

Vahe Bandarian

List of Publications by Year in descending order

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69
papers

2,492
citations

186265

28
h-index

214800

47
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73
all docs

73
docs citations

73
times ranked

2099
citing authors

#	ARTICLE	IF	CITATIONS
1	New developments in RiPP discovery, enzymology and engineering. <i>Natural Product Reports</i> , 2021, 38, 130-239.	10.3	412
2	Comparison of a PreQ1 Riboswitch Aptamer in Metabolite-bound and Free States with Implications for Gene Regulation. <i>Journal of Biological Chemistry</i> , 2011, 286, 24626-24637.	3.4	114
3	The Deazapurine Biosynthetic Pathway Revealed: In Vitro Enzymatic Synthesis of PreQ ₀ from Guanosine 5'-Triphosphate in Four Steps. <i>Biochemistry</i> , 2009, 48, 3847-3852.	2.5	96
4	The Structural Basis for Recognition of the PreQ ₀ Metabolite by an Unusually Small Riboswitch Aptamer Domain. <i>Journal of Biological Chemistry</i> , 2009, 284, 11012-11016.	3.4	93
5	Discovery of epoxyqueuosine (oQ) reductase reveals parallels between halorespiration and tRNA modification. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2011, 108, 7368-7372.	7.1	87
6	Revealing the Quaternary Structure of a Heterogeneous Noncovalent Protein Complex through Surface-Induced Dissociation. <i>Analytical Chemistry</i> , 2011, 83, 2862-2865.	6.5	78
7	Deciphering Deazapurine Biosynthesis: Pathway for Pyrrolopyrimidine Nucleosides Toyocamycin and Sangivamycin. <i>Chemistry and Biology</i> , 2008, 15, 790-798.	6.0	77
8	Radical SAM enzyme QueE defines a new minimal core fold and metal-dependent mechanism. <i>Nature Chemical Biology</i> , 2014, 10, 106-112.	8.0	71
9	Factors modulating conformational equilibria in large modular proteins: A case study with cobalamin-dependent methionine synthase. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2003, 100, 8156-8163.	7.1	68
10	Biosynthesis of pyrrolopyrimidines. <i>Bioorganic Chemistry</i> , 2012, 43, 15-25.	4.1	67
11	Spectroscopic, Steady-State Kinetic, and Mechanistic Characterization of the Radical SAM Enzyme QueE, Which Catalyzes a Complex Cyclization Reaction in the Biosynthesis of 7-Deazapurines. <i>Biochemistry</i> , 2013, 52, 188-198.	2.5	67
12	Ethanolamine Ammonia-Lyase Has a Base-On Binding Mode for Coenzyme B12. <i>Archives of Biochemistry and Biophysics</i> , 1999, 370, 138-141.	3.0	64
13	An informatic framework for decoding protein complexes by top-down mass spectrometry. <i>Nature Methods</i> , 2016, 13, 237-240.	19.0	59
14	Refining the Structural Model of a Heterohexameric Protein Complex: Surface Induced Dissociation and Ion Mobility Provide Key Connectivity and Topology Information. <i>ACS Central Science</i> , 2015, 1, 477-487.	11.3	57
15	Biochemical and Spectroscopic Characterization of a Radical S-Adenosyl-methionine Enzyme Involved in the Formation of a Peptide Thioether Cross-Link. <i>Biochemistry</i> , 2016, 55, 2122-2134.	2.5	55
16	Cobalamin-Dependent and Cobalamin-Independent Methionine Synthases: Are There Two Solutions to the Same Chemical Problem?. <i>Helvetica Chimica Acta</i> , 2003, 86, 3939-3954.	1.6	54
17	The Radical S-Adenosyl-methionine Enzyme MftC Catalyzes an Oxidative Decarboxylation of the C-Terminus of the MftA Peptide. <i>Biochemistry</i> , 2016, 55, 2813-2816.	2.5	52
18	Dioldehydratase Binds Coenzyme B12 in the Base-On Mode: ESR Investigations on Cob(II)alamin. <i>Angewandte Chemie - International Edition</i> , 1998, 37, 625-627.	13.8	50

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19	<i>Escherichia coli</i> QueD Is a 6-Carboxy-5,6,7,8-tetrahydropterin Synthase. <i>Biochemistry</i> , 2009, 48, 2301-2303.	2.5	50
20	Phospholipase D Toxins of Brown Spider Venom Convert Lysophosphatidylcholine and Sphingomyelin to Cyclic Phosphates. <i>PLoS ONE</i> , 2013, 8, e72372.	2.5	43
21	Structural and spectroscopic analyses of the sporulation killing factor biosynthetic enzyme SkfB, a bacterial AdoMet radical sactisynthase. <i>Journal of Biological Chemistry</i> , 2018, 293, 17349-17361.	3.4	43
22	Pyruvate Is the Source of the Two Carbons That Are Required for Formation of the Imidazoline Ring of 4-Demethylwyosine. <i>Biochemistry</i> , 2011, 50, 10573-10575.	2.5	40
23	Inhibition of Lysine 2,3-Aminomutase by the Alternative Substrate 4-Thialysine and Characterization of the 4-Thialysyl Radical Intermediate. <i>Archives of Biochemistry and Biophysics</i> , 2001, 387, 281-288.	3.0	36
24	Spectroelectrochemical Characterization of the Metal Centers in Carbon Monoxide Dehydrogenase (CODH) and Nickel-deficient CODH from <i>Rhodospirillum rubrum</i> . <i>Journal of Biological Chemistry</i> , 1996, 271, 7973-7977.	3.4	34
25	Variable Substrate Preference among Phospholipase D Toxins from Sicariid Spiders. <i>Journal of Biological Chemistry</i> , 2015, 290, 10994-11007.	3.4	34
26	The Copper-Inducible cin Operon Encodes an Unusual Methionine-Rich Azurin-Like Protein and a Pre-Q0 Reductase in <i>Pseudomonas putida</i> KT2440. <i>Journal of Bacteriology</i> , 2007, 189, 5361-5371.	2.2	31
27	Chemical and Biological Reduction of the Radical SAM Enzyme CPH Synthase. <i>Biochemistry</i> , 2015, 54, 2903-2910.	2.5	31
28	SkfB Abstracts a Hydrogen Atom from C ₁₂ on SkfA To Initiate Thioether Cross-Link Formation. <i>Biochemistry</i> , 2016, 55, 4131-4134.	2.5	31
29	7-Carboxy-7-deazaguanine Synthase: A Radical S-Adenosyl-methionine Enzyme with Polar Tendencies. <i>Journal of the American Chemical Society</i> , 2017, 139, 1912-1920.	13.7	30
30	A Single Enzyme Transforms a Carboxylic Acid into a Nitrile through an Amide Intermediate. <i>Angewandte Chemie - International Edition</i> , 2015, 54, 10627-10629.	13.8	29
31	Molecular basis of cobalamin-dependent RNA modification. <i>Nucleic Acids Research</i> , 2016, 44, gkw806.	14.5	29
32	Biochemical and Spectroscopic Studies of Epoxyqueuosine Reductase: A Novel Iron-Sulfur Cluster- and Cobalamin-Containing Protein Involved in the Biosynthesis of Queuosine. <i>Biochemistry</i> , 2015, 54, 4927-4935.	2.5	27
33	The Alpha Subunit of Nitrile Hydratase Is Sufficient for Catalytic Activity and Post-Translational Modification. <i>Biochemistry</i> , 2014, 53, 3990-3994.	2.5	24
34	Characterization of a Unique Coenzyme B6 Radical in the Ascarylose Biosynthetic Pathway. <i>Journal of the American Chemical Society</i> , 2000, 122, 4239-4240.	13.7	23
35	Radical SAM enzymes involved in the biosynthesis of purine-based natural products. <i>Biochimica Et Biophysica Acta - Proteins and Proteomics</i> , 2012, 1824, 1245-1253.	2.3	22
36	Radical mediated ring formation in the biosynthesis of the hypermodified tRNA base wybutosine. <i>Current Opinion in Chemical Biology</i> , 2013, 17, 613-618.	6.1	22

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37	Biochemical and Structural Studies of 6-Carboxy-5,6,7,8-tetrahydropterin Synthase Reveal the Molecular Basis of Catalytic Promiscuity within the Tunnel-fold Superfamily. <i>Journal of Biological Chemistry</i> , 2014, 289, 23641-23652.	3.4	21
38	Metabolite Activation of Crassulacean Acid Metabolism and C4 Phosphoenolpyruvate Carboxylase. <i>Plant Physiology</i> , 1992, 100, 1411-1416.	4.8	19
39	A Radical Clock Probe Uncouples H Atom Abstraction from Thioether Cross-Link Formation by the Radical <i>S</i> -Adenosyl-methionine Enzyme SkfB. <i>Biochemistry</i> , 2018, 57, 4816-4823.	2.5	19
40	Measurement of Energetics of Conformational Change in Cobalamin-Dependent Methionine Synthase. <i>Methods in Enzymology</i> , 2004, 380, 152-169.	1.0	15
41	Radical-mediated ring contraction in the biosynthesis of 7-deazapurines. <i>Current Opinion in Structural Biology</i> , 2015, 35, 116-124.	5.7	15
42	A Radical Intermediate in <i>Bacillus subtilis</i> QueE during Turnover with the Substrate Analogue 6-Carboxypterin. <i>Journal of the American Chemical Society</i> , 2018, 140, 1753-1759.	13.7	15
43	TYW1: A Radical SAM Enzyme Involved in the Biosynthesis of Wybutosine Bases. <i>Methods in Enzymology</i> , 2018, 606, 119-153.	1.0	15
44	Mechanistic Studies of the Radical <i>S</i> -Adenosyl-methionine Enzyme 4-Demethylwyosine Synthase Reveal the Site of Hydrogen Atom Abstraction. <i>Biochemistry</i> , 2015, 54, 3569-3572.	2.5	14
45	The Creatininase Homolog MftE from <i>Mycobacterium smegmatis</i> Catalyzes a Peptide Cleavage Reaction in the Biosynthesis of a Novel Ribosomally Synthesized Post-translationally Modified Peptide (RiPP). <i>Journal of Biological Chemistry</i> , 2017, 292, 4371-4381.	3.4	14
46	Deconvoluting the Reduction Potentials for the Three [4Fe-4S] Clusters in an AdoMet Radical SCIFF Maturase. <i>Biochemistry</i> , 2018, 57, 6050-6053.	2.5	13
47	Biochemical and Structural Characterization of a Schiff Base in the Radical-Mediated Biosynthesis of 4-Demethylwyosine by TYW1. <i>Journal of the American Chemical Society</i> , 2018, 140, 6842-6852.	13.7	13
48	Probing Nitrogen-Sensitive Steps in the Free-Radical-Mediated Deamination of Amino Alcohols by Ethanolamine Ammonia-Lyase. <i>Journal of the American Chemical Society</i> , 2006, 128, 7120-7121.	13.7	12
49	Human Viperin Causes Radical SAM-Dependent Elongation of <i>Escherichia coli</i> , Hinting at Its Physiological Role. <i>Biochemistry</i> , 2017, 56, 3874-3876.	2.5	12
50	Pathways of thymidine hypermodification. <i>Nucleic Acids Research</i> , 2022, 50, 3001-3017.	14.5	12
51	Crystal structure of AdoMet radical enzyme 7-carboxy-7-deazaguanine synthase from <i>Escherichia coli</i> suggests how modifications near [4Fe-4S] cluster engender flavodoxin specificity. <i>Protein Science</i> , 2019, 28, 202-215.	7.6	11
52	New Role for Radical SAM Enzymes in the Biosynthesis of Thio(seleno)oxazole RiPP Natural Products. <i>Biochemistry</i> , 2021, 60, 3347-3361.	2.5	11
53	Analysis of Electrochemical Properties of <i>S</i> -Adenosyl-methionine and Implications for Its Role in Radical SAM Enzymes. <i>Journal of the American Chemical Society</i> , 2019, 141, 11019-11026.	13.7	10
54	A tRNA modifying enzyme as a tunable regulatory nexus for bacterial stress responses and virulence. <i>Nucleic Acids Research</i> , 2022, 50, 7570-7590.	14.5	8

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55	Eukaryotic TYW1 Is a Radical SAM Flavoenzyme. <i>Biochemistry</i> , 2021, 60, 2179-2185.	2.5	7
56	A Protein-derived Oxygen Is the Source of the Amide Oxygen of Nitrile Hydratases. <i>Journal of Biological Chemistry</i> , 2016, 291, 7822-7829.	3.4	6
57	QueE: A Radical SAM Enzyme Involved in the Biosynthesis of 7-Deazapurine Containing Natural Products. <i>Methods in Enzymology</i> , 2018, 606, 95-118.	1.0	6
58	Spectroscopic and Computational Investigation of the Epoxyqueuosine Reductase QueG Reveals Intriguing Similarities with the Reductive Dehalogenase PceA. <i>Biochemistry</i> , 2022, 61, 195-205.	2.5	5
59	Site-Specific Profiling of 4-Thiouridine Across Transfer RNA Genes in <i>Escherichia coli</i> . <i>ACS Omega</i> , 2022, 7, 4011-4025.	3.5	5
60	Journey on the Radical SAM Road as an Accidental Pilgrim. <i>ACS Bio & Med Chem Au</i> , 2022, 2, 187-195.	3.7	4
61	Radical SAM Enzymes Involved in Modifications of RiPP Natural Products. , 2020, , 489-519.		2
62	Delivery of tailor-made cobalamin to methylmalonyl-CoA mutase. <i>Nature Chemical Biology</i> , 2008, 4, 158-159.	8.0	0
63	Preface. <i>Methods in Enzymology</i> , 2018, 606, xv-xvi.	1.0	0
64	Redox Mediated Modifications of tRNA Bases. , 2020, , 442-464.		0
65	Functions of three GTP cyclohydrolase II proteins of <i>S. coelicolor</i> . <i>FASEB Journal</i> , 2006, 20, LB54.	0.5	0
66	Novel enzymatic transformations in secondary metabolism and tRNA modification. <i>FASEB Journal</i> , 2013, 27, 337.1.	0.5	0
67	Investigation of the Radical SAM Enzyme CDG Synthase. <i>FASEB Journal</i> , 2015, 29, 572.12.	0.5	0
68	B 12 in a New Light: Queuosine tRNA Modification. <i>FASEB Journal</i> , 2015, 29, 573.38.	0.5	0
69	Exploring the biosynthesis of hypermodified bases one step at a time. <i>FASEB Journal</i> , 2018, 32, 381.1.	0.5	0