

Giuseppe Zaccai

List of Publications by Year in descending order

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111
papers

5,049
citations

76196

40
h-index

95083

68
g-index

114
all docs

114
docs citations

114
times ranked

3484
citing authors

#	ARTICLE	IF	CITATIONS
1	Complex transitions between dihydrate and anhydrate forms of ectoine “ unexpected behavior of a highly hygroscopic compatible solute in the solid state. CrystEngComm, 2020, 22, 169-172.	1.3	5
2	Molecular dynamics in cells: A neutron view. Biochimica Et Biophysica Acta - General Subjects, 2020, 1864, 129475.	1.1	14
3	Behavior of Hydrated Lipid Bilayers at Cryogenic Temperatures. Frontiers in Chemistry, 2020, 8, 455.	1.8	2
4	RNA Back and Forth: Looking through Ribozyme and Viroid Motifs. Viruses, 2019, 11, 283.	1.5	11
5	Solution scattering approaches to dynamical ordering in biomolecular systems. Biochimica Et Biophysica Acta - General Subjects, 2018, 1862, 253-274.	1.1	39
6	Mobility of a Mononucleotide within a Lipid Matrix: A Neutron Scattering Study. Life, 2017, 7, 2.	1.1	9
7	The Summer of 1954 and Paths to the Institut Laue-Langevin. Neutron News, 2017, 28, 15-19.	0.1	1
8	The fluctuating ribosome: thermal molecular dynamics characterized by neutron scattering. Scientific Reports, 2016, 6, 37138.	1.6	12
9	Self-assembly Controls Self-cleavage of HHR from ASBVd (α^{\sim}): a Combined SANS and Modeling Study. Scientific Reports, 2016, 6, 30287.	1.6	8
10	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
11	Molecular adaptation and salt stress response of Halobacterium salinarum cells revealed by neutron spectroscopy. Extremophiles, 2015, 19, 1099-1107.	0.9	24
12	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
13	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
14	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
15	Hydration shells with a pinch of salt. Biopolymers, 2013, 99, 233-238.	1.2	15
16	Correlation between Supercoiling and Conformational Motions of the Bacterial Flagellar Filament. Biophysical Journal, 2013, 105, 2157-2165.	0.2	9
17	Neutron scattering: a tool to detect <i>in vivo</i> thermal stress effects at the molecular dynamics level in micro-organisms. Journal of the Royal Society Interface, 2013, 10, 20130003.	1.5	22
18	Dynamics of Cardiomyopathy-Causing Mutant of Troponin Measured by Neutron Scattering. Journal of the Physical Society of Japan, 2013, 82, SA020.	0.7	4

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19	Ecology of Protein Dynamics. <i>Current Physical Chemistry</i> , 2013, 3, 9-16.	0.1	10
20	Dynamics-Stability Relationships in Apo- and Holomyoglobin: A Combined Neutron Scattering and Molecular Dynamics Simulations Study. <i>Biophysical Journal</i> , 2012, 102, 351-359.	0.2	22
21	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. <i>Journal of the American Chemical Society</i> , 2012, 134, 13357-13365.	6.6	15
22	Straight lines of neutron scattering in biology: a review of basic controls in SANS and EINS. <i>European Biophysics Journal</i> , 2012, 41, 781-787.	1.2	18
23	A Polymer Surfactant Corona Dynamically Replaces Water in Solvent-Free Protein Liquids and Ensures Macromolecular Flexibility and Activity. <i>Journal of the American Chemical Society</i> , 2012, 134, 13168-13171.	6.6	45
24	Kinetic Asymmetry of Subunit Exchange of Homooligomeric Protein as Revealed by Deuteration-Assisted Small-Angle Neutron Scattering. <i>Biophysical Journal</i> , 2011, 101, 2037-2042.	0.2	20
25	Neutron scattering perspectives for protein dynamics. <i>Journal of Non-Crystalline Solids</i> , 2011, 357, 615-621.	1.5	36
26	The case for an empirical 'high-throughput' neutron scattering approach to protein dynamics. <i>Acta Crystallographica Section D: Biological Crystallography</i> , 2010, 66, 1224-1228.	2.5	2
27	A neutron diffraction study of purple membranes under pressure. <i>Acta Crystallographica Section D: Biological Crystallography</i> , 2010, 66, 1232-1236.	2.5	0
28	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. <i>Journal of the American Chemical Society</i> , 2010, 132, 4990-4991.	6.6	52
29	Observation of a Large-Scale Superstructure in Concentrated Hemoglobin Solutions by Using Small Angle Neutron Scattering. <i>Journal of Physical Chemistry Letters</i> , 2010, 1, 1805-1808.	2.1	14
30	Neutrons and Biology: Three Decades of Excitement and More to Come. <i>Neutron News</i> , 2010, 21, 43-45.	0.1	0
31	Dynamics of heparan sulfate explored by neutron scattering. <i>Physical Chemistry Chemical Physics</i> , 2010, 12, 3360.	1.3	41
32	Specific cellular water dynamics observed in vivo by neutron scattering and NMR. <i>Physical Chemistry Chemical Physics</i> , 2010, 12, 10154.	1.3	49
33	Double Superhelix Model of High Density Lipoprotein. <i>Journal of Biological Chemistry</i> , 2009, 284, 36605-36619.	1.6	85
34	Biological physics at large facilities: from molecule to cell. <i>Journal of the Royal Society Interface</i> , 2009, 6, S565-6.	1.5	0
35	Dynamics of apomyoglobin in the \hat{I}_{\pm} -to- \hat{I}^2 transition and of partially unfolded aggregated protein. <i>European Biophysics Journal</i> , 2009, 38, 237-244.	1.2	18
36	Quantitative Model-free Analysis of Urea Binding to Unfolded Ubiquitin Using a Combination of Small Angle X-ray and Neutron Scattering. <i>Journal of the American Chemical Society</i> , 2009, 131, 8769-8771.	6.6	36

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37	A benchmark for protein dynamics: Ribonuclease A measured by neutron scattering in a large wavevector-energy transfer range. <i>Chemical Physics</i> , 2008, 345, 305-314.	0.9	39
38	Self-association of adenine-dependent hairpin ribozymes. <i>European Biophysics Journal</i> , 2008, 37, 173-182.	1.2	10
39	Solvent isotope effect on macromolecular dynamics in <i>E. coli</i> . <i>European Biophysics Journal</i> , 2008, 37, 613-617.	1.2	32
40	Down to atomic-scale intracellular water dynamics. <i>EMBO Journal</i> , 2008, 9, 543-547.	3.5	83
41	Hydration Dependence of Active Core Fluctuations in Bacteriorhodopsin. <i>Biophysical Journal</i> , 2008, 95, 194-202.	0.2	24
42	Coincidence of Dynamical Transitions in a Soluble Protein and Its Hydration Water: Direct Measurements by Neutron Scattering and MD Simulations. <i>Journal of the American Chemical Society</i> , 2008, 130, 4586-4587.	6.6	184
43	Cytoplasmic Water and Hydration Layer Dynamics in Human Red Blood Cells. <i>Journal of the American Chemical Society</i> , 2008, 130, 16852-16853.	6.6	58
44	Neutron scattering reveals extremely slow cell water in a Dead Sea organism. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007, 104, 766-771.	3.3	95
45	Use of a 'caged' analogue to study the traffic of choline within acetylcholinesterase by kinetic crystallography. <i>Acta Crystallographica Section D: Biological Crystallography</i> , 2007, 63, 1115-1128.	2.5	40
46	Adaptation to high temperatures through macromolecular dynamics by neutron scattering. <i>FEBS Journal</i> , 2007, 274, 4034-4043.	2.2	28
47	Dynamic Flexibility of Double-stranded RNA Activated PKR in Solution. <i>Journal of Molecular Biology</i> , 2006, 359, 610-623.	2.0	21
48	Structural insights into substrate traffic and inhibition in acetylcholinesterase. <i>EMBO Journal</i> , 2006, 25, 2746-2756.	3.5	160
49	Fundamental and biotechnological applications of neutron scattering measurements for macromolecular dynamics. <i>European Biophysics Journal</i> , 2006, 35, 551-558.	1.2	18
50	Shape and oligomerization state of the cytoplasmic domain of the phototaxis transducer II from <i>Natronobacterium pharaonis</i> . <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2006, 103, 15428-15433.	3.3	10
51	Neutron Scattering Reveals the Dynamic Basis of Protein Adaptation to Extreme Temperature. <i>Journal of Biological Chemistry</i> , 2005, 280, 40974-40979.	1.6	69
52	Adaptation to extreme environments: Macromolecular dynamics in complex systems. <i>Biochimica Et Biophysica Acta - General Subjects</i> , 2005, 1724, 404-410.	1.1	43
53	Methanoarchaeal sulfolactate dehydrogenase: prototype of a new family of NADH-dependent enzymes. <i>EMBO Journal</i> , 2004, 23, 1234-1244.	3.5	17
54	Adaptation to extreme environments: macromolecular dynamics in bacteria compared in vivo by neutron scattering. <i>EMBO Reports</i> , 2004, 5, 66-70.	2.0	118

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55	Salt-dependent studies of NADP-dependent isocitrate dehydrogenase from the halophilic archaeon <i>Haloferax volcanii</i> . <i>Extremophiles</i> , 2004, 8, 377-384.	0.9	27
56	Crowding in extremophiles: linkage between solvation and weak protein-protein interactions, stability and dynamics, provides insight into molecular adaptation. <i>Journal of Molecular Recognition</i> , 2004, 17, 382-389.	1.1	17
57	Molecular adaptation: the malate dehydrogenase from the extreme halophilic bacterium <i>Salinibacter ruber</i> behaves like a non-halophilic protein. <i>Biochimie</i> , 2004, 86, 295-303.	1.3	48
58	The Oligomeric States of <i>Haloarcula marismortui</i> Malate Dehydrogenase are Modulated by Solvent Components as Shown by Crystallographic and Biochemical Studies. <i>Journal of Molecular Biology</i> , 2003, 326, 859-873.	2.0	57
59	19Å... Solution Structure of the Filarial Nematode Immunomodulatory Protein, ES-62. <i>Biophysical Journal</i> , 2003, 84, 1419-1420.	0.2	0
60	Proteins as nano-machines: dynamics-function relations studied by neutron scattering. <i>Journal of Physics Condensed Matter</i> , 2003, 15, S1673-S1682.	0.7	8
61	Protein dynamics studied by neutron scattering. <i>Quarterly Reviews of Biophysics</i> , 2002, 35, 327-367.	2.4	314
62	Solvent Interactions of Halophilic Malate Dehydrogenase. <i>Biochemistry</i> , 2002, 41, 13234-13244.	1.2	58
63	Link between Protein-Solvent and Weak Protein-Protein Interactions Gives Insight into Halophilic Adaptation. <i>Biochemistry</i> , 2002, 41, 13245-13252.	1.2	42
64	The search for traces of life: the protective effect of salt on biological macromolecules. <i>Extremophiles</i> , 2002, 6, 427-430.	0.9	59
65	Biophysical Characterization of the Influence of Salt on Tetrameric SecB. <i>Biophysical Journal</i> , 2001, 81, 455-462.	0.2	3
66	Why biologists should support the exploration of Mars. <i>BioEssays</i> , 2001, 23, 977-978.	1.2	8
67	Understanding the crystallisation of an acidic protein by dilution in the ternary NaCl-2-methyl-2,4-pentanediol-H ₂ O system. <i>Journal of Crystal Growth</i> , 2001, 232, 102-113.	0.7	20
68	Characterization of a Novel Complex from Halophilic Archaeobacteria, Which Displays Chaperone-like Activities in Vitro. <i>Journal of Biological Chemistry</i> , 2001, 276, 29906-29914.	1.6	31
69	Insights into the Molecular Relationships between Malate and Lactate Dehydrogenases: Structural and Biochemical Properties of Monomeric and Dimeric Intermediates of a Mutant of Tetrameric-[LDH-like] Malate Dehydrogenase from the Halophilic Archaeon <i>Haloarcula marismortui</i> . <i>Biochemistry</i> , 2000, 39, 1001-1010.	1.2	45
70	Halophilic Adaptation: Novel Solvent Protein Interactions Observed in the 2.9 and 2.6 Å... Resolution Structures of the Wild Type and a Mutant of Malate Dehydrogenase from <i>Haloarcula marismortui</i> . <i>Biochemistry</i> , 2000, 39, 992-1000.	1.2	104
71	Protein-solvent and weak protein-protein interactions in halophilic malate dehydrogenase. <i>Journal of Crystal Growth</i> , 1999, 196, 395-402.	0.7	21
72	Harmonic Behavior of Trehalose-Coated Carbon-Monoxide-Myoglobin at High Temperature. <i>Biophysical Journal</i> , 1999, 76, 1043-1047.	0.2	225

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73	Relative Role of Anions and Cations in the Stabilization of Halophilic Malate Dehydrogenase. <i>Biochemistry</i> , 1999, 38, 9039-9047.	1.2	84
74	The protein sequence of an archaeal catalase-peroxidase. <i>Biochimie</i> , 1998, 80, 1003-1011.	1.3	7
75	Localization of Glycolipids in Membranes by In Vivo Labeling and Neutron Diffraction. <i>Molecular Cell</i> , 1998, 1, 411-419.	4.5	83
76	Thermal Motions in Bacteriorhodopsin at Different Hydration Levels Studied by Neutron Scattering: Correlation with Kinetics and Light-Induced Conformational Changes. <i>Biophysical Journal</i> , 1998, 75, 1945-1952.	0.2	144
77	Stabilisation of Halophilic Malate Dehydrogenase from <i>Haloarcula Marismortui</i> by Divalent Cations. Effects of Temperature, Water Isotope, Cofactor and pH. <i>FEBS Journal</i> , 1997, 249, 607-611.	0.2	32
78	Mutation at a Single Acidic Amino Acid Enhances the Halophilic Behaviour of Malate Dehydrogenase from <i>Haloarcula Marismortui</i> in Physiological Salts. <i>FEBS Journal</i> , 1995, 230, 1088-1095.	0.2	63
79	The triple isotopic substitution method in small angle neutron scattering. Application to the study of the ternary complex EF-Tu · GTP · aminoacyl-tRNA. <i>Biophysical Chemistry</i> , 1994, 53, 123-130.	1.5	13
80	Small angle neutron scattering, total cross-sections and mass density measurements of concentrated NaCl and KCl solutions in H ₂ O or D ₂ O. <i>Biophysical Chemistry</i> , 1994, 53, 69-75.	1.5	6
81	Stability against Denaturation Mechanisms in Halophilic Malate Dehydrogenase "Adapt" to Solvent Conditions. <i>Journal of Molecular Biology</i> , 1994, 244, 436-447.	2.0	109
82	Rotational orientation of transmembrane α -helices in bacteriorhodopsin. <i>Journal of Molecular Biology</i> , 1994, 236, 1093-1104.	2.0	17
83	Biophysical study of halophilic malate dehydrogenase in solution: revised subunit structure and solvent interactions of native and recombinant enzyme. <i>Journal of the Chemical Society, Faraday Transactions</i> , 1993, 89, 2659-2666.	1.7	61
84	Biochemical, Structural, and Molecular Genetic Aspects of Halophilism. <i>Advances in Protein Chemistry</i> , 1992, 43, 1-62.	4.4	129
85	Small-angle neutron scattering study of halophilic glyceraldehyde 3-phosphate dehydrogenase (hGAPDH). <i>Physica B: Condensed Matter</i> , 1991, 174, 306-308.	1.3	3
86	Functional implications related to the gene structure of the elongation factor EF-Tu from <i>Halobacterium marismortui</i> . <i>Nucleic Acids Research</i> , 1990, 18, 507-511.	6.5	49
87	Neutron and light-scattering studies of DNA gyrase and its complex with DNA. <i>Journal of Molecular Biology</i> , 1990, 211, 211-220.	2.0	49
88	Water molecules and exchangeable hydrogen ions at the active centre of bacteriorhodopsin localized by neutron diffraction. <i>Journal of Molecular Biology</i> , 1990, 214, 15-19.	2.0	171
89	Halophilic proteins and the influence of solvent on protein stabilization. <i>Trends in Biochemical Sciences</i> , 1990, 15, 333-337.	3.7	73
90	Neutron scattering study of the (β -B) catalytic domains of complement proteases Cl _{1,r} and Cl _{1,s} . <i>FEBS Letters</i> , 1990, 269, 19-22.	1.3	7

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91	Tertiary structure of bacteriorhodopsin. <i>Journal of Molecular Biology</i> , 1989, 210, 829-847.	2.0	59
92	Stabilization of halophilic malate dehydrogenase. <i>Journal of Molecular Biology</i> , 1989, 208, 491-500.	2.0	116
93	Structure of phenylalanine-accepting transfer ribonucleic acid and of its environment in aqueous solvents with different salts. <i>Biochemistry</i> , 1988, 27, 1316-1320.	1.2	23
94	Structure and hydration of purple membranes in different conditions. <i>Journal of Molecular Biology</i> , 1987, 194, 569-572.	2.0	53
95	Structure of halophilic malate dehydrogenase in multimolar KCl solutions from neutron scattering and ultracentrifugation. <i>Biophysical Chemistry</i> , 1987, 26, 279-290.	1.5	28
96	[46] Measurement of density and location of solvent associated with biomolecules by small-angle neutron scattering. <i>Methods in Enzymology</i> , 1986, 127, 619-629.	0.4	8
97	Methionyl-tRNA synthetase from <i>E. coli</i> : direct evidence for exchange of protomers in the dimeric enzyme by using deuteration and small-angle neutron scattering. <i>Biochimie</i> , 1985, 67, 637-641.	1.3	4
98	Nonspecific binding of lac repressor to DNA. <i>Biophysical Chemistry</i> , 1983, 18, 313-322.	1.5	6
99	Structure of phenylalanine-accepting transfer ribonucleic acid and of its environment in aqueous solvents with different salts. <i>Biochemistry</i> , 1983, 22, 4380-4388.	1.2	51
100	Neutron-scattering studies of the binding of initiator tRNA ^{Met} to <i>Escherichia coli</i> trypsin-modified methionyl-tRNA synthetase. <i>Journal of Molecular Biology</i> , 1982, 154, 603-613.	2.0	26
101	Neutron scattering studies of <i>Escherichia coli</i> tyrosyl-tRNA synthetase and of its interaction with tRNA ^{Tyr} . <i>Journal of Molecular Biology</i> , 1982, 159, 651-664.	2.0	27
102	Small angle neutron scattering of the mitochondrial ADP/ATP carrier protein in detergent. <i>Biochemical and Biophysical Research Communications</i> , 1982, 109, 471-477.	1.0	59
103	The Interaction with Phospholipids of Bee Venom Melittin. <i>Biophysical Journal</i> , 1982, 37, 161-163.	0.2	21
104	Neutron-scattering studies of lac repressor: A low-resolution model. <i>Journal of Molecular Biology</i> , 1981, 153, 177-182.	2.0	29
105	Neutron small angle scattering of the Mo-Fe protein (nitrogenase) from <i>Clostridium pasteurianum</i> . <i>Biochemical and Biophysical Research Communications</i> , 1981, 98, 43-50.	1.0	9
106	Determination of molecular weight by neutron scattering. <i>Biopolymers</i> , 1981, 20, 2413-2426.	1.2	360
107	Study of the internal structure of <i>Escherichia coli</i> ribosomes by neutron and X-ray scattering. <i>Journal of Molecular Biology</i> , 1979, 135, 691-707.	2.0	34
108	Areas of hydration in the purple membrane of <i>Halobacterium halobium</i> : A neutron diffraction study. <i>Journal of Molecular Biology</i> , 1979, 132, 181-191.	2.0	86

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109	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
110	Research and culture. Nature, 1978, 271, 500-500.	13.7	1
111	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