Xavier Carpena

List of Publications by Year
in descending order

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45 papers	1,691 citations	257450 24 h-index	276875 41 g-index
47 all docs	47 docs citations	47 times ranked	1946 citing authors

#	Article	IF	Citations
1	Molecular basis of substrate-induced permeation by an amino acid antiporter. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 3935-3940.	7.1	139
2	Catalase-peroxidase KatG of Burkholderia pseudomallei at 1.7Ã… resolution. Journal of Molecular Biology, 2003, 327, 475-489.	4.2	126
3	Thirty years of heme catalases structural biology. Archives of Biochemistry and Biophysics, 2012, 525, 102-110.	3.0	90
4	Structure and interaction with phospholipids of a prokaryotic lipoxygenase from <i>Pseudomonas aeruginosa</i>. FASEB Journal, 2013, 27, 4811-4821.	0.5	78
5	Catalase-peroxidases (KatG) Exhibit NADH Oxidase Activity. Journal of Biological Chemistry, 2004, 279, 43098-43106.	3.4	68
6	Essential Role of Proximal Histidine-Asparagine Interaction in Mammalian Peroxidases. Journal of Biological Chemistry, 2009, 284, 25929-25937.	3.4	68
7	Molecular mechanism of light-driven sodium pumping. Nature Communications, 2020, 11, 2137.	12.8	67
8	Structure ofHelicobacter pyloriCatalase, with and without Formic Acid Bound, at 1.6 Ã… Resolutionâ€. Biochemistry, 2004, 43, 3089-3103.	2.5	65
9	Structural and biochemical features distinguish the foot-and-mouth disease virus leader proteinase from other papain-like enzymes 1 1Edited by R. Huber. Journal of Molecular Biology, 2000, 302, 1227-1240.	4.2	62
10	The Structures and Electronic Configuration of Compound I Intermediates ofHelicobacterpyloriandPenicillium vitaleCatalases Determined by X-ray Crystallography and QM/MM Density Functional Theory Calculations. Journal of the American Chemical Society, 2007, 129, 4193-4205.	13.7	58
11	L amino acid transporter structure and molecular bases for the asymmetry of substrate interaction. Nature Communications, 2019, 10, 1807.	12.8	57
12	An Electrical Potential in the Access Channel of Catalases Enhances Catalysis. Journal of Biological Chemistry, 2003, 278, 31290-31296.	3.4	56
13	Isonicotinic Acid Hydrazide Conversion to Isonicotinyl-NAD by Catalase-peroxidases. Journal of Biological Chemistry, 2010, 285, 26662-26673.	3.4	55
14	Substrate flow in catalases deduced from the crystal structures of active site variants of HPII fromEscherichia coli. Proteins: Structure, Function and Bioinformatics, 2001, 44, 270-281.	2.6	50
15	Versatility of the Electronic Structure of Compound I in Catalase-Peroxidases. Journal of the American Chemical Society, 2007, 129, 13436-13446.	13.7	47
16	Structural and functional basis of phospholipid oxygenase activity of bacterial lipoxygenase from Pseudomonas aeruginosa. Biochimica Et Biophysica Acta - Molecular and Cell Biology of Lipids, 2016, 1861, 1681-1692.	2.4	46
17	Structure of the Clade 1 catalase, CatF of Pseudomonas syringae, at 1.8 Ã… resolution. Proteins: Structure, Function and Bioinformatics, 2003, 50, 423-436.	2.6	45
18	A molecular switch and electronic circuit modulate catalase activity in catalaseâ€peroxidases. EMBO Reports, 2005, 6, 1156-1162.	4.5	45

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19	Crystal Structure of a Putative Type I Restrictionâ€“Modification S Subunit from Mycoplasma genitalium. Journal of Molecular Biology, 2005, 351, 749-762.	4.2	44
20	Characterization of the Catalase-Peroxidase KatG from Burkholderia pseudomallei by Mass Spectrometry. Journal of Biological Chemistry, 2003, 278, 35687-35692.	3.4	43
21	Roles for Arg426 and Trp111 in the Modulation of NADH Oxidase Activity of the Catalase-peroxidase KatG fromBurkholderia pseudomalleiInferred from pH-Induced Structural Changesâ€,â€¡. Biochemistry, 2006, 45, 5171-5179.	2.5	39
22	Structural Characterization of the Ser324Thr Variant of the Catalase-peroxidase (KatG) from Burkholderia pseudomallei. Journal of Molecular Biology, 2005, 345, 21-28.	4.2	34
23	An Ionizable Active-Site Tryptophan Imparts Catalase Activity to a Peroxidase Core. Journal of the American Chemical Society, 2014, 136, 7249-7252.	13.7	28
24	Binding of the Antitubercular Pro-Drug Isoniazid in the Heme Access Channel of Catalase-Peroxidase (KatG). A Combined Structural and Metadynamics Investigation. Journal of Physical Chemistry B, 2014, 118, 2924-2931.	2.6	27
25	Pseudomonas aeruginosa Lipoxygenase LoxA Contributes to Lung Infection by Altering the Host Immune Lipid Signaling. Frontiers in Microbiology, 2019, 10, 1826.	3.5	25
26	Two alternative substrate paths for compound I formation and reduction in catalase-peroxidase KatG from Burkholderia pseudomallei. Proteins: Structure, Function and Bioinformatics, 2006, 66, 219-228.	2.6	22
27	High Conformational Stability of Secreted Eukaryotic Catalase-peroxidases. Journal of Biological Chemistry, 2012, 287, 32254-32262.	3.4	21
28	RhaU of <i>Rhizobium leguminosarum</i> Is a Rhamnose Mutarotase. Journal of Bacteriology, 2008, 190, 2903-2910.	2.2	20
29	Oxygen Binding to Catalase-Peroxidase. Journal of Physical Chemistry Letters, 2011, 2, 196-200.	4.6	18
30	Characterization of a Large Subunit Catalase Truncated by Proteolytic Cleavageâ€,â€¡. Biochemistry, 2005, 44, 5597-5605.	2.5	17
31	The dynamic role of distal side residues in heme hydroperoxidase catalysis. Interplay between X-ray crystallography and ab initio MD simulations. Archives of Biochemistry and Biophysics, 2010, 500, 37-44.	3.0	16
32	Structure of the C-terminal domain of the catalaseâ€“peroxidase KatG fromEscherichia coli. Acta Crystallographica Section D: Biological Crystallography, 2004, 60, 1824-1832.	2.5	15
33	Electronic State of the Molecular Oxygen Released by Catalase. Journal of Physical Chemistry A, 2008, 112, 12842-12848.	2.5	14
34	Modulation of Heme Orientation and Binding by a Single Residue in Catalase HPII of <i>Escherichia coli</i>. Biochemistry, 2011, 50, 2101-2110.	2.5	14
35	Influence of main channel structure on H2O2 access to the heme cavity of catalase KatE of Escherichia coli. Archives of Biochemistry and Biophysics, 2012, 526, 54-59.	3.0	12
36	A first principles study of the binding of formic acid in catalase complementing high resolution X-ray structures. Chemical Physics, 2006, 323, 129-137.	1.9	11

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37	Structural Asymmetry and Disulfide Bridges among Subunits Modulate the Activity of Human Malonyl-CoA Decarboxylase*. Journal of Biological Chemistry, 2013, 288, 11907-11919.	3.4	10
38	Structure of glycerol-3-phosphate dehydrogenase (GPD1) from<i>Saccharomyces cerevisiae</i>at 2.45â€…Ã… resolution. Acta Crystallographica Section F: Structural Biology Communications, 2012, 68, 1279-1283.	0.7	8
39	Interaction with the Redox Cofactor MYW and Functional Role of a Mobile Arginine in Eukaryotic Catalase-Peroxidase. Biochemistry, 2016, 55, 3528-3541.	2.5	8
40	Crystallization and preliminary X-ray analysis of the catalaseâ€"peroxidase KatG fromBurkholderia pseudomallei. Acta Crystallographica Section D: Biological Crystallography, 2002, 58, 2184-2186.	2.5	7
41	Crystallization and preliminary X-ray analysis of clade I catalases fromPseudomonas syringaeandListeria seeligeri. Acta Crystallographica Section D: Biological Crystallography, 2001, 57, 1184-1186.	2.5	6
42	Crystallization and preliminary X-ray analysis of the hydroperoxidase I C-terminal domain fromEscherichia coli. Acta Crystallographica Section D: Biological Crystallography, 2002, 58, 853-855.	2.5	5
43	Eukaryotic Catalase-Peroxidase: The Role of the Trp-Tyr-Met Adduct in Protein Stability, Substrate Accessibility, and Catalysis of Hydrogen Peroxide Dismutation. Biochemistry, 2015, 54, 5425-5438.	2.5	3
44	Chapter 7. Catalase-peroxidase (KatG) Structure and Function. 2-Oxoglutarate-Dependent Oxygenases, 2015, , 133-155.	0.8	1
45	Serial macromolecular crystallography at ALBA Synchrotron Light Source. Journal of Synchrotron Radiation, 2022, 29, 896-907.	2.4	1