Thomas A Bobik

List of Publications by Year
in descending order

68	4,397	101543 36	114465 63
papers	citations	h-index	g-index

69	69	69	2440
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	The Propanediol Utilization (<i>pdu</i>) Operon of <i>Salmonella enterica</i> Serovar Typhimurium LT2 Includes Genes Necessary for Formation of Polyhedral Organelles Involved in Coenzyme B ₁₂ -Dependent 1,2-Propanediol Degradation. Journal of Bacteriology, 1999, 181, 5967-5975.	2.2	310
2	Short N-terminal sequences package proteins into bacterial microcompartments. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 7509-7514.	7.1	214
3	Diverse Bacterial Microcompartment Organelles. Microbiology and Molecular Biology Reviews, 2014, 78, 438-468.	6.6	197
4	Microcompartments for B ₁₂ -Dependent 1,2-Propanediol Degradation Provide Protection from DNA and Cellular Damage by a Reactive Metabolic Intermediate. Journal of Bacteriology, 2008, 190, 2966-2971.	2.2	195
5	The Alternative Electron Acceptor Tetrathionate Supports B 12 -Dependent Anaerobic Growth of Salmonella enterica Serovar Typhimurium on Ethanolamine or 1,2-Propanediol. Journal of Bacteriology, 2001, 183, 2463-2475.	2.2	194
6	Bacterial microcompartments: their properties and paradoxes. BioEssays, 2008, 30, 1084-1095.	2.5	169
7	Protein Content of Polyhedral Organelles Involved in Coenzyme B 12 -Dependent Degradation of 1,2-Propanediol in Salmonella enterica Serovar Typhimurium LT2. Journal of Bacteriology, 2003, 185, 5086-5095.	2.2	147
8	PduA Is a Shell Protein of Polyhedral Organelles Involved in Coenzyme B ₁₂ -Dependent Degradation of 1,2-Propanediol in <i>Salmonella enterica</i> Serovar Typhimurium LT2. Journal of Bacteriology, 2002, 184, 1253-1261.	2.2	136
9	The protein shells of bacterial microcompartment organelles. Current Opinion in Structural Biology, 2011, 21, 223-231.	5.7	128
10	Structural Insight into the Mechanisms of Transport across the Salmonella enterica Pdu Microcompartment Shell. Journal of Biological Chemistry, 2010, 285, 37838-37846.	3.4	127
11	Interactions between the termini of lumen enzymes and shell proteins mediate enzyme encapsulation into bacterial microcompartments. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 14995-15000.	7.1	127
12	Functional Genomic, Biochemical, and Genetic Characterization of the Salmonella pduO Gene, an ATP:Cob(I)alamin Adenosyltransferase Gene. Journal of Bacteriology, 2001, 183, 1577-1584.	2.2	123
13	Polyhedral organelles compartmenting bacterial metabolic processes. Applied Microbiology and Biotechnology, 2006, 70, 517-525.	3.6	120
14	Bacterial microcompartments: widespread prokaryotic organelles for isolation and optimization of metabolic pathways. Molecular Microbiology, 2015, 98, 193-207.	2.5	120
15	Selective molecular transport through the protein shell of a bacterial microcompartment organelle. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 2990-2995.	7.1	119
16	Biochemistry of coenzyme B12-dependent glycerol and diol dehydratases and organization of the encoding genes. FEMS Microbiology Reviews, 1998, 22, 553-566.	8.6	118
17	Structure of the PduU Shell Protein from the Pdu Microcompartment of Salmonella. Structure, 2008, 16, 1324-1332.	3.3	102
18	The N-Terminal Region of the Medium Subunit (PduD) Packages Adenosylcobalamin-Dependent Diol Dehydratase (PduCDE) into the Pdu Microcompartment. Journal of Bacteriology, 2011, 193, 5623-5628.	2.2	98

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19	PduP is a coenzyme-a-acylating propionaldehyde dehydrogenase associated with the polyhedral bodies involved in B 12 -dependent 1,2-propanediol degradation by Salmonella enterica serovar Typhimurium LT2. Archives of Microbiology, 2003, 180, 353-361.	2.2	94
20	Genetic Analysis of the Protein Shell of the Microcompartments Involved in Coenzyme B ₁₂ -Dependent 1,2-Propanediol Degradation by <i>Salmonella</i>. Journal of Bacteriology, 2011, 193, 1385-1392.	2.2	93
21	Evidence that the heterodisulfide of coenzyme M and 7-mercaptoheptanoylthreonine phosphate is a product of the methylreductase reaction in Methanobacterium. Biochemical and Biophysical Research Communications, 1987, 149, 455-460.	2.1	89
22	The PduQ Enzyme Is an Alcohol Dehydrogenase Used to Recycle NAD+ Internally within the Pdu Microcompartment of Salmonella enterica. PLoS ONE, 2012, 7, e47144.	2.5	81
23	Identification of the Human and Bovine ATP:Cob(I)alamin Adenosyltransferase cDNAs Based on Complementation of a Bacterial Mutant. Journal of Biological Chemistry, 2003, 278, 9227-9234.	3.4	72
24	PduL Is an Evolutionarily Distinct Phosphotransacylase Involved in B 12 -Dependent 1,2-Propanediol Degradation by Salmonella enterica Serovar Typhimurium LT2. Journal of Bacteriology, 2007, 189, 1589-1596.	2.2	67
25	Alanine Scanning Mutagenesis Identifies an Asparagineâ€“Arginineâ€“Lysine Triad Essential to Assembly of the Shell of the Pdu Microcompartment. Journal of Molecular Biology, 2014, 426, 2328-2345.	4.2	66
26	The PduM Protein Is a Structural Component of the Microcompartments Involved in Coenzyme B ₁₂ -Dependent 1,2-Propanediol Degradation by Salmonella enterica. Journal of Bacteriology, 2012, 194, 1912-1918.	2.2	64
27	Human ATP:Cob(I)alamin Adenosyltransferase and Its Interaction with Methionine Synthase Reductase. Journal of Biological Chemistry, 2004, 279, 47536-47542.	3.4	57
28	The Shells of BMC-Type Microcompartment Organelles in Bacteria. Journal of Molecular Microbiology and Biotechnology, 2013, 23, 290-299.	1.0	56
29	Purification and Initial Characterization of the Salmonella enterica PduO ATP:Cob(I)alamin Adenosyltransferase. Journal of Bacteriology, 2004, 186, 7881-7887.	2.2	53
30	The PduX Enzyme of Salmonella enterica Is an l-Threonine Kinase Used for Coenzyme B12 Synthesis. Journal of Biological Chemistry, 2008, 283, 11322-11329.	3.4	52
31	Biochemical evidence that the pduS gene encodes a bifunctional cobalamin reductase. Microbiology (United Kingdom), 2005, 151, 1169-1177.	1.8	45
32	Identification of the Human Methylmalonyl-CoA Racemase Gene Based on the Analysis of Prokaryotic Gene Arrangements. Journal of Biological Chemistry, 2001, 276, 37194-37198.	3.4	43
33	Characterization of the PduS Cobalamin Reductase of <i>Salmonella</i> <i>enterica</i> and Its Role in the Pdu Microcompartment. Journal of Bacteriology, 2010, 192, 5071-5080.	2.2	42
34	Coproduction of Acetaldehyde and Hydrogen during Glucose Fermentation by Escherichia coli. Applied and Environmental Microbiology, 2011, 77, 6441-6450.	3.1	42
35	A Bacterial Microcompartment Is Used for Choline Fermentation by Escherichia coli 536. Journal of Bacteriology, 2018, 200, .	2.2	41
36	Formation of Isobutene from 3-Hydroxy-3-Methylbutyrate by Diphosphomevalonate Decarboxylase. Applied and Environmental Microbiology, 2010, 76, 8004-8010.	3.1	37

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37	The N Terminus of the PduB Protein Binds the Protein Shell of the Pdu Microcompartment to Its Enzymatic Core. Journal of Bacteriology, 2017, 199, .	2.2	37
38	The PduL Phosphotransacylase Is Used To Recycle Coenzyme A within the Pdu Microcompartment. Journal of Bacteriology, 2015, 197, 2392-2399.	2.2	35
39	Molecular Dynamics Simulations of Selective Metabolite Transport across the Propanediol Bacterial Microcompartment Shell. Journal of Physical Chemistry B, 2017, 121, 8149-8154.	2.6	35
40	Fermentative production of short-chain fatty acids in Escherichia coli. Microbiology (United) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 622 T	1.8	34
41	The function of the PduJ microcompartment shell protein is determined by the genomic position of its encoding gene. Molecular Microbiology, 2016, 101, 770-783.	2.5	33
42	In Salmonella enterica, Ethanolamine Utilization Is Repressed by 1,2-Propanediol To Prevent Detrimental Mixing of Components of Two Different Bacterial Microcompartments. Journal of Bacteriology, 2015, 197, 2412-2421.	2.2	32
43	Exploiting genomic patterns to discover new supramolecular protein assemblies. Protein Science, 2009, 18, 69-79.	7.6	31
44	Expanding the genetic code of Salmonella with non-canonical amino acids. Scientific Reports, 2016, 6, 39920.	3.3	31
45	Advances in the World of Bacterial Microcompartments. Trends in Biochemical Sciences, 2021, 46, 406-416.	7.5	28
46	Structure of a methanofuran derivative found in cell extracts of Methanosarcina barkeri. Archives of Biochemistry and Biophysics, 1987, 254, 430-436.	3.0	27
47	Kinetic and Functional Analysis of l-Threonine Kinase, the PduX Enzyme of Salmonella enterica. Journal of Biological Chemistry, 2009, 284, 20240-20248.	3.4	26
48	Exploring Bacterial Organelle Interactomes: A Model of the Protein-Protein Interaction Network in the Pdu Microcompartment. PLoS Computational Biology, 2015, 11, e1004067.	3.2	24
49	Prokaryotic Organelles: Bacterial Microcompartments in <i>E. coli</i> and <i>Salmonella</i>. EcoSal Plus, 2020, 9, .	5.4	22
50	Structure of a bacterial microcompartment shell protein bound to a cobalamin cofactor. Acta Crystallographica Section F, Structural Biology Communications, 2014, 70, 1584-1590.	0.8	21
51	Genetic Characterization of a Glycyl Radical Microcompartment Used for 1,2-Propanediol Fermentation by Uropathogenic Escherichia coli CFT073. Journal of Bacteriology, 2020, 202, .	2.2	15
52	Functional Characterization and Mutation Analysis of Human ATP:Cob(I)alamin Adenosyltransferase. Biochemistry, 2008, 47, 2806-2813.	2.5	13
53	Engineering the PduT shell protein to modify the permeability of the 1,2-propanediol microcompartment of Salmonella. Microbiology (United Kingdom), 2019, 165, 1355-1364.	1.8	13
54	Structure of Dihydromethanopterin Reductase, a Cubic Protein Cage for Redox Transfer. Journal of Biological Chemistry, 2014, 289, 8852-8864.	3.4	11

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55	The Cobalamin-Dependent Gene Cluster of Listeria monocytogenes: Implications for Virulence, Stress Response, and Food Safety. Frontiers in Microbiology, 2020, 11, 601816.	3.5	11
56	Symmetry breaking and structural polymorphism in a bacterial microcompartment shell protein for choline utilization. Protein Science, 2020, 29, 2201-2212.	7.6	11
57	MCPdb: The bacterial microcompartment database. PLoS ONE, 2021, 16, e0248269.	2.5	11
58	HPLC assay for methylmalonylâ€“CoA epimerase. Analytical and Bioanalytical Chemistry, 2003, 375, 344-349.	3.7	10
59	Oxygen Generation via Water Splitting by a Novel Biogenic Metal Ion-Binding Compound. Applied and Environmental Microbiology, 2021, 87, e0028621.	3.1	8
60	Bacterial Microcompartments. Microbe Magazine, 2007, 2, 25-31.	0.4	7
61	Selective molecular transport across the protein shells of bacterial microcompartments. Current Opinion in Microbiology, 2021, 62, 76-83.	5.1	6
62	Biochemistry of coenzyme B12-dependent glycerol and diol dehydratases and organization of the encoding genes. FEMS Microbiology Reviews, 1998, 22, 553-566.	8.6	6
63	Formyl-methanofuran synthesis inMethanobacterium thermoautotrophicum. FEMS Microbiology Letters, 1990, 87, 323-326.	1.8	5
64	Formyl-methanofuran synthesis in Methanobacterium thermoautotrophicum. FEMS Microbiology Letters, 1990, 87, 323-326.	1.8	5
65	MbnC Is Not Required for the Formation of the N-Terminal Oxazolone in the Methanobactin from Methylosinus trichosporium OB3b. Applied and Environmental Microbiology, 2022, 88, AEM0184121.	3.1	5
66	In vivo expression of human ATP:cob(I)alamin adenosyltransferase (ATR) using recombinant adeno-associated virus (rAAV) serotypes 2 and 8. Journal of Gene Medicine, 2007, 9, 462-469.	2.8	3
67	Structure of the methanofuran/methanopterin-biosynthetic enzyme MJ1099 from<i>Methanocaldococcus jannaschii</i>. Acta Crystallographica Section F, Structural Biology Communications, 2014, 70, 1472-1479.	0.8	2
68	Facile methods for heterologous production of bacterial microcompartments in diverse host species. Microbial Biotechnology, 2018, 11, 160-162.	4.2	1