ruber behaves like a non-halophilic protein. Biochimie, 2004, 86, 295-303.	1.3	48
38	Insights into the Molecular Relationships between Malate and Lactate Dehydrogenases:Â Structural and Biochemical Properties of Monomeric and Dimeric Intermediates of a Mutant of Tetramericl-[LDH-like] Malate Dehydrogenase from the Halophilic ArchaeonHaloarcula marismortui. Biochemistry, 2000, 39, 1001-1010.	1.2	45
39	A Polymer Surfactant Corona Dynamically Replaces Water in Solvent-Free Protein Liquids and Ensures Macromolecular Flexibility and Activity. Journal of the American Chemical Society, 2012, 134, 13168-13171.	6.6	45
40	Adaptation to extreme environments: Macromolecular dynamics in complex systems. Biochimica Et Biophysica Acta - General Subjects, 2005, 1724, 404-410.	1.1	43
41	Link between Proteinâ^'Solvent and Weak Proteinâ^'Protein Interactions Gives Insight into Halophilic Adaptation. Biochemistry, 2002, 41, 13245-13252.	1.2	42
42	Dynamics of heparan sulfate explored by neutron scattering. Physical Chemistry Chemical Physics, 2010, 12, 3360.	1.3	41
43	Use of a `caged' analogue to study the traffic of choline within acetylcholinesterase by kinetic crystallography. Acta Crystallographica Section D: Biological Crystallography, 2007, 63, 1115-1128.	2.5	40
44	A benchmark for protein dynamics: Ribonuclease A measured by neutron scattering in a large wavevector-energy transfer range. Chemical Physics, 2008, 345, 305-314.	0.9	39
45	Solution scattering approaches to dynamical ordering in biomolecular systems. Biochimica Et Biophysica Acta - General Subjects, 2018, 1862, 253-274.	1.1	39
46	Quantitative Modelfree Analysis of Urea Binding to Unfolded Ubiquitin Using a Combination of Small Angle X-ray and Neutron Scattering. Journal of the American Chemical Society, 2009, 131, 8769-8771.	6.6	36
47	Neutron scattering perspectives for protein dynamics. Journal of Non-Crystalline Solids, 2011, 357, 615-621.	1.5	36
48	Study of the internal structure of Escherichia coli ribosomes by neutron and X-ray scattering. Journal of Molecular Biology, 1979, 135, 691-707.	2.0	34
49	Stabilisation of Halophilic Malate Dehydrogenase from Haloarcula Marismortui by Divalent Cations. Effects of Temperature, Water Isotope, Cofactor and pH. FEBS Journal, 1997, 249, 607-611.	0.2	32
50	Solvent isotope effect on macromolecular dynamics in E. coli. European Biophysics Journal, 2008, 37, 613-617.	1.2	32
51	Characterization of a Novel Complex from Halophilic Archaebacteria, Which Displays Chaperone-like Activities in Vitro. Journal of Biological Chemistry, 2001, 276, 29906-29914.	1.6	31
52	Neutron-scattering studies of lac repressor: A low-resolution model. Journal of Molecular Biology, 1981, 153, 177-182.	2.0	29
53	Structure of halophilic malate dehydrogenase in multimolar KCl solutions from neutron scattering and ultracentrifugation. Biophysical Chemistry, 1987, 26, 279-290.	1.5	28
54	Adaptation to high temperatures through macromolecular dynamics by neutron scattering. FEBS Journal, 2007, 274, 4034-4043.	2.2	28

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55	Neutron scattering studies of Escherichia coli tyrosyl-tRNA synthetase and of its interaction with tRNATyr. Journal of Molecular Biology, 1982, 159, 651-664.	2.0	27
56	Salt-dependent studies of NADP-dependent isocitrate dehydrogenase from the halophilic archaeon Haloferax volcanii. Extremophiles, 2004, 8, 377-384.	0.9	27
57	Neutron-scattering studies of the binding of initiator tRNAMet to Escherichia coli trypsin-modified methionyl-tRNA synthetase. Journal of Molecular Biology, 1982, 154, 603-613.	2.0	26
58	Hydration Dependence of Active Core Fluctuations in Bacteriorhodopsin. Biophysical Journal, 2008, 95, 194-202.	0.2	24
59	Molecular adaptation and salt stress response of Halobacterium salinarum cells revealed by neutron spectroscopy. Extremophiles, 2015, 19, 1099-1107.	0.9	24
60	Structure of phenylalanine-accepting transfer ribonucleic acid and of its environment in aqueous solvents with different salts. Biochemistry, 1988, 27, 1316-1320.	1.2	23
61	Dynamics-Stability Relationships in Apo- and Holomyoglobin: A Combined Neutron Scattering and Molecular Dynamics Simulations Study. Biophysical Journal, 2012, 102, 351-359.	0.2	22
62	Neutron scattering: a tool to detect in vivo thermal stress effects at the molecular dynamics level in micro-organisms. Journal of the Royal Society Interface, 2013, 10, 20130003.	1.5	22
63	The Interaction with Phospholipids of Bee Venom Melittin. Biophysical Journal, 1982, 37, 161-163.	0.2	21
64	Proteinâ€“solvent and weak proteinâ€“protein interactions in halophilic malate dehydrogenase. Journal of Crystal Growth, 1999, 196, 395-402.	0.7	21
65	Dynamic Flexibility of Double-stranded RNA Activated PKR in Solution. Journal of Molecular Biology, 2006, 359, 610-623.	2.0	21
66	Understanding the crystallisation of an acidic protein by dilution in the ternary NaClâ€“2-methyl-2,4-pentanediolâ€“H2O system. Journal of Crystal Growth, 2001, 232, 102-113.	0.7	20
67	Kinetic Asymmetry of Subunit Exchange of Homooligomeric Protein as Revealed by Deuteration-Assisted Small-Angle Neutron Scattering. Biophysical Journal, 2011, 101, 2037-2042.	0.2	20
68	Fundamental and biotechnological applications of neutron scattering measurements for macromolecular dynamics. European Biophysics Journal, 2006, 35, 551-558.	1.2	18
69	Dynamics of apomyoglobin in the Î±-to-Î² transition and of partially unfolded aggregated protein. European Biophysics Journal, 2009, 38, 237-244.	1.2	18
70	Straight lines of neutron scattering in biology: a review of basic controls in SANS and EINS. European Biophysics Journal, 2012, 41, 781-787.	1.2	18
71	Rotational orientation of transmembrane Î±-helices in bacteriorhodopsin. Journal of Molecular Biology, 1994, 236, 1093-1104.	2.0	17
72	Methanoarchaeal sulfolactate dehydrogenase: prototype of a new family of NADH-dependent enzymes. EMBO Journal, 2004, 23, 1234-1244.	3.5	17

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73	Crowding in extremophiles: linkage between solvation and weak proteinâ€“protein interactions, stability and dynamics, provides insight into molecular adaptation. Journal of Molecular Recognition, 2004, 17, 382-389.	1.1	17
74	Picosecond dynamics in haemoglobin from different species: A quasielastic neutron scattering study. Biochimica Et Biophysica Acta - General Subjects, 2014, 1840, 2989-2999.	1.1	17
75	Binding of the J-Binding Protein to DNA Containing Glucosylated hmU (Base J) or 5-hmC: Evidence for a Rapid Conformational Change upon DNA Binding. Journal of the American Chemical Society, 2012, 134, 13357-13365.	6.6	15
76	Hydration shells with a pinch of salt. Biopolymers, 2013, 99, 233-238.	1.2	15
77	Thermal Fluctuations in Amphipol A8-35 Particles: A Neutron Scattering and Molecular Dynamics Study. Journal of Membrane Biology, 2014, 247, 897-908.	1.0	15
78	Molecular Dynamics Simulations of a Powder Model of the Intrinsically Disordered Protein Tau. Journal of Physical Chemistry B, 2015, 119, 12580-12589.	1.2	15
79	Observation of a Large-Scale Superstructure in Concentrated Hemoglobin Solutions by Using Small Angle Neutron Scattering. Journal of Physical Chemistry Letters, 2010, 1, 1805-1808.	2.1	14
80	Molecular dynamics in cells: A neutron view. Biochimica Et Biophysica Acta - General Subjects, 2020, 1864, 129475.	1.1	14
81	The triple isotopic substitution method in small angle neutron scattering. Application to the study of the ternary complex EF-Tu Â· GTP Â· aminoacyl-tRNA. Biophysical Chemistry, 1994, 53, 123-130.	1.5	13
82	The fluctuating ribosome: thermal molecular dynamics characterized by neutron scattering. Scientific Reports, 2016, 6, 37138.	1.6	12
83	RNA Back and Forth: Looking through Ribozyme and Viroid Motifs. Viruses, 2019, 11, 283.	1.5	11
84	Shape and oligomerization state of the cytoplasmic domain of the phototaxis transducer II from Natronobacterium pharaonis. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 15428-15433.	3.3	10
85	Self-association of adenine-dependent hairpin ribozymes. European Biophysics Journal, 2008, 37, 173-182.	1.2	10
86	Ecology of Protein Dynamics. Current Physical Chemistry, 2013, 3, 9-16.	0.1	10
87	Neutron small angle scattering of the Mo-Fe protein (nitrogenase) from Clostridium pasteurianum. Biochemical and Biophysical Research Communications, 1981, 98, 43-50.	1.0	9
88	Correlation between Supercoiling and Conformational Motions of the Bacterial Flagellar Filament. Biophysical Journal, 2013, 105, 2157-2165.	0.2	9
89	Mobility of a Mononucleotide within a Lipid Matrix: A Neutron Scattering Study. Life, 2017, 7, 2.	1.1	9
90	[46] Measurement of density and location of solvent associated with biomolecules by small-angle neutron scattering. Methods in Enzymology, 1986, 127, 619-629.	0.4	8

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91	Why biologists should support the exploration of Mars. BioEssays, 2001, 23, 977-978.	1.2	8
92	Proteins as nano-machines: dynamicsÂfunction relations studied by neutron scattering. Journal of Physics Condensed Matter, 2003, 15, S1673-S1682.	0.7	8
93	Self-assembly Controls Self-cleavage of HHR from ASBVd (â˜): a Combined SANS and Modeling Study. Scientific Reports, 2016, 6, 30287.	1.6	8
94	Neutron scattering study of the (Î³-B) catalytic domains of complement proteases ClÌ„r and ClÌ„s. FEBS Letters, 1990, 269, 19-22.	1.3	7
95	The protein sequence of an archaeal catalase-peroxidase. Biochimie, 1998, 80, 1003-1011.	1.3	7
96	Nonspecific binding of lac repressor to DNA. Biophysical Chemistry, 1983, 18, 313-322.	1.5	6
97	Small angle neutron scattering, total cross-sections and mass density measurements of concentrated NaCl and KCl solutions in H2O or D2O. Biophysical Chemistry, 1994, 53, 69-75.	1.5	6
98	Perspectives in biological physics: The nDDB project for a neutron Dynamics Data Bank for biological macromolecules. European Physical Journal E, 2013, 36, 80.	0.7	6
99	Complex transitions between dihydrate and anhydrate forms of ectoine â€“ unexpected behavior of a highly hygroscopic compatible solute in the solid state. CrystEngComm, 2020, 22, 169-172.	1.3	5
100	Methionyl-tRNA synthetase from E. coli: direct evidence for exchange of protomers in the dimeric enzyme by using deuteriation and small-angle neutron scattering. Biochimie, 1985, 67, 637-641.	1.3	4
101	Dynamics of Cardiomyopathy-Causing Mutant of Troponin Measured by Neutron Scattering. Journal of the Physical Society of Japan, 2013, 82, SA020.	0.7	4
102	Small-angle neutron scattering study of halophilic glyceraldehyde 3-phosphate dehydrogenase (hGAPDH). Physica B: Condensed Matter, 1991, 174, 306-308.	1.3	3
103	Biophysical Characterization of the Influence of Salt on Tetrameric SecB. Biophysical Journal, 2001, 81, 455-462.	0.2	3
104	The case for an empirical 'high-throughput' neutron scattering approach to protein dynamics. Acta Crystallographica Section D: Biological Crystallography, 2010, 66, 1224-1228.	2.5	2
105	Behavior of Hydrated Lipid Bilayers at Cryogenic Temperatures. Frontiers in Chemistry, 2020, 8, 455.	1.8	2
106	Research and culture. Nature, 1978, 271, 500-500.	13.7	1
107	The Summer of 1954 and Paths to the Institut Laue-Langevin. Neutron News, 2017, 28, 15-19.	0.1	1
108	19Ã... Solution Structure of the Filarial Nematode Immunomodulatory Protein, ES-62. Biophysical Journal, 2003, 84, 1419-1420.	0.2	0

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109	Biological physics at large facilities: from molecule to cell. Journal of the Royal Society Interface, 2009, 6, S565-6.	1.5	0
110	A neutron diffraction study of purple membranes under pressure. Acta Crystallographica Section D: Biological Crystallography, 2010, 66, 1232-1236.	2.5	0
111	Neutrons and Biology: Three Decades of Excitement and More to Come. Neutron News, 2010, 21, 43-45.	0.1	0