Mark Gomelsky

List of Publications by Year
in descending order

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89 papers	8,904 citations	50170 46 h-index	51492 86 g-index
91 all docs	91 docs citations	91 times ranked	6596 citing authors

#	Article	IF	Citations
1	Cyclic di-GMP: the First 25 Years of a Universal Bacterial Second Messenger. Microbiology and Molecular Biology Reviews, 2013, 77, 1-52.	2.9	1,479
2	C-di-GMP: the dawning of a novel bacterial signalling system. Molecular Microbiology, 2005, 57, 629-639.	1.2	593
3	The Ubiquitous Protein Domain EAL Is a Cyclic Diguanylate-Specific Phosphodiesterase: Enzymatically Active and Inactive EAL Domains. Journal of Bacteriology, 2005, 187, 4774-4781.	1.0	515
4	Cyclic Diguanylate Is a Ubiquitous Signaling Molecule in Bacteria: Insights into Biochemistry of the GGDEF Protein Domain. Journal of Bacteriology, 2005, 187, 1792-1798.	1.0	509
5	The PilZ Domain Is a Receptor for the Second Messenger c-di-GMP. Journal of Biological Chemistry, 2006, 281, 30310-30314.	1.6	443
6	BLUF: a novel FAD-binding domain involved in sensory transduction in microorganisms. Trends in Biochemical Sciences, 2002, 27, 497-500.	3.7	380
7	Structure and mechanism of a bacterial light-regulated cyclic nucleotide phosphodiesterase. Nature, 2009, 459, 1015-1018.	13.7	249
8	A postâ€translational, câ€diâ€GMPâ€dependent mechanism regulating flagellar motility. Molecular Microbiology, 2010, 76, 1295-1305.	1.2	206
9	Natural and Engineered Photoactivated Nucleotidyl Cyclases for Optogenetic Applications. Journal of Biological Chemistry, 2010, 285, 41501-41508.	1.6	194
10	A single flavoprotein, AppA, integrates both redox and light signals in Rhodobacter sphaeroides. Molecular Microbiology, 2002, 45, 827-836.	1.2	164
11	Structure of a bacterial BLUF photoreceptor: Insights into blue light-mediated signal transduction. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 12350-12355.	3.3	155
12	Systematic analysis of cyclic diâ€GMP signalling enzymes and their role in biofilm formation and virulence in Yersinia pestis. Molecular Microbiology, 2011, 79, 533-551.	1.2	152
13	An Unorthodox Bacteriophytochrome from Rhodobacter sphaeroides Involved in Turnover of the Second Messenger c-di-GMP. Journal of Biological Chemistry, 2006, 281, 34751-34758.	1.6	148
14	cAMP, c-di-GMP, c-di-AMP and now cGMP: bacteria use them all!. Molecular Microbiology, 2011, 79, 562-565.	1.2	146
15	Light helps bacteria make important lifestyle decisions. Trends in Microbiology, 2011, 19, 441-448.	3.5	140
16	Molecular genetic analysis suggesting interactions between AppA and PpsR in regulation of photosynthesis gene expression in Rhodobacter sphaeroides 2.4.1. Journal of Bacteriology, 1997, 179, 128-134.	1.0	123
17	Cyclic di-GMP is Essential for the Survival of the Lyme Disease Spirochete in Ticks. PLoS Pathogens, 2011, 7, e1002133.	2.1	120
18	<scp>GIL</scp>, a new câ€diâ€<scp>GMP</scp>â€binding protein domain involved in regulation of cellulose synthesis in enterobacteria. Molecular Microbiology, 2014, 93, 439-452.	1.2	118

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19	AppA, a Redox Regulator of Photosystem Formation inRhodobacter sphaeroides 2.4.1, Is a Flavoprotein. Journal of Biological Chemistry, 1998, 273, 35319-35325.	1.6	115
20	Control of Photosystem Formation in Rhodobacter sphaeroides. Journal of Bacteriology, 1998, 180, 2801-2809.	1.0	114
21	Near-infrared Light Responsive Synthetic c-di-GMP Module for Optogenetic Applications. ACS Synthetic Biology, 2014, 3, 802-810.	1.9	113
22	Genetic evidence that PpsR from Rhodobacter sphaeroides 2.4.1 functions as a repressor of puc and bchF expression. Journal of Bacteriology, 1995, 177, 1634-1637.	1.0	111
23	appA, a novel gene encoding a trans-acting factor involved in the regulation of photosynthesis gene expression in Rhodobacter sphaeroides 2.4.1. Journal of Bacteriology, 1995, 177, 4609-4618.	1.0	110
24	Overexpression of Aldehyde Dehydrogenase-2 (ALDH2) Transgene Prevents Acetaldehyde-induced Cell Injury in Human Umbilical Vein Endothelial Cells. Journal of Biological Chemistry, 2004, 279, 11244-11252.	1.6	108
25	Engineering adenylate cyclases regulated by near-infrared window light. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 10167-10172.	3.3	104
26	Systematic Nomenclature for GGDEF and EAL Domain-Containing Cyclic Di-GMP Turnover Proteins of Escherichia coli. Journal of Bacteriology, 2016, 198, 7-11.	1.0	96
27	A Staphylococcal GGDEF Domain Protein Regulates Biofilm Formation Independently of Cyclic Dimeric GMP. Journal of Bacteriology, 2008, 190, 5178-5189.	1.0	95
28	The Flagellar Sigma Factor FliA Regulates Adhesion and Invasion of Crohn Disease-associated Escherichia coli via a Cyclic Dimeric GMP-dependent Pathway. Journal of Biological Chemistry, 2007, 282, 33275-33283.	1.6	92
29	DhhP, a Cyclic di-AMP Phosphodiesterase of Borrelia burgdorferi, Is Essential for Cell Growth and Virulence. Infection and Immunity, 2014, 82, 1840-1849.	1.0	82
30	Discrete Cyclic di-GMP-Dependent Control of Bacterial Predation versus Axenic Growth in Bdellovibrio bacteriovorus. PLoS Pathogens, 2012, 8, e1002493.	2.1	80
31	Cyclic di-GMP-dependent Signaling Pathways in the Pathogenic Firmicute Listeria monocytogenes. PLoS Pathogens, 2014, 10, e1004301.	2.1	80
32	<scp>L</scp>isteria monocytogenes exopolysaccharide: origin, structure, biosynthetic machinery and câ€diâ€<scp>GMP</scp>â€dependent regulation. Molecular Microbiology, 2015, 96, 728-743.	1.2	80
33	Construction and Validation of the Rhodobacter sphaeroides 2.4.1 DNA Microarray: Transcriptome Flexibility at Diverse Growth Modes. Journal of Bacteriology, 2004, 186, 4748-4758.	1.0	75
34	Identification and molecular genetic analysis of multiple loci contributing to high-level tellurite resistance in Rhodobacter sphaeroides 2.4.1. Applied and Environmental Microbiology, 1997, 63, 4713-4720.	1.4	69
35	Transcriptome Analysis of the Rhodobacter sphaeroides PpsR Regulon: PpsR as a Master Regulator of Photosystem Development. Journal of Bacteriology, 2005, 187, 2148-2156.	1.0	66
36	Earliest changes in the left ventricular transcriptome post-myocardial infarction. Mammalian Genome, 2006, 17, 701-715.	1.0	64

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37	Flux balance analysis of photoheterotrophic growth of purple nonsulfur bacteria relevant to biohydrogen production. International Journal of Hydrogen Energy, 2010, 35, 12751-12760.	3.8	64
38	Salt Stress-Induced Changes in the Transcriptome, Compatible Solutes, and Membrane Lipids in the Facultatively Phototrophic Bacterium Rhodobacter sphaeroides. Applied and Environmental Microbiology, 2011, 77, 7551-7559.	1.4	63
39	Responses of the Rhodobacter sphaeroides Transcriptome to Blue Light under Semiaerobic Conditions. Journal of Bacteriology, 2004, 186, 7726-7735.	1.0	62
40	Transcriptome and Physiological Responses to Hydrogen Peroxide of the Facultatively Phototrophic Bacterium Rhodobacter sphaeroides. Journal of Bacteriology, 2005, 187, 7232-7242.	1.0	59
41	Integration of the Second Messenger c-di-GMP into the Chemotactic Signaling Pathway. MBio, 2013, 4, e00001-13.	1.8	59
42	Novel Heme-based Oxygen Sensor with a Revealing Evolutionary History. Journal of Biological Chemistry, 2007, 282, 28740-28748.	1.6	58
43	Signaling specificity in the c-di-GMP-dependent network regulating antibiotic synthesis in Lysobacter. Nucleic Acids Research, 2018, 46, 9276-9288.	6.5	55
44	Analysis of two formaldehyde oxidation pathways in Methylobacillus flagellatus KT, a ribulose monophosphate cycle methylotroph The GenBank accession numbers for the sequences of 2502Ânt containing gndA and part of zwf, and of 2685Ânt containing mch, are AF167580 and AF139592, respectively.. Microbiology (United Kingdom), 2000, 146, 233-238.	0.7	51
45	Domain Structure, Oligomeric State, and Mutational Analysis of PpsR, the Rhodobacter sphaeroides Repressor of Photosystem Gene Expression. Journal of Bacteriology, 2000, 182, 2253-2261.	1.0	50
46	Identification and in vivo characterization of PpaA, a regulator of photosystem formation in Rhodobacter sphaeroides. Microbiology (United Kingdom), 2003, 149, 377-388.	0.7	49
47	Metabolic engineering of Rhodobacter sphaeroides for improved hydrogen production. International Journal of Hydrogen Energy, 2014, 39, 6384-6390.	3.8	44
48	Regulation of Biofilm Components in Salmonella enterica Serovar Typhimurium by Lytic Transglycosylases Involved in Cell Wall Turnover. Journal of Bacteriology, 2011, 193, 6443-6451.	1.0	40
49	Cyclic Di-GMP Phosphodiesterases RmdA and RmdB Are Involved in Regulating Colony Morphology and Development in Streptomyces coelicolor. Journal of Bacteriology, 2012, 194, 4642-4651.	1.0	39
50	Lysobacter PilR, the Regulator of Type IV Pilus Synthesis, Controls Antifungal Antibiotic Production via a Cyclic di-GMP Pathway. Applied and Environmental Microbiology, 2017, 83, .	1.4	39
51	Isolation of regulatory mutants in photosynthesis gene expression in Rhodobacter sphaeroides 2.4.1 and partial complementation of a PrrB mutant by the HupT histidine-kinase. Microbiology (United) Tj ETQq1 1 0.784314 rgBT /Overlock	1.3	38
52	Antifungal weapons of Lysobacter, a mighty biocontrol agent. Environmental Microbiology, 2021, 23, 5704-5715.	1.8	34
53	Regulation of Hydrogen Peroxide-Dependent Gene Expression in Rhodobacter sphaeroides : Regulatory Functions of OxyR. Journal of Bacteriology, 2007, 189, 3784-3792.	1.0	31
54	Optogenetic Manipulation of Cyclic Di-GMP (c-di-GMP) Levels Reveals the Role of c-di-GMP in Regulating Aerotaxis Receptor Activity in Azospirillum brasilense. Journal of Bacteriology, 2017, 199, .	1.0	30

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55	Optogenetic Module for Dichromatic Control of c-di-GMP Signaling. Journal of Bacteriology, 2017, 199, .	1.0	29
56	The Rhodobacter sphaeroides 2.4.1 rho gene: expression and genetic analysis of structure and function. Journal of Bacteriology, 1996, 178, 1946-1954.	1.0	28
57	Photodynamics of blue-light-regulated phosphodiesterase BlrP1 protein from Klebsiella pneumoniae and its photoreceptor BLUF domain. Chemical Physics, 2008, 354, 130-141.	0.9	26
58	c-di-GMP signaling regulates E. coli O157:H7 adhesion to colonic epithelium. Veterinary Microbiology, 2013, 164, 344-351.	0.8	26
59	Inducible asymmetric cell division and cell differentiation in a bacterium. Nature Chemical Biology, 2019, 15, 925-931.	3.9	26
60	Bacterial second messengers, cGMP and c-di-GMP, in a quest for regulatory dominance. EMBO Journal, 2013, 32, 2421-2423.	3.5	24
61	Hierarchical Regulation of Photosynthesis Gene Expression by the Oxygen-Responsive PrrBA and AppA-PpsR Systems of Rhodobacter sphaeroides. Journal of Bacteriology, 2008, 190, 8106-8114.	1.0	20
62	Engineering Adenylate Cyclase Activated by Near-Infrared Window Light for Mammalian Optogenetic Applications. ACS Synthetic Biology, 2019, 8, 1314-1324.	1.9	20
63	A YajQâ€LysRâ€like, cyclicÂdiâ€GMPâ€dependent system regulating biosynthesis of an antifungal antibiotic in a cropâ€protecting bacterium, Lysobacter enzymogenes. Molecular Plant Pathology, 2020, 21, 218-229.	2.0	20
64	[10] Transcriptional regulation of photosynthesis operons in Rhodobacter sphaeroides 2.4.1. Methods in Enzymology, 1998, 297, 151-166.	0.4	18
65	The c-di-GMP phosphodiesterase VmpA absent in Escherichia coli K12 strains affects motility and biofilm formation in the enterohemorrhagic O157:H7 serotype. Veterinary Immunology and Immunopathology, 2013, 152, 132-140.	0.5	18
66	The PpaA/AerR Regulators of Photosynthesis Gene Expression from Anoxygenic Phototrophic Proteobacteria Contain Heme-Binding SCHIC Domains. Journal of Bacteriology, 2010, 192, 5253-5256.	1.0	17
67	Identification of bacterial guanylate cyclases. Proteins: Structure, Function and Bioinformatics, 2015, 83, 799-804.	1.5	17
68	Biology and Data-Intensive Scientific Discovery in the Beginning of the 21st Century. OMICS A Journal of Integrative Biology, 2011, 15, 209-212.	1.0	16
69	Positive and Negative Regulation of Glycerol Utilization by the c-di-GMP Binding Protein PlzA in Borrelia burgdorferi. Journal of Bacteriology, 2018, 200, .	1.0	16
70	Identification and characterization of thepqqDGCgene cluster involved in pyrroloquinoline quinone production in an obligate methylotrophMethylobacillus flagellatum. FEMS Microbiology Letters, 1996, 141, 169-176.	0.7	15
71	Fifty Ways To Inhibit Motility via Cyclic Di-GMP: the Emerging Pseudomonas aeruginosa Swarming Story. Journal of Bacteriology, 2015, 197, 406-409.	1.0	15
72	Coordinated control of the type IV pili and câ€diâ€GMPâ€dependent antifungal antibiotic production in Lysobacter by the response regulator PilR. Molecular Plant Pathology, 2021, 22, 602-617.	2.0	14

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73	Cyclic di-GMP-Mediated Regulation of Gene Transfer and Motility in Rhodobacter capsulatus. Journal of Bacteriology, 2020, 202, .	1.0	12
74	Cloning, sequence and expression in Escherichia coli of the Methylobacillus flagellatum recA gene. Gene, 1990, 94, 69-75.	1.0	11
75	CodY-Mediated c-di-GMP-Dependent Inhibition of Mammalian Cell Invasion in Listeria monocytogenes. Journal of Bacteriology, 2018, 200, .	1.0	11
76	Cyclic-di-GMP-Binding CRP-Like Protein: a Spectacular New Role for a Veteran Signal Transduction Actor. Journal of Bacteriology, 2009, 191, 6785-6787.	1.0	9
77	Altered residues in key proteins influence the expression and activity of the nitrogenase complex in an adaptive CO2 fixation-deficient mutant strain of Rhodobacter sphaeroides. Microbiology (United) Tj ETQq1 1 0.784314 rgBT /Overloc	1.7	9
78	Photoactivated cells link diagnosis and therapy. Science Translational Medicine, 2017, 9, .	5.8	8
79	Cyclic Dimeric GMP-Mediated Decisions in Surface-Grown Vibrio parahaemolyticus: a Different Kind of Motile-to-Sessile Transition. Journal of Bacteriology, 2012, 194, 911-913.	1.0	7
80	Using Light-Activated Enzymes for Modulating Intracellular c-di-GMP Levels in Bacteria. Methods in Molecular Biology, 2017, 1657, 169-186.	0.4	7
81	Rhodobase, a meta-analytical tool for reconstructing gene regulatory networks in a model photosynthetic bacterium. BioSystems, 2011, 103, 125-131.	0.9	5
82	The Living Genome of a Purple Nonsulfur Photosynthetic Bacterium. Advances in Botanical Research, 2013, , 179-203.	0.5	3
83	Special Issue on Synthetic Photobiology. ACS Synthetic Biology, 2014, 3, 780-781.	1.9	2
84	Mutation Analysis and Regulation of PpsR. , 1999, , 131-138.		2
85	The Core Pathway: Diguanylate Cyclases, Cyclic Di-GMP-Specific Phosphodiesterases, and Cyclic Di-GMP-Binding Proteins. , 0, , 37-56.		2
86	A Zinc Lock on GGDEF Domain Dimerization Inhibits E.Âcoli Biofilms. Structure, 2013, 21, 1067-1068.	1.6	1
87	CyclicÂdi-GMP-Dependent Regulation of Antibiotic Biosynthesis in Lysobacter. , 2020, , 329-336.		1
88	Refined genetic map of the obligate methylotroph Methylobacillus flagellatum. Molecular Genetics and Genomics, 1998, 258, 133-138.	2.4	0
89	Mathematical modeling of bacterial metabolism. Moscow University Physics Bulletin (English) Tj ETQq1 1 0.784314 rgBT /Overlock 10	0.1	0