

# Aimin Liu

## List of Publications by Year in descending order

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104  
papers

3,204  
citations

136885

32  
h-index

189801

50  
g-index

110  
all docs

110  
docs citations

110  
times ranked

3193  
citing authors

#	ARTICLE	IF	CITATIONS
1	Metalloenzymes involved in carotenoid biosynthesis in plants. <i>Methods in Enzymology</i> , 2022, , 207-222.	0.4	1
2	Charge Maintenance during Catalysis in Nonheme Iron Oxygenases. <i>ACS Catalysis</i> , 2022, 12, 6191-6208.	5.5	12
3	A novel catalytic heme cofactor in SfmD with a single thioether bond and a <i>bis</i> -His ligand set revealed by a <i>de novo</i> crystal structural and spectroscopic study. <i>Chemical Science</i> , 2021, 12, 3984-3998.	3.7	7
4	Molecular Rationale for Partitioning between C-H and C-F Bond Activation in Heme-Dependent Tyrosine Hydroxylase. <i>Journal of the American Chemical Society</i> , 2021, 143, 4680-4693.	6.6	16
5	Capillary electrochromatography-mass spectrometry of kynurenine pathway metabolites. <i>Journal of Chromatography A</i> , 2021, 1651, 462294.	1.8	10
6	Crystal structure of human cysteamine dioxygenase provides a structural rationale for its function as an oxygen sensor. <i>Journal of Biological Chemistry</i> , 2021, 297, 101176.	1.6	10
7	HygY Is a Twitch Radical SAM Epimerase with Latent Dehydrogenase Activity Revealed upon Mutation of a Single Cysteine Residue. <i>Journal of the American Chemical Society</i> , 2021, 143, 15152-15158.	6.6	10
8	Heme Binding to HupZ with a C-Terminal Tag from Group A Streptococcus. <i>Molecules</i> , 2021, 26, 549.	1.7	7
9	A new regime of heme-dependent aromatic oxygenase superfamily. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	3.3	13
10	Diflunisal Derivatives as Modulators of ACMS Decarboxylase Targeting the Tryptophan-Kynurenine Pathway. <i>Journal of Medicinal Chemistry</i> , 2021, 64, 797-811.	2.9	4
11	Substrate-Assisted Hydroxylation and <i>O</i> -Demethylation in the Peroxidase-like Cytochrome P450 Enzyme CYP121. <i>ACS Catalysis</i> , 2020, 10, 1628-1639.	5.5	17
12	Formation of Monofluorinated Radical Cofactor in Galactose Oxidase through Copper-Mediated C-F Bond Scission. <i>Journal of the American Chemical Society</i> , 2020, 142, 18753-18757.	6.6	14
13	Kinetic and Spectroscopic Characterization of the Catalytic Ternary Complex of Tryptophan 2,3-Dioxygenase. <i>Biochemistry</i> , 2020, 59, 2813-2822.	1.2	10
14	Observing 3-hydroxyanthranilate-3,4-dioxygenase in action through a crystalline lens. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 19720-19730.	3.3	20
15	Carbon-fluorine bond cleavage mediated by metalloenzymes. <i>Chemical Society Reviews</i> , 2020, 49, 4906-4925.	18.7	61
16	Characterization of the nonheme iron center of cysteamine dioxygenase and its interaction with substrates. <i>Journal of Biological Chemistry</i> , 2020, 295, 11789-11802.	1.6	19
17	Crystal Structures of L-DOPA Dioxygenase from <i>Streptomyces sclerotialis</i> . <i>Biochemistry</i> , 2019, 58, 5339-5350.	1.2	14
18	Quaternary structure of $\beta$ -amino- $\beta$ -carboxymuconate- $\mu$ -semialdehyde decarboxylase (ACMSD) controls its activity. <i>Journal of Biological Chemistry</i> , 2019, 294, 11609-11621.	1.6	7

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19	Biocatalytic Carbon-Hydrogen and Carbon-Fluorine Bond Cleavage through Hydroxylation Promoted by a Histidyl-Ligated Heme Enzyme. <i>ACS Catalysis</i> , 2019, 9, 4764-4776.	5.5	20
20	Probing the Cys-Tyr Cofactor Biogenesis in Cysteine Dioxygenase by the Genetic Incorporation of Fluorotyrosine. <i>Biochemistry</i> , 2019, 58, 2218-2227.	1.2	33
21	Stepwise O-Atom Transfer in Heme-Based Tryptophan Dioxygenase: Role of Substrate Ammonium in Epoxide Ring Opening. <i>Journal of the American Chemical Society</i> , 2018, 140, 4372-4379.	6.6	24
22	High-Frequency/High-Field Electron Paramagnetic Resonance and Theoretical Studies of Tryptophan-Based Radicals. <i>Journal of Physical Chemistry A</i> , 2018, 122, 3170-3176.	1.1	6
23	Reassignment of the human aldehyde dehydrogenase ALDH8A1 (ALDH12) to the kynurenine pathway in tryptophan catabolism. <i>Journal of Biological Chemistry</i> , 2018, 293, 9594-9603.	1.6	24
24	Cleavage of a carbon-fluorine bond by an engineered cysteine dioxygenase. <i>Nature Chemical Biology</i> , 2018, 14, 853-860.	3.9	37
25	Backbone Dehydrogenation in Pyrrole-Based Pincer Ligands. <i>Inorganic Chemistry</i> , 2018, 57, 9544-9553.	1.9	16
26	Adapting to oxygen: 3-Hydroxyanthrinilate 3,4-dioxygenase employs loop dynamics to accommodate two substrates with disparate polarities. <i>Journal of Biological Chemistry</i> , 2018, 293, 10415-10424.	1.6	13
27	Cofactor Biogenesis in Cysteamine Dioxygenase: C-F Bond Cleavage with Genetically Incorporated Unnatural Tyrosine. <i>Angewandte Chemie - International Edition</i> , 2018, 57, 8149-8153.	7.2	26
28	Cofactor Biogenesis in Cysteamine Dioxygenase: C-F Bond Cleavage with Genetically Incorporated Unnatural Tyrosine. <i>Angewandte Chemie</i> , 2018, 130, 8281-8285.	1.6	1
29	Radical Trapping Study of the Relaxation of -Fe(IV) MauG. <i>Reactive Oxygen Species (Apex, N C)</i> , 2018, 5, 46-55.	5.4	0
30	Oxygen activation by mononuclear nonheme iron dioxygenases involved in the degradation of aromatics. <i>Journal of Biological Inorganic Chemistry</i> , 2017, 22, 395-405.	1.1	80
31	Hypertryptophanemia due to tryptophan 2,3-dioxygenase deficiency. <i>Molecular Genetics and Metabolism</i> , 2017, 120, 317-324.	0.5	21
32	Heterolytic OO bond cleavage: Functional role of Glu113 during bis-Fe(IV) formation in MauG. <i>Journal of Inorganic Biochemistry</i> , 2017, 167, 60-67.	1.5	4
33	Probing Ligand Exchange in the P450 Enzyme CYP121 from <i>Mycobacterium tuberculosis</i> : Dynamic Equilibrium of the Distal Heme Ligand as a Function of pH and Temperature. <i>Journal of the American Chemical Society</i> , 2017, 139, 17484-17499.	6.6	21
34	Mutual synergy between catalase and peroxidase activities of the bifunctional enzyme KatG is facilitated by electron hole-hopping within the enzyme. <i>Journal of Biological Chemistry</i> , 2017, 292, 18408-18421.	1.6	15
35	Cross-linking of dicycloyrosine by the cytochrome P450 enzyme CYP121 from <i>Mycobacterium tuberculosis</i> proceeds through a catalytic shunt pathway. <i>Journal of Biological Chemistry</i> , 2017, 292, 13645-13657.	1.6	30
36	A Pitcher-and-Catcher Mechanism Drives Endogenous Substrate Isomerization by a Dehydrogenase in Kynurenine Metabolism. <i>Journal of Biological Chemistry</i> , 2016, 291, 26252-26261.	1.6	4

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37	What is the tryptophan kynurenine pathway and why is it important to neurotherapeutics?. Expert Review of Neurotherapeutics, 2015, 15, 719-721.	1.4	128
38	Probing Bis-Fe <sup>IV</sup> MauG: Experimental Evidence for the Long-Range Charge-Resonance Model. Angewandte Chemie - International Edition, 2015, 54, 3692-3696.	7.2	28
39	Crystallographic and spectroscopic snapshots reveal a dehydrogenase in action. Nature Communications, 2015, 6, 5935.	5.8	18
40	An Iron Reservoir to the Catalytic Metal. Journal of Biological Chemistry, 2015, 290, 15621-15634.	1.6	17
41	Control of carotenoid biosynthesis through a heme-based cis-trans isomerase. Nature Chemical Biology, 2015, 11, 598-605.	3.9	72
42	Human Î±-Amino-Î²-ketocarboxymuconate-Î³-semialdehyde decarboxylase (ACMSD): A structural and mechanistic unveiling. Proteins: Structure, Function and Bioinformatics, 2015, 83, 178-187.	1.5	22
43	Extending the Kynurenine Pathway to an Aldehyde Disarming Enzyme: Mechanistic Study of Bacterial AMSDH and Identification of the Correct Human Enzyme. FASEB Journal, 2015, 29, 573.3.	0.2	0
44	Nature's Sniper for Long-Range Specific Protein Oxidation. FASEB Journal, 2015, 29, 573.2.	0.2	0
45	Heme-dependent dioxygenases in tryptophan oxidation. Archives of Biochemistry and Biophysics, 2014, 544, 18-26.	1.4	48
46	Bis-Fe(IV): nature's sniper for long-range oxidation. Journal of Biological Inorganic Chemistry, 2014, 19, 1057-1067.	1.1	19
47	Improved separation and detection of picolinic acid and quinolinic acid by capillary electrophoresis-mass spectrometry: Application to analysis of human cerebrospinal fluid. Journal of Chromatography A, 2013, 1316, 147-153.	1.8	27
48	Diradical intermediate within the context of tryptophan tryptophylquinone biosynthesis. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 4569-4573.	3.3	51
49	An unexpected copper catalyzed "reduction" of an arylazide to amine through the formation of a nitrene intermediate. Tetrahedron, 2013, 69, 5079-5085.	1.0	23
50	Pirin is an iron-dependent redox regulator of NF-Î²B. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 9722-9727.	3.3	91
51	The Power of Two. Journal of Biological Chemistry, 2013, 288, 30862-30871.	1.6	19
52	Tryptophan-mediated charge-resonance stabilization in the bis-Fe(IV) redox state of MauG. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 9639-9644.	3.3	63
53	Development of a CZE-ESI-MS assay with a sulfonated capillary for profiling picolinic acid and quinolinic acid formation in multienzyme system. Electrophoresis, 2013, 34, 1828-1835.	1.3	9
54	Effects of the loss of the axial tyrosine ligand of the low-spin heme of MauG on its physical properties and reactivity. FEBS Letters, 2012, 586, 4339-4343.	1.3	16

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55	Chemical Rescue of the Distal Histidine Mutants of Tryptophan 2,3-Dioxygenase. <i>Journal of the American Chemical Society</i> , 2012, 134, 12209-12218.	6.6	29
56	Proline 107 Is a Major Determinant in Maintaining the Structure of the Distal Pocket and Reactivity of the High-Spin Heme of MauG. <i>Biochemistry</i> , 2012, 51, 1598-1606.	1.2	30
57	Evidence for a Dual Role of an Active Site Histidine in $\alpha$ -Amino- $\beta^2$ -carboxymuconate- $\beta$ -semialdehyde Decarboxylase. <i>Biochemistry</i> , 2012, 51, 5811-5821.	1.2	22
58	Role of Calcium in Metalloenzymes: Effects of Calcium Removal on the Axial Ligation Geometry and Magnetic Properties of the Catalytic Diheme Center in MauG. <i>Biochemistry</i> , 2012, 51, 1586-1597.	1.2	30
59	Tryptophan tryptophylquinone biosynthesis: A radical approach to posttranslational modification. <i>Biochimica Et Biophysica Acta - Proteins and Proteomics</i> , 2012, 1824, 1299-1305.	1.1	13
60	Decarboxylation mechanisms in biological system. <i>Bioorganic Chemistry</i> , 2012, 43, 2-14.	2.0	88
61	The roles of <i>Rhodobacter sphaeroides</i> copper chaperones PCuAC and Sco (PrrC) in the assembly of the copper centers of the aa3-type and the cbb3-type cytochrome c oxidases. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2012, 1817, 955-964.	0.5	57
62	Synthesis, Characterisation, and Preliminary In Vitro Studies of Vanadium(IV) Complexes with a Schiff Base and Thiosemicarbazones as Mixed Ligands. <i>European Journal of Inorganic Chemistry</i> , 2012, 2012, 664-677.	1.0	66
63	Proline 96 of the Copper Ligand Loop of Amicyanin Regulates Electron Transfer from Methylamine Dehydrogenase by Positioning Other Residues at the Protein-Protein Interface. <i>Biochemistry</i> , 2011, 50, 1265-1273.	1.2	7
64	The Tightly Bound Calcium of MauG Is Required for Tryptophan Tryptophylquinone Cofactor Biosynthesis. <i>Biochemistry</i> , 2011, 50, 144-150.	1.2	17
65	Mutagenesis of tryptophan199 suggests that hopping is required for MauG-dependent tryptophan tryptophylquinone biosynthesis. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2011, 108, 16956-16961.	3.3	65
66	Enzyme Reactivation by Hydrogen Peroxide in Heme-based Tryptophan Dioxygenase. <i>Journal of Biological Chemistry</i> , 2011, 286, 26541-26554.	1.6	42
67	Mutagenic Analysis of Cox11 of <i>Rhodobacter sphaeroides</i> : Insights into the Assembly of Cu <sub>B</sub> of Cytochrome c Oxidase. <i>Biochemistry</i> , 2010, 49, 5651-5661.	1.2	31
68	EPR and Mössbauer Spectroscopy Show Inequivalent Hemes in Tryptophan Dioxygenase. <i>Journal of the American Chemical Society</i> , 2010, 132, 1098-1109.	6.6	20
69	A single EF-hand isolated from STIM1 forms dimer in the absence and presence of Ca <sup>2+</sup> . <i>FEBS Journal</i> , 2009, 276, 5589-5597.	2.2	33
70	Defining the Role of the Axial Ligand of the Type 1 Copper Site in Amicyanin by Replacement of Methionine with Leucine. <i>Biochemistry</i> , 2009, 48, 9174-9184.	1.2	17
71	Heme Iron Nitrosyl Complex of MauG Reveals an Efficient Redox Equilibrium between Hemes with Only One Heme Exclusively Binding Exogenous Ligands. <i>Biochemistry</i> , 2009, 48, 11603-11605.	1.2	21
72	Purification and Characterization of the Epoxidase Catalyzing the Formation of Fosfomycin from <i>Pseudomonas syringae</i> . <i>Biochemistry</i> , 2008, 47, 8726-8735.	1.2	22

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73	Kinetic and Physical Evidence That the Diheme Enzyme MauG Tightly Binds to a Biosynthetic Precursor of Methylamine Dehydrogenase with Incompletely Formed Tryptophan Tryptophylquinone. <i>Biochemistry</i> , 2008, 47, 2908-2912.	1.2	21
74	A catalytic di-heme bis-Fe(IV) intermediate, alternative to an Fe(IV)=O porphyrin radical. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2008, 105, 8597-8600.	3.3	89
75	Detection of Transient Intermediates in the Metal-Dependent Nonoxidative Decarboxylation Catalyzed by $\alpha$ -Amino- $\beta^2$ -Carboxymuconate- $\beta$ -Semiaidehyde Decarboxylase. <i>Journal of the American Chemical Society</i> , 2007, 129, 9278-9279.	6.6	20
76	Determination of the Substrate Binding Mode to the Active Site Iron of (S)-2-Hydroxypropylphosphonic Acid Epoxidase Using $^{17}\text{O}$ -Enriched Substrates and Substrate Analogues. <i>Biochemistry</i> , 2007, 46, 12628-12638.	1.2	28
77	$\alpha$ -Amino- $\beta^2$ -carboxymuconic- $\beta$ -semialdehyde Decarboxylase (ACMSD) Is a New Member of the Amidohydrolase Superfamily. <i>Biochemistry</i> , 2006, 45, 6628-6634.	1.2	52
78	Crystal Structure of $\alpha$ -Amino- $\beta^2$ -carboxymuconate- $\beta$ -semialdehyde Decarboxylase: Insight into the Active Site and Catalytic Mechanism of a Novel Decarboxylation Reaction,. <i>Biochemistry</i> , 2006, 45, 10412-10421.	1.2	47
79	Transition Metal-Catalyzed Nonoxidative Decarboxylation Reactions. <i>Biochemistry</i> , 2006, 45, 10407-10411.	1.2	48
80	Kinetic and Spectroscopic Characterization of ACMSD from <i>Pseudomonas fluorescens</i> Reveals a Pentacoordinate Mononuclear Metallocofactor. <i>Journal of the American Chemical Society</i> , 2005, 127, 12282-12290.	6.6	37
81	The Mechanism of Inactivation of 3-Hydroxyanthranilate-3,4-dioxygenase by 4-Chloro-3-hydroxyanthranilate. <i>Biochemistry</i> , 2005, 44, 7623-7631.	1.2	50
82	Substrate radical intermediates in soluble methane monooxygenase. <i>Biochemical and Biophysical Research Communications</i> , 2005, 338, 254-261.	1.0	12
83	Site-directed mutagenesis and spectroscopic studies of the iron-binding site of (S)-2-hydroxypropylphosphonic acid epoxidase. <i>Archives of Biochemistry and Biophysics</i> , 2005, 442, 82-91.	1.4	13
84	Enzymatic Mechanism of Fe-Only Hydrogenase: A Density Functional Study on $\text{H}\ddot{\text{a}}\text{H}$ Making/Breaking at the Diiron Cluster with Concerted Proton and Electron Transfers. <i>Inorganic Chemistry</i> , 2004, 43, 923-930.	1.9	67
85	MauG, a Novel Diheme Protein Required for Tryptophan Tryptophylquinone Biogenesis. <i>Biochemistry</i> , 2003, 42, 7318-7325.	1.2	123
86	Biochemical and Spectroscopic Studies on (S)-2-Hydroxypropylphosphonic Acid Epoxidase: A Novel Mononuclear Non-heme Iron Enzyme. <i>Biochemistry</i> , 2003, 42, 11577-11586.	1.2	45
87	$\text{O}_2$ - and $\alpha$ -Ketoglutarate-Dependent Tyrosyl Radical Formation in TauD, an $\alpha$ -Keto Acid-Dependent Non-Heme Iron Dioxygenase. <i>Biochemistry</i> , 2003, 42, 1854-1862.	1.2	110
88	An Engineered CuA Amicyanin Capable of Intermolecular Electron Transfer Reactions. <i>Journal of Biological Chemistry</i> , 2003, 278, 47269-47274.	1.6	21
89	Interconversion of two oxidized forms of taurine/ $\alpha$ -ketoglutarate dioxygenase, a non-heme iron hydroxylase: Evidence for bicarbonate binding. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2003, 100, 3790-3795.	3.3	49
90	Chemical reduction of the diferric/radical center in protein R2 from mouse ribonucleotide reductase is independent of the proposed radical transfer pathway. <i>Inorganica Chimica Acta</i> , 2002, 331, 65-72.	1.2	1

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91	Reduction of Escherichia coli ribonucleotide reductase subunit R2 with eight water-soluble ferrocene derivatives. <i>Inorganica Chimica Acta</i> , 2002, 337, 83-90.	1.2	13
92	Alternative Reactivity of an Î±-Ketoglutarate-Dependent Iron(II) Oxygenase:Â Enzyme Self-Hydroxylation. <i>Journal of the American Chemical Society</i> , 2001, 123, 5126-5127.	6.6	94
93	Resonance Raman Studies of the Iron(II)âˆ™-Keto Acid Chromophore in Model and Enzyme Complexes. <i>Journal of the American Chemical Society</i> , 2001, 123, 5022-5029.	6.6	55
94	EPR evidence of two structurally different diferric sites in Mycobacterium tuberculosis R2-2 ribonucleotide reductase protein. <i>Journal of Inorganic Biochemistry</i> , 2000, 80, 213-218.	1.5	3
95	Yeast ribonucleotide reductase has a heterodimeric iron-radical-containing subunit. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2000, 97, 2474-2479.	3.3	84
96	Electron Paramagnetic Resonance Evidence for a Novel Interconversion of [3Fe-4S] <sup>+</sup> and [4Fe-4S] <sup>+</sup> Clusters with Endogenous Iron and Sulfide in Anaerobic Ribonucleotide Reductase Activase in Vitro. <i>Journal of Biological Chemistry</i> , 2000, 275, 12367-12373.	1.6	45
97	The Anaerobic (Class III) Ribonucleotide Reductase from <i>Lactococcus lactis</i> . <i>Journal of Biological Chemistry</i> , 2000, 275, 2463-2471.	1.6	44
98	Heterogeneity of the Local Electrostatic Environment of the Tyrosyl Radical in Mycobacterium tuberculosis Ribonucleotide Reductase Observed by High-Field Electron Paramagnetic Resonance. <i>Journal of the American Chemical Society</i> , 2000, 122, 1974-1978.	6.6	30
99	Sequential Mechanism of Methane Dehydrogenation over Metal (Mo or W) Oxide and Carbide Catalysts. <i>Journal of Physical Chemistry A</i> , 2000, 104, 4505-4513.	1.1	28
100	The Tyrosyl Free Radical of Recombinant Ribonucleotide Reductase from Mycobacterium tuberculosis Located in a Rigid Hydrophobic Pocketâ€¢. <i>Biochemistry</i> , 1998, 37, 16369-16377.	1.2	50
101	New Paramagnetic Species Formed at the Expense of the Transient Tyrosyl Radical in Mutant Protein R2 F208Y of Escherichia coli Ribonucleotide Reductase. <i>Biochemical and Biophysical Research Communications</i> , 1998, 246, 740-745.	1.0	13
102	Optimal group symmetric localized molecular orbitals. <i>Theoretica Chimica Acta</i> , 1994, 88, 375-381.	0.9	3
103	Symmetry adaptation of configuration basis in MCSCF method. <i>Theoretica Chimica Acta</i> , 1994, 89, 137-145.	0.9	3
104	Radical Trapping Study of the Relaxation of bis-Fe(IV) MauG. , 0, , .		1