

Stefania Abbruzzetti

List of Publications by Year in descending order

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Version: 2024-02-01

112
papers

2,610
citations

159585

30
h-index

254184

43
g-index

116
all docs

116
docs citations

116
times ranked

2451
citing authors

#	ARTICLE	IF	CITATIONS
1	<i>Cis</i> → <i>Trans</i> Photoisomerization of Fluorescent-Protein Chromophores. Journal of Physical Chemistry B, 2008, 112, 10714-10722.	2.6	114
2	New insights into allosteric mechanisms from trapping unstable protein conformations in silica gels. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 14414-14419.	7.1	110
3	Fast Events in Protein Folding: Structural Volume Changes Accompanying the Early Events in the N ⁺ 1 Transition of Apomyoglobin Induced by Ultrafast pH Jump. Biophysical Journal, 2000, 78, 405-415.	0.5	82
4	High and low oxygen affinity conformations of T state hemoglobin. Protein Science, 2008, 10, 2401-2407.	7.6	74
5	Residual water modulates the dynamics of the protein and of the external matrix in trehalose coated MbCO: An infrared and flash-photolysis study. Journal of Chemical Physics, 2002, 116, 1193-1200.	3.0	63
6	Single Amino Acid Replacement Makes Aequorea victoria Fluorescent Proteins Reversibly Photoswitchable. Journal of the American Chemical Society, 2010, 132, 85-95.	13.7	61
7	Green Fluorescent Protein Ground States: The Influence of a Second Protonation Site near the Chromophore. Biochemistry, 2007, 46, 5494-5504.	2.5	60
8	Kinetics of Acid-Induced Spectral Changes in the GFPmut2 Chromophore. Journal of the American Chemical Society, 2005, 127, 626-635.	13.7	57
9	The Reactivity with CO of AHb1 and AHb2 from Arabidopsis thaliana is Controlled by the Distal HisE7 and Internal Hydrophobic Cavities. Journal of the American Chemical Society, 2007, 129, 2880-2889.	13.7	54
10	Time-resolved methods in Biophysics. 2. Monitoring haem proteins at work with nanosecond laser flash photolysis. Photochemical and Photobiological Sciences, 2006, 5, 1109.	2.9	53
11	Kinetics of Local Helix Formation in Poly-L-Glutamic Acid Studied by Time-Resolved Photoacoustics: Neutralization Reactions of Carboxylates in Aqueous Solutions and Their Relevance to the Problem of Protein Folding. Biophysical Journal, 2000, 79, 2714-2721.	0.5	51
12	Ligand migration through the internal hydrophobic cavities in human neuroglobin. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 18984-18989.	7.1	47
13	Experimental basis for a new allosteric model for multisubunit proteins. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 12758-12763.	7.1	46
14	Non-toxic, water-soluble photocalorimetric reference compounds for UV and visible excitation. Chemical Physics Letters, 1999, 304, 167-172.	2.6	45
15	PEGylation Promotes Hemoglobin Tetramer Dissociation. Bioconjugate Chemistry, 2009, 20, 1356-1366.	3.6	45
16	Kinetics of Histidine Deligation from the Heme in GuHCl-Unfolded Fe(III) Cytochrome c Studied by a Laser-Induced pH-Jump Technique. Journal of the American Chemical Society, 2001, 123, 6649-6653.	13.7	39
17	One-Pot Synthesis of Gold Nanoshells with High Photon-to-Heat Conversion Efficiency. Journal of Physical Chemistry C, 2009, 113, 7516-7521.	3.1	39
18	Kinetics of Proton Release after Flash Photolysis of 1-(2-Nitrophenyl)ethyl Sulfate (Caged Sulfate) in Aqueous Solution. Journal of the American Chemical Society, 2005, 127, 9865-9874.	13.7	38

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19	Deprotonation yields, pKa, and aci-nitro decay rates in some substituted o-nitrobenzaldehydes Dedicated to Professor Silvia Braslavsky, to mark her great contribution to photochemistry and photobiology particularly in the field of photothermal methods.. <i>Photochemical and Photobiological Sciences</i> , 2003, 2, 796.	2.9	36
20	The complex of hypericin with β -lactoglobulin has antimicrobial activity with potential applications in dairy industry. <i>Journal of Dairy Science</i> , 2015, 98, 89-94.	3.4	36
21	Functional Characterization of Heme Proteins Encapsulated in Wet Nanoporous Silica Gels. <i>Journal of Nanoscience and Nanotechnology</i> , 2001, 1, 407-415.	0.9	35
22	A photochromic bacterial photoreceptor with potential for super-resolution microscopy. <i>Photochemical and Photobiological Sciences</i> , 2013, 12, 231-235.	2.9	35
23	Subdiffraction localization of a nanostructured photosensitizer in bacterial cells. <i>Scientific Reports</i> , 2015, 5, 15564.	3.3	35
24	Acid-induced unfolding of myoglobin triggered by a laser pH jump method. <i>Photochemical and Photobiological Sciences</i> , 2006, 5, 621.	2.9	34
25	Singlet oxygen photosensitisation by GFP mutants: oxygen accessibility to the chromophore. <i>Photochemical and Photobiological Sciences</i> , 2010, 9, 1336-1341.	2.9	34
26	Labeling and Selective Inactivation of Gram-Positive Bacteria Employing Bimodal Photoprobes with Dual Readouts. <i>Chemistry - A European Journal</i> , 2016, 22, 5243-5252.	3.3	34
27	Experiments on Hemoglobin in Single Crystals and Silica Gels Distinguish among Allosteric Models. <i>Biophysical Journal</i> , 2015, 109, 1264-1272.	0.5	33
28	Photochromic conversion in a red/green cyanobacteriochrome from <i>Synechocystis</i> PCC6803: quantum yields in solution and photoswitching dynamics in living <i>E. coli</i> cells. <i>Photochemical and Photobiological Sciences</i> , 2015, 14, 229-237.	2.9	33
29	Different roles of protein dynamics and ligand migration in non-symbiotic hemoglobins AHb1 and AHb2 from <i>Arabidopsis thaliana</i> . <i>Gene</i> , 2007, 398, 224-233.	2.2	32
30	A self-assembled nanostructured material with photosensitising properties. <i>RSC Advances</i> , 2013, 3, 17874.	3.6	30
31	The amino acids surrounding the flavin 7a-methyl group determine the UVA spectral features of a LOV protein. <i>Biological Chemistry</i> , 2013, 394, 1517-1528.	2.5	30
32	Evidence for Two Geminate Rebinding States Following Laser Photolysis of R State Hemoglobin Encapsulated in Wet Silica Gels. <i>Journal of Physical Chemistry B</i> , 2005, 109, 11411-11413.	2.6	29
33	Determination of Microscopic Rate Constants for CO Binding and Migration in Myoglobin Encapsulated in Silica Gels. <i>Journal of Physical Chemistry B</i> , 2005, 109, 19523-19528.	2.6	29
34	Geminate Rebinding in R-State Hemoglobin: Kinetic and Computational Evidence for Multiple Hydrophobic Pockets. <i>Journal of the American Chemical Society</i> , 2005, 127, 17427-17432.	13.7	29
35	CO Rebinding Kinetics and Molecular Dynamics Simulations Highlight Dynamic Regulation of Internal Cavities in Human Cytochrome. <i>PLoS ONE</i> , 2013, 8, e49770.	2.5	28
36	Serum albumins are efficient delivery systems for the photosensitizer hypericin in photosensitization-based treatments against <i>Staphylococcus aureus</i> . <i>Food Control</i> , 2018, 94, 254-262.	5.5	28

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37	Biophysical Characterisation of Neuroglobin of the Icefish, a Natural Knockout for Hemoglobin and Myoglobin. Comparison with Human Neuroglobin. PLoS ONE, 2012, 7, e44508.	2.5	28
38	Circular dichroism spectroscopy of tertiary and quaternary conformations of human hemoglobin entrapped in wet silica gels. Protein Science, 2006, 15, 1961-1967.	7.6	27
39	Ligand Migration in Nonsymbiotic Hemoglobin AHb1 from Arabidopsis thaliana. Journal of Physical Chemistry B, 2007, 111, 12582-12590.	2.6	27
40	Kinetics of proton release and uptake by channelrhodopsin. FEBS Letters, 2012, 586, 1344-1348.	2.8	27
41	The Greenland shark Somniosus microcephalus Hemoglobins and ligand-binding properties. PLoS ONE, 2017, 12, e0186181.	2.5	27
42	Enhanced geminate ligand rebinding upon photo-dissociation of silica gel-embedded myoglobin-CO. Chemical Physics Letters, 2001, 346, 430-436.	2.6	25
43	Ligand Uptake Modulation by Internal Water Molecules and Hydrophobic Cavities in Hemoglobins. Journal of Physical Chemistry B, 2014, 118, 1234-1245.	2.6	25
44	An experimental methodology for measuring volume changes in proton transfer reactions in aqueous solutions. Biophysical Chemistry, 1998, 73, 13-22.	2.8	24
45	Photoinduced alkaline pH-jump on the nanosecond time scale. Chemical Physics Letters, 2001, 344, 387-394.	2.6	24
46	Photoswitching of E222Q GFP mutants: concerted mechanism of chromophore isomerization and protonation. Photochemical and Photobiological Sciences, 2010, 9, 1307.	2.9	23
47	Enhanced photosensitizing properties of protein bound curcumin. Life Sciences, 2019, 233, 116710.	4.3	22
48	Hypericin-Apomyoglobin: An Enhanced Photosensitizer Complex for the Treatment of Tumor Cells. Biomacromolecules, 2019, 20, 2024-2033.	5.4	22
49	Following Ligand Migration Pathways from Picoseconds to Milliseconds in Type II Truncated Hemoglobin from Thermobifida fusca. PLoS ONE, 2012, 7, e39884.	2.5	22
50	Ligand reactivity and allosteric regulation of hemoglobin-based oxygen carriers. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2008, 1784, 1365-1377.	2.3	21
51	Structural Plasticity and Functional Implications of Internal Cavities in Distal Mutants of Type 1 Non-Symbiotic Hemoglobin AHb1 from Arabidopsis thaliana. Journal of Physical Chemistry B, 2009, 113, 16028-16038.	2.6	20
52	Histidine E7 Dynamics Modulates Ligand Exchange between Distal Pocket and Solvent in AHb1 from Arabidopsis thaliana. Journal of Physical Chemistry B, 2011, 115, 4138-4146.	2.6	20
53	Engineered chimeras reveal the structural basis of hexacoordination in globins: A case study of neuroglobin and myoglobin. Biochimica Et Biophysica Acta - General Subjects, 2015, 1850, 169-177.	2.4	20
54	Immobilization of Proteins in Silica Gel: Biochemical and Biophysical Properties. Current Organic Chemistry, 2015, 19, 1653-1668.	1.6	20

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55	Ligand Migration and Binding in Nonsymbiotic Hemoglobins of <i>Arabidopsis thaliana</i> . <i>Biochemistry</i> , 2010, 49, 7448-7458.	2.5	19
56	Oxygen binding to <i>Arabidopsis thaliana</i> AHb2 nonsymbiotic hemoglobin: evidence for a role in oxygen transport. <i>IUBMB Life</i> , 2011, 63, 355-362.	3.4	19
57	Heterogeneous Kinetics of the Carbon Monoxide Association and Dissociation Reaction to Nitrophorin 4 and 7 Coincide with Structural Heterogeneity of the Gate-Loop. <i>Journal of the American Chemical Society</i> , 2012, 134, 9986-9998.	13.7	19
58	The Dark Recovery Rate in the Photocycle of the Bacterial Photoreceptor YtvA Is Affected by the Cellular Environment and by Hydration. <i>PLoS ONE</i> , 2014, 9, e107489.	2.5	19
59	Zinc-Substituted Myoglobin Is a Naturally Occurring Photo-antimicrobial Agent with Potential Applications in Food Decontamination. <i>Journal of Agricultural and Food Chemistry</i> , 2016, 64, 8633-8639.	5.2	19
60	Ligand migration through hemeprotein cavities: insights from laser flash photolysis and molecular dynamics simulations. <i>Physical Chemistry Chemical Physics</i> , 2013, 15, 10686.	2.8	18
61	Dynamics and efficiency of photoswitching in biliverdin-binding phytochromes. <i>Photochemical and Photobiological Sciences</i> , 2019, 18, 2484-2496.	2.9	18
62	Mycobacterial and Human Nitrobindins: Structure and Function. <i>Antioxidants and Redox Signaling</i> , 2020, 33, 229-246.	5.4	17
63	The Interaction of Hypericin with SARS-CoV-2 Reveals a Multimodal Antiviral Activity. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 14025-14032.	8.0	17
64	Light-Induced Protein-Matrix Uncoupling and Protein Relaxation in Dry Samples of Trehalose-Coated MbCO at Room Temperature. <i>Cell Biochemistry and Biophysics</i> , 2005, 43, 431-438.	1.8	16
65	Sulfur Mobilization in Cyanobacteria. <i>Journal of Biological Chemistry</i> , 2006, 281, 38769-38780.	3.4	16
66	Oxygen and nitric oxide rebinding kinetics in nonsymbiotic hemoglobin AHb1 from <i>Arabidopsis thaliana</i> . <i>IUBMB Life</i> , 2011, 63, 1094-1100.	3.4	16
67	Tuning the local solvent composition at a drug carrier surface: the effect of dimethyl sulfoxide/water mixture on the photofunctional properties of hypericin ²⁺ -lactoglobulin complexes. <i>Journal of Materials Chemistry B</i> , 2017, 5, 1633-1641.	5.8	16
68	Apomyoglobin is an efficient carrier for zinc phthalocyanine in photodynamic therapy of tumors. <i>Biophysical Chemistry</i> , 2019, 253, 106228.	2.8	16
69	Ligand migration and hexacoordination in type 1 non-symbiotic rice hemoglobin. <i>Biochimica Et Biophysica Acta - Proteins and Proteomics</i> , 2011, 1814, 1042-1053.	2.3	15
70	Tetramethylbenzidine: An Acoustogenic Photoacoustic Probe for Reactive Oxygen Species Detection. <i>Sensors</i> , 2020, 20, 5952.	3.8	15
71	Photosensitizing proteins for antibacterial photodynamic inactivation. <i>Translational Biophotonics</i> , 2020, 2, e201900031.	2.7	15
72	From hemoglobin allostery to hemoglobin-based oxygen carriers. <i>Molecular Aspects of Medicine</i> , 2022, 84, 101050.	6.4	15

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73	Molten Globule Formation in Apomyoglobin Monitored by the Fluorescent Probe Nile Red. <i>Biochemistry</i> , 2006, 45, 5111-5121.	2.5	14
74	Structure and dynamics of the membrane attaching nitric oxide transporter nitrophorin 7. <i>F1000Research</i> , 0, 4, 45.	1.6	13
75	Ligation Tunes Protein Reactivity in an Ancient Haemoglobin: Kinetic Evidence for an Allosteric Mechanism in <i>Methanosarcina acetivorans</i> Protoglobin. <i>PLoS ONE</i> , 2012, 7, e33614.	2.5	13
76	ATP regulation of the ligand-binding properties in temperate and cold-adapted haemoglobins. X-ray structure and ligand-binding kinetics in the sub-Antarctic fish <i>Eleginops maclovinus</i> . <i>Molecular BioSystems</i> , 2012, 8, 3295.	2.9	12
77	More than a Confinement: "Soft" and "Hard" Enzyme Entrapment Modulates Biological Catalyst Function. <i>Catalysts</i> , 2019, 9, 1024.	3.5	12
78	Characterization of the Heme Pocket Structure and Ligand Binding Kinetics of Non-symbiotic Hemoglobins from the Model Legume <i>Lotus japonicus</i> . <i>Frontiers in Plant Science</i> , 2017, 8, 407.	3.6	11
79	Oxygen-Insensitive Aggregates of Pt(II) Complexes as Phosphorescent Labels of Proteins with Luminescence Lifetime-Based Readouts. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 24361-24369.	8.0	11
80	Ligand-Induced Tertiary Relaxations During the T-to-R Quaternary Transition in Hemoglobin. <i>Journal of Physical Chemistry B</i> , 2008, 112, 12790-12794.	2.6	10
81	Kinetics and computational studies of ligand migration in nitrophorin 7 and its Δ 3 mutant. <i>Biochimica Et Biophysica Acta - Proteins and Proteomics</i> , 2013, 1834, 1711-1721.	2.3	10
82	Structural and functional properties of Antarctic fish cytoglobins-1: Cold-reactivity in multi-ligand reactions. <i>Computational and Structural Biotechnology Journal</i> , 2020, 18, 2132-2144.	4.1	10
83	Mycobacterial and Human Ferrous Nitrobindins: Spectroscopic and Reactivity Properties. <i>International Journal of Molecular Sciences</i> , 2021, 22, 1674.	4.1	10
84	Low affinity PEGylated hemoglobin from <i>Trematomus bernacchii</i> , a model for hemoglobin-based blood substitutes. <i>BMC Biochemistry</i> , 2011, 12, 66.	4.4	9
85	A caged substrate peptide for matrix metalloproteinases. <i>Photochemical and Photobiological Sciences</i> , 2015, 14, 300-307.	2.9	9
86	Photodynamic action of <i>Hypericum perforatum</i> hydrophilic extract against <i>Staphylococcus aureus</i> . <i>Photochemical and Photobiological Sciences</i> , 2020, 19, 324-331.	2.9	9
87	Kinetics of Histidine Dissociation From the Heme Fe(III) in N-fragment (residues 1?56) of Cytochrome c. <i>Protein Journal</i> , 2004, 23, 519-527.	1.6	8
88	A Plant Gene Encoding One-Heme and Two-Heme Hemoglobins With Extreme Reactivities Toward Diatomic Gases and Nitrite. <i>Frontiers in Plant Science</i> , 2020, 11, 600336.	3.6	8
89	Photodynamic treatment of pathogens. <i>Rivista Del Nuovo Cimento</i> , 2022, 45, 407-459.	5.7	8
90	Structure and dynamics of the membrane attaching nitric oxide transporter nitrophorin 7. <i>F1000Research</i> , 2015, 4, 45.	1.6	7

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91	Cold-Adaptation Signatures in the Ligand Rebinding Kinetics to the Truncated Hemoglobin of the Antarctic Bacterium <i>Pseudoalteromonas haloplanktis</i> TAC125. <i>Journal of Physical Chemistry B</i> , 2018, 122, 11649-11661.	2.6	6
92	A Double Payload Complex between Hypericin and All-trans Retinoic Acid in the β^2 -Lactoglobulin Protein. <i>Antibiotics</i> , 2022, 11, 282.	3.7	5
93	Characterization of Ligand Migration Mechanisms inside Hemoglobins from the Analysis of Geminate Rebinding Kinetics. <i>Methods in Enzymology</i> , 2008, 437, 329-345.	1.0	4
94	Electrostatic Tuning of the Ligand Binding Mechanism by Glu27 in Nitrophorin 7. <i>Scientific Reports</i> , 2018, 8, 10855.	3.3	4
95	Structural Bases for the Regulation of CO Binding in the Archaeal Protoglobin from <i>Methanosarcina acetivorans</i> . <i>PLoS ONE</i> , 2015, 10, e0125959.	2.5	3
96	Functional characterisation of the haemoglobins of the migratory notothenioid fish <i>Dissostichus eleginoides</i> . <i>Hydrobiologia</i> , 2015, 761, 315-333.	2.0	3
97	A photosensitizing fusion protein with targeting capabilities. <i>Biomolecular Concepts</i> , 2022, 13, 175-182.	2.2	3
98	Versatile Supramolecular Complex for Targeted Antimicrobial Photodynamic Inactivation. <i>Bioconjugate Chemistry</i> , 2022, 33, 666-676.	3.6	3
99	Study of Tumor Cellular Damage Induced by Photosensitizing Molecules. <i>Biophysical Journal</i> , 2018, 114, 535a.	0.5	2
100	A red-green photochromic bacterial protein as a new contrast agent for improved photoacoustic imaging. <i>Photoacoustics</i> , 2022, 26, 100358.	7.8	2
101	Probing the Role of Murine Neuroglobin CD-loop α -D-Helix Unit in CO Ligand Binding and Structural Dynamics. <i>ACS Chemical Biology</i> , 0, . .	3.4	2
102	Development and Characterization of Novel Probes for Photoacoustic Microscopy. <i>Biophysical Journal</i> , 2021, 120, 363a.	0.5	1
103	Time-Resolved and Steady-State Spectroscopy of Native and Mutated <i>Thermobifida fusca</i> Hemoglobins. <i>Biophysical Journal</i> , 2011, 100, 379a-380a.	0.5	0
104	Photochromism in a Flavin Binding Photoreceptor. <i>Biophysical Journal</i> , 2012, 102, 168a.	0.5	0
105	Kinetics of Proton Release and Uptake by Channelrhodopsin-2. <i>Biophysical Journal</i> , 2012, 102, 575a.	0.5	0
106	A Photochromic Bacterial Photoreceptor with Potential for Super-Resolution Microscopy. <i>Biophysical Journal</i> , 2013, 104, 672a.	0.5	0
107	Photofunctional proteins: how nature keeps the laboratories updated about light and life. <i>Photochemical and Photobiological Sciences</i> , 2015, 14, 198-199.	2.9	0
108	A Novel Targeting Approach for Cancer Treatment Based on Photodynamic Therapy. <i>Biophysical Journal</i> , 2020, 118, 313a.	0.5	0

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109	Photoacoustic Selective Plane Illumination Microscopy. Biophysical Journal, 2020, 118, 175a.	0.5	0
110	Unusually Fast bis-Histidyl Coordination in a Plant Hemoglobin. International Journal of Molecular Sciences, 2021, 22, 2740.	4.1	0
111	Monitoring the Tâ€R transition of human hemoglobin encapsulated in silica gels. FASEB Journal, 2007, 21, A637.	0.5	0
112	A Red-Green Photochromic Bacterial Protein as a New Contrast Agent for Improved Photoacoustic Imaging. SSRN Electronic Journal, 0, , .	0.4	0