

David P Barondeau

List of Publications by Citations

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32
papers

2,207
citations

25
h-index

37
g-index

37
ext. papers

2,505
ext. citations

9
avg, IF

4.93
L-index

#	Paper	IF	Citations
32	Nickel superoxide dismutase structure and mechanism. <i>Biochemistry</i> , 2004 , 43, 8038-47	3.2	327
31	Human frataxin is an allosteric switch that activates the Fe-S cluster biosynthetic complex. <i>Biochemistry</i> , 2010 , 49, 9132-9	3.2	223
30	Mechanism and energetics of green fluorescent protein chromophore synthesis revealed by trapped intermediate structures. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2003 , 100, 12111-6	11.5	162
29	Human frataxin activates Fe-S cluster biosynthesis by facilitating sulfur transfer chemistry. <i>Biochemistry</i> , 2014 , 53, 4904-13	3.2	115
28	Methylation of Carbon Monoxide Dehydrogenase from <i>Clostridium thermoaceticum</i> and Mechanism of Acetyl Coenzyme A Synthesis. <i>Journal of the American Chemical Society</i> , 1997 , 119, 3959-3970	16.4	102
27	Superoxide dismutase from the eukaryotic thermophile <i>Alvinella pompejana</i> : structures, stability, mechanism, and insights into amyotrophic lateral sclerosis. <i>Journal of Molecular Biology</i> , 2009 , 385, 1534-55	6.5	101
26	Structural chemistry of a green fluorescent protein Zn biosensor. <i>Journal of the American Chemical Society</i> , 2002 , 124, 3522-4	16.4	96
25	Structure of human Fe-S assembly subcomplex reveals unexpected cysteine desulfurase architecture and acyl-ACP-ISC11 interactions. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017 , 114, E5325-E5334	11.5	94
24	Enzymes for the homeland defense: optimizing phosphotriesterase for the hydrolysis of organophosphate nerve agents. <i>Biochemistry</i> , 2012 , 51, 6463-75	3.2	88
23	Effector role reversal during evolution: the case of frataxin in Fe-S cluster biosynthesis. <i>Biochemistry</i> , 2012 , 51, 2506-14	3.2	79
22	The KaiA protein of the cyanobacterial circadian oscillator is modulated by a redox-active cofactor. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010 , 107, 5804-9	11.5	66
21	Defining the role of arginine 96 in green fluorescent protein fluorophore biosynthesis. <i>Biochemistry</i> , 2005 , 44, 16211-20	3.2	62
20	Understanding GFP posttranslational chemistry: structures of designed variants that achieve backbone fragmentation, hydrolysis, and decarboxylation. <i>Journal of the American Chemical Society</i> , 2006 , 128, 4685-93	16.4	62
19	Understanding GFP chromophore biosynthesis: controlling backbone cyclization and modifying post-translational chemistry. <i>Biochemistry</i> , 2005 , 44, 1960-70	3.2	61
18	Structure-function analysis of Friedreich's ataxia mutants reveals determinants of frataxin binding and activation of the Fe-S assembly complex. <i>Biochemistry</i> , 2011 , 50, 7265-74	3.2	58
17	Frataxin Accelerates [2Fe-2S] Cluster Formation on the Human Fe-S Assembly Complex. <i>Biochemistry</i> , 2015 , 54, 3880-9	3.2	53
16	Molecular engineering of organophosphate hydrolysis activity from a weak promiscuous lactonase template. <i>Journal of the American Chemical Society</i> , 2013 , 135, 11670-7	16.4	47

15	Structural evidence for an enolate intermediate in GFP fluorophore biosynthesis. <i>Journal of the American Chemical Society</i> , 2006 , 128, 3166-8	16.4	47
14	Hypoxia Rescues Frataxin Loss by Restoring Iron Sulfur Cluster Biogenesis. <i>Cell</i> , 2019 , 177, 1507-1521.e1562	16.2	45
13	Structural insights into protein-metal ion partnerships. <i>Current Opinion in Structural Biology</i> , 2004 , 14, 765-74	8.1	45
12	Stability of the Ni-C State and Oxidative Titrations of <i>Desulfovibrio gigas</i> Hydrogenase Monitored by EPR and Electronic Absorption Spectroscopies. <i>Journal of the American Chemical Society</i> , 1994 , 116, 3442-3448	16.4	45
11	FriedreichWataxia variants I154F and W155R diminish frataxin-based activation of the iron-sulfur cluster assembly complex. <i>Biochemistry</i> , 2011 , 50, 6478-87	3.2	38
10	The case of the missing ring: radical cleavage of a carbon-carbon bond and implications for GFP chromophore biosynthesis. <i>Journal of the American Chemical Society</i> , 2007 , 129, 3118-26	16.4	36
9	The Human Iron-Sulfur Assembly Complex Catalyzes the Synthesis of [2Fe-2S] Clusters on ISCU2 That Can Be Transferred to Acceptor Molecules. <i>Biochemistry</i> , 2015 , 54, 3871-9	3.2	35
8	Mechanism of activation of the human cysteine desulfurase complex by frataxin. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019 , 116, 19421-19430	11.5	33
7	Molecular Mechanism of ISC Iron-Sulfur Cluster Biogenesis Revealed by High-Resolution Native Mass Spectrometry. <i>Journal of the American Chemical Society</i> , 2020 , 142, 6018-6029	16.4	21
6	Fluorescent probes for tracking the transfer of iron-sulfur cluster and other metal cofactors in biosynthetic reaction pathways. <i>Journal of the American Chemical Society</i> , 2015 , 137, 390-8	16.4	19
5	Mechanism of frataxin "bypass" in human iron-sulfur cluster biosynthesis with implications for FriedreichWataxia. <i>Journal of Biological Chemistry</i> , 2019 , 294, 9276-9284	5.4	14
4	Structure, mechanism, and substrate profile for Sco3058: the closest bacterial homologue to human renal dipeptidase. <i>Biochemistry</i> , 2010 , 49, 611-22	3.2	14
3	Variable-Temperature Electrospray Ionization for Temperature-Dependent Folding/Refolding Reactions of Proteins and Ligand Binding. <i>Analytical Chemistry</i> , 2021 , 93, 6924-6931	7.8	9
2	Real-Time Kinetic Probes Support Monothiol Glutaredoxins As Intermediate Carriers in Fe-S Cluster Biosynthetic Pathways. <i>ACS Chemical Biology</i> , 2016 , 11, 3114-3121	4.9	9
1	Structure and Chemical Reaction Mechanism of LigU, an Enzyme That Catalyzes an Allylic Isomerization in the Bacterial Degradation of Lignin. <i>Biochemistry</i> , 2019 , 58, 3494-3503	3.2	