

Carl E Bauer

List of Publications by Year in descending order

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101
papers

6,075
citations

53794

45
h-index

74163

75
g-index

103
all docs

103
docs citations

103
times ranked

3528
citing authors

#	ARTICLE	IF	CITATIONS
1	Molecular Evidence for the Early Evolution of Photosynthesis. <i>Science</i> , 2000, 289, 1724-1730.	12.6	498
2	AppA Is a Blue Light Photoreceptor that Antirepresses Photosynthesis Gene Expression in <i>Rhodobacter sphaeroides</i> . <i>Cell</i> , 2002, 110, 613-623.	28.9	384
3	Directed Mutational Analysis of Bacteriochlorophyll a Biosynthesis in <i>Rhodobacter capsulatus</i> . <i>Journal of Molecular Biology</i> , 1994, 237, 622-640.	4.2	224
4	Mechanisms for Redox Control of Gene Expression. <i>Annual Review of Microbiology</i> , 1999, 53, 495-523.	7.3	213
5	RegB/RegA, a Highly Conserved Redox-Responding Global Two-Component Regulatory System. <i>Microbiology and Molecular Biology Reviews</i> , 2004, 68, 263-279.	6.6	192
6	Regulatory factors controlling photosynthetic reaction center and light-harvesting gene expression in <i>Rhodobacter capsulatus</i> . <i>Cell</i> , 1992, 68, 945-954.	28.9	188
7	Bacterial Photoreceptor with Similarity to Photoactive Yellow Protein and Plant Phytochromes. <i>Science</i> , 1999, 285, 406-409.	12.6	187
8	GENETIC ANALYSIS OF CHLOROPHYLL BIOSYNTHESIS. <i>Annual Review of Genetics</i> , 1997, 31, 61-89.	7.6	172
9	Genetic evidence for superoperonal organization of genes for photosynthesis pigments and pigment-binding proteins in <i>Rhodobacter capsulatus</i> . <i>Molecular Genetics and Genomics</i> , 1989, 218, 1-12.	2.4	166
10	Reconstitution of Light-independent Protochlorophyllide Reductase from Purified Bchl and BchN-BchB Subunits. <i>Journal of Biological Chemistry</i> , 2000, 275, 23583-23588.	3.4	153
11	Regulatory Circuits Controlling Photosynthesis Gene Expression. <i>Cell</i> , 1996, 85, 5-8.	28.9	105
12	Characterization of Chlorophyll a and Bacteriochlorophyll a Synthases by Heterologous Expression in <i>Escherichia coli</i> . <i>Journal of Biological Chemistry</i> , 1997, 272, 9671-9676.	3.4	101
13	The RegB/RegA two-component regulatory system controls synthesis of photosynthesis and respiratory electron transfer components in <i>Rhodobacter capsulatus</i> . <i>Journal of Molecular Biology</i> , 2001, 309, 121-138.	4.2	99
14	Redox and light regulation of gene expression in photosynthetic prokaryotes. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2003, 358, 147-154.	4.0	97
15	Chemosensory signaling systems that control bacterial survival. <i>Trends in Microbiology</i> , 2014, 22, 389-398.	7.7	96
16	Expression of Uptake Hydrogenase and Molybdenum Nitrogenase in <i>Rhodobacter capsulatus</i> Is Coregulated by the RegB-RegA Two-Component Regulatory System. <i>Journal of Bacteriology</i> , 2000, 182, 2831-2837.	2.2	92
17	Identification of a Ubiquinone-binding Site That Affects Autophosphorylation of the Sensor Kinase RegB. <i>Journal of Biological Chemistry</i> , 2006, 281, 6768-6775.	3.4	90
18	Signal transduction by the global regulator RegB is mediated by a redox-active cysteine. <i>EMBO Journal</i> , 2003, 22, 4699-4708.	7.8	89

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19	Extent of sequence homology required for bacteriophage lambda site-specific recombination. <i>Journal of Molecular Biology</i> , 1985, 181, 187-197.	4.2	88
20	Repression of photosynthesis gene expression by formation of a disulfide bond in CrtJ. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2002, 99, 7078-7083.	7.1	81
21	DNA Binding Characteristics of CrtJ. <i>Journal of Biological Chemistry</i> , 1997, 272, 18391-18396.	3.4	80
22	Isolation and in Vitro Phosphorylation of Sensory Transduction Components Controlling Anaerobic Induction of Light Harvesting and Reaction Center Gene Expression in <i>Rhodobacter capsulatus</i> . <i>Biochemistry</i> , 1995, 34, 391-396.	2.5	79
23	Macroscopic phototactic behavior of the purple photosynthetic bacterium <i>Rhodospirillum centenum</i> . <i>Archives of Microbiology</i> , 1995, 163, 1-6.	2.2	79
24	DNA Binding Characteristics of RegA. <i>Journal of Biological Chemistry</i> , 1998, 273, 18509-18513.	3.4	77
25	Involvement of a Che-like signal transduction cascade in regulating cyst cell development in <i>Rhodospirillum centenum</i> . <i>Molecular Microbiology</i> , 2005, 56, 1457-1466.	2.5	77
26	The superoperon organization of genes for pigment biosynthesis and reaction center proteins is a conserved feature in <i>Rhodobacter capsulatus</i> : analysis of overlapping bchB and puhA transcripts. <i>Molecular Genetics and Genomics</i> , 1991, 228, 433-444.	2.4	71
27	Interaction of CbbR and RegA* Transcription Regulators with the <i>Rhodobacter sphaeroides</i> cbb Promoter-Operator Region. <i>Journal of Biological Chemistry</i> , 2000, 275, 19224-19230.	3.4	69
28	Sulfide-responsive transcriptional repressor SqrR functions as a master regulator of sulfide-dependent photosynthesis. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, 2355-2360.	7.1	68
29	Cyclic GMP controls <i>Rhodospirillum centenum</i> cyst development. <i>Molecular Microbiology</i> , 2011, 79, 600-615.	2.5	67
30	Coordination of Ubiquinol Oxidase and Cytochrome cbb 3 Oxidase Expression by Multiple Regulators in <i>Rhodobacter capsulatus</i> . <i>Journal of Bacteriology</i> , 2002, 184, 2815-2820.	2.2	66
31	Transcription of the <i>Rhodobacter capsulatus</i> nifHDK operon is modulated by the nitrogen source. Construction of plasmid expression vectors based on the nifHDK promoter. <i>Gene</i> , 1988, 65, 269-275.	2.2	62
32	PixE promotes dark oligomerization of the BLUF photoreceptor PixD. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2008, 105, 11715-11719.	7.1	62
33	Autophosphorylation, Phosphotransfer, and DNA-binding Properties of the RegB/RegA Two-component Regulatory System in <i>Rhodobacter capsulatus</i> . <i>Journal of Biological Chemistry</i> , 1999, 274, 16343-16348.	3.4	61
34	RegB Kinase Activity Is Controlled in Part by Monitoring the Ratio of Oxidized to Reduced Ubiquinones in the Ubiquinone Pool. <i>MBio</i> , 2010, 1, .	4.1	61
35	Control of photosystem genes in <i>Rhodobacter capsulatus</i> . <i>Trends in Genetics</i> , 1993, 9, 56-60.	6.7	60
36	Involvement of SenC in Assembly of Cytochrome cbb 3 Oxidase in <i>Rhodobacter capsulatus</i> . <i>Journal of Bacteriology</i> , 2005, 187, 8081-8087.	2.2	58

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37	Multiple regulators and their interactions in vivo and in vitro with the cbb regulons of <i>Rhodobacter capsulatus</i> 11 Edited by N.-H. Chua. <i>Journal of Molecular Biology</i> , 2000, 300, 1079-1099.	4.2	55
38	Vitamin B ₁₂ regulates photosystem gene expression via the <i>CrtJ</i> antirepressor <i>AerR</i> in <i>Rhodobacter capsulatus</i> . <i>Molecular Microbiology</i> , 2014, 91, 649-664.	2.5	53
39	Structural and Functional Analyses of Photosynthetic Regulatory Genes <i>regA</i> and <i>regB</i> from <i>Rhodovulum sulfidophilum</i> , <i>Roseobacter denitrificans</i> , and <i>Rhodobacter capsulatus</i> . <i>Journal of Bacteriology</i> , 1999, 181, 4205-4215.	2.2	53
40	A che-like signal transduction cascade involved in controlling flagella biosynthesis in <i>Rhodospirillum centenum</i> . <i>Molecular Microbiology</i> , 2005, 55, 1390-1402.	2.5	52
41	Regulation of stringent factor by branched-chain amino acids. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, 6446-6451.	7.1	52
42	<i>RegB/RegA</i> , A Global Redox-Responding Two-Component System. <i>Advances in Experimental Medicine and Biology</i> , 2008, 631, 131-148.	1.6	52
43	Mutational analysis of integrase arm-type binding sites of bacteriophage lambda. <i>Journal of Molecular Biology</i> , 1986, 192, 513-527.	4.2	49
44	Conservation of the photosynthesis gene cluster in <i>Rhodospirillum centenum</i> . <i>Molecular Microbiology</i> , 1992, 6, 2683-2691.	2.5	48
45	Characterization of cyst cell formation in the purple photosynthetic bacterium <i>Rhodospirillum centenum</i> . <i>Microbiology (United Kingdom)</i> , 2004, 150, 383-390.	1.8	48
46	<i>CrtJ</i> Bound to Distant Binding Sites Interacts Cooperatively to Aerobically Repress Photopigment Biosynthesis and Light Harvesting II Gene Expression in <i>Rhodobacter capsulatus</i> . <i>Journal of Biological Chemistry</i> , 1998, 273, 30762-30769.	3.4	47
47	A genetic enrichment for mutations constructed by oligodeoxynucleotide-directed mutagenesis. <i>Gene</i> , 1985, 37, 73-81.	2.2	46
48	A Cytochrome b Origin of Photosynthetic Reaction Centers: an Evolutionary Link between Respiration and Photosynthesis. <i>Journal of Molecular Biology</i> , 2002, 322, 1025-1037.	4.2	44
49	Isolation of <i>Rhodospirillum centenum</i> Mutants Defective in Phototactic Colony Motility by Transposon Mutagenesis. <i>Journal of Bacteriology</i> , 1998, 180, 1248-1255.	2.2	44
50	Null Mutation of <i>HvrA</i> Compensates for Loss of an Essential <i>relA/spoT</i> -Like Gene in <i>Rhodobacter capsulatus</i> . <i>Journal of Bacteriology</i> , 2004, 186, 235-239.	2.2	43
51	<i>RegB</i> Kinase Activity Is Repressed by Oxidative Formation of Cysteine Sulfenic Acid. <i>Journal of Biological Chemistry</i> , 2013, 288, 4755-4762.	3.4	43
52	<i>Rhodospirillum centenum</i> Utilizes Separate Motor and Switch Components To Control Lateral and Polar Flagellum Rotation. <i>Journal of Bacteriology</i> , 2002, 184, 2429-2438.	2.2	42
53	Phototactic purple bacteria. <i>Nature</i> , 1994, 370, 104-104.	27.8	41
54	Cobalamin's (Vitamin B12) Surprising Function as a Photoreceptor. <i>Trends in Biochemical Sciences</i> , 2016, 41, 647-650.	7.5	40

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55	Hypercyst Mutants in <i>Rhodospirillum centenum</i> Identify Regulatory Loci Involved in Cyst Cell Differentiation. <i>Journal of Bacteriology</i> , 2004, 186, 5834-5841.	2.2	39
56	The Tetrapyrrole Biosynthetic Pathway and Its Regulation in <i>Rhodobacter capsulatus</i> . <i>Advances in Experimental Medicine and Biology</i> , 2010, 675, 229-250.	1.6	37
57	Regulation of hem Gene Expression in <i>Rhodobacter capsulatus</i> by Redox and Photosystem Regulators RegA, CrtJ, FnrL, and AerR. <i>Journal of Molecular Biology</i> , 2004, 342, 1171-1186.	4.2	36
58	Controlling the delicate balance of tetrapyrrole biosynthesis. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2013, 368, 20120262.	4.0	36
59	Aerobic Repression of the <i>Rhodobacter capsulatus</i> bchCPromoter Involves Cooperative Interactions between CrtJ Bound to Neighboring Palindromes. <i>Journal of Biological Chemistry</i> , 1998, 273, 30757-30761.	3.4	33
60	AerR, a Second Aerobic Repressor of Photosynthesis Gene Expression in <i>Rhodobacter capsulatus</i> . <i>Journal of Bacteriology</i> , 2002, 184, 2805-2814.	2.2	33
61	PpsR, a Regulator of Heme and Bacteriochlorophyll Biosynthesis, Is a Heme-sensing Protein. <i>Journal of Biological Chemistry</i> , 2012, 287, 13850-13858.	3.4	33
62	Metabolic flexibility revealed in the genome of the cyst-forming $\hat{\pm}$ -1 proteobacterium <i>Rhodospirillum centenum</i> . <i>BMC Genomics</i> , 2010, 11, 325.	2.8	32
63	Activity of the tetrapyrrole regulator CrtJ is controlled by oxidation of a redox active cysteine located in the DNA binding domain. <i>Molecular Microbiology</i> , 2012, 85, 734-746.	2.5	31
64	In vitro activation and repression of photosynthesis gene transcription in <i>Rhodobacter capsulatus</i> . <i>Molecular Microbiology</i> , 1999, 33, 429-437.	2.5	29
65	Cloning and characterization of the chlorophyll biosynthesis gene chlM from <i>Synechocystis</i> PCC 6803 by complementation of a bacteriochlorophyll biosynthesis mutant of <i>Rhodobacter capsulatus</i> . <i>Plant Molecular Biology</i> , 1996, 30, 1307-1314.	3.9	27
66	RegA Control of Bacteriochlorophyll and Carotenoid Synthesis in <i>Rhodobacter capsulatus</i> . <i>Journal of Bacteriology</i> , 2007, 189, 7765-7773.	2.2	26
67	Regulated Expression of a Highly Conserved Regulatory Gene Cluster Is Necessary for Controlling Photosynthesis Gene Expression in Response to Anaerobiosis in <i>Rhodobacter capsulatus</i> . <i>Journal of Bacteriology</i> , 1999, 181, 4334-4341.	2.2	25
68	The RegA regulon exhibits variability in response to altered growth conditions and differs markedly between <i>Rhodobacter</i> species. <i>Microbial Genomics</i> , 2016, 2, e000081.	2.0	23
69	Phosphate Flow between Hybrid Histidine Kinases CheA3 and CheS3 Controls <i>Rhodospirillum centenum</i> Cyst Formation. <i>PLoS Genetics</i> , 2013, 9, e1004002.	3.5	22
70	The σ -type transcription factor HbrL is a global regulator of iron homeostasis and porphyrin synthesis in <i>Rhodobacter capsulatus</i> . <i>Molecular Microbiology</i> , 2013, 90, 1277-1292.	2.5	21
71	Redox and Light Control the Heme-Sensing Activity of AppA. <i>MBio</i> , 2013, 4, e00563-13.	4.1	21
72	Members of the PpaA/AerR Antirepressor Family Bind Cobalamin. <i>Journal of Bacteriology</i> , 2015, 197, 2694-2703.	2.2	21

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73	The plant growth promoting bacterium <i>Azospirillum brasilense</i> is vertically transmitted in <i>Phaseolus vulgaris</i> (common bean). <i>Symbiosis</i> , 2018, 76, 97-108.	2.3	21
74	Analysis of the <i>puc</i> Operon Promoter from <i>Rhodobacter capsulatus</i> . <i>Journal of Bacteriology</i> , 1998, 180, 4270-4277.	2.2	20
75	Analysis of the FnrL regulon in <i>Rhodobacter capsulatus</i> reveals limited regulon overlap with orthologues from <i>Rhodobacter sphaeroides</i> and <i>Escherichia coli</i> . <i>BMC Genomics</i> , 2015, 16, 895.	2.8	19
76	Component of the <i>Rhodospirillum centenum</i> Photosensory Apparatus with Structural and Functional Similarity to Methyl-Accepting Chemotaxis Protein Chemoreceptors. <i>Journal of Bacteriology</i> , 2001, 183, 171-177.	2.2	18
77	Transcriptome analysis of cyst formation in <i>Rhodospirillum centenum</i> reveals large global changes in expression during cyst development. <i>BMC Genomics</i> , 2015, 16, 68.	2.8	18
78	Tetrapyrrole Biosynthesis in <i>Rhodobacter capsulatus</i> Is Transcriptionally Regulated by the Heme-Binding Regulatory Protein, HbrL. <i>Journal of Bacteriology</i> , 2006, 188, 1567-1576.	2.2	17
79	Characterization of a Glycyl Radical Enzyme Bacterial Microcompartment Pathway in <i>Rhodobacter capsulatus</i> . <i>Journal of Bacteriology</i> , 2019, 201, .	2.2	15
80	The Vitamin B ₁₂ -Dependent Photoreceptor AerR Relieves Photosystem Gene Repression by Extending the Interaction of CrtJ with Photosystem Promoters. <i>MBio</i> , 2017, 8, .	4.1	14
81	Regulation of Photosystem Synthesis in <i>Rhodobacter capsulatus</i> . <i>Photosynthesis Research</i> , 2004, 80, 353-360.	2.9	13
82	Transcriptomic analysis of aerobic respiratory and anaerobic photosynthetic states in <i>Rhodobacter capsulatus</i> and their modulation by global redox regulators RegA, FnrL and CrtJ. <i>Microbial Genomics</i> , 2017, 3, e000125.	2.0	13
83	Differing isoforms of the cobalamin binding photoreceptor AerR oppositely regulate photosystem expression. <i>ELife</i> , 2018, 7, .	6.0	13
84	Insight into the haem d1 biosynthesis pathway in heliobacteria through bioinformatics analysis. <i>Microbiology (United Kingdom)</i> , 2007, 153, 3548-3562.	1.8	12
85	Regulation of aerobic photosystem synthesis in the purple bacterium <i>Rhodospirillum centenum</i> by CrtJ and AerR. <i>Photochemical and Photobiological Sciences</i> , 2008, 7, 1267-1272.	2.9	11
86	Iron homeostasis in the <i>Rhodobacter</i> genus. <i>Advances in Botanical Research</i> , 2013, 66, 289-326.	1.1	10
87	DNA-binding properties of a cGMP-binding CRP homologue that controls development of metabolically dormant cysts of <i>Rhodospirillum centenum</i> . <i>Microbiology (United Kingdom)</i> , 2015, 161, 2256-2264.	1.8	10
88	Transcriptome analysis of <i>Azospirillum brasilense</i> vegetative and cyst states reveals large-scale alterations in metabolic and replicative gene expression. <i>Microbial Genomics</i> , 2018, 4, .	2.0	9
89	Adenylate Charge Regulates Sensor Kinase CheS 3 To Control Cyst Formation in <i>Rhodospirillum centenum</i> . <i>MBio</i> , 2015, 6, e00546-15.	4.1	8
90	The Antirepressor AppA Uses the Novel Flavin-Binding BLUF Domain as a Blue-Light-Absorbing Photoreceptor to Control Photosystem Synthesis. , 2005, , 433-445.		7

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91	Evidence that Altered Cis Element Spacing Affects PpsR Mediated Redox Control of Photosynthesis Gene Expression in <i>Rubrivivax gelatinosus</i> . <i>PLoS ONE</i> , 2015, 10, e0128446.	2.5	6
92	Characterization of Light Harvesting and Reaction Center Complexes from <i>Rhodospirillum rubrum</i> . , 1992, , 19-26.		6
93	Mapping the CgrA regulon of <i>Rhodospirillum rubrum</i> reveals a hierarchical network controlling Gram-negative cyst development. <i>BMC Genomics</i> , 2015, 16, 1066.	2.8	5
94	Evidence of defined temporal expression patterns that lead a Gram-negative cell out of dormancy. <i>PLoS Genetics</i> , 2020, 16, e1008660.	3.5	5
95	Regulating Synthesis of the Purple Bacterial Photosystem. <i>Advances in Photosynthesis and Respiration</i> , 2001, , 67-83.	1.0	5
96	The Maintenance of Iron Homeostasis Among Prokaryotic Phototrophs. , 2017, , 123-161.		4
97	No Light, No Germination: Excitation of the <i>Rhodospirillum rubrum</i> Photosynthetic Apparatus Is Necessary and Sufficient for Cyst Germination. <i>MBio</i> , 2021, 12, .	4.1	2
98	Remembering Robert (Bob) Togasaki (1932–2019): A leader in <i>Chlamydomonas</i> genetics and in plant biology, as well as a teacher par excellence. <i>Photosynthesis Research</i> , 2022, , .	2.9	2
99	Structural Analyses of CrtJ and Its B12-Binding Co-Regulators SAerR and LAerR from the Purple Photosynthetic Bacterium <i>Rhodobacter capsulatus</i> . <i>Microorganisms</i> , 2022, 10, 912.	3.6	2
100	Regulating Synthesis of Cytochromes. <i>Advances in Photosynthesis and Respiration</i> , 2016, , 479-498.	1.0	0
101	The Response Regulator RegA Is a Copper Binding Protein That Covalently Dimerizes When Exposed to Oxygen. <i>Microorganisms</i> , 2022, 10, 934.	3.6	0