

Nathan C Rockwell

List of Publications by Year in descending order

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58
papers

4,894
citations

101543

36
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138484

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all docs

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docs citations

58
times ranked

3528
citing authors

#	ARTICLE	IF	CITATIONS
1	Protein-chromophore interactions controlling photoisomerization in red/green cyanobacteriochromes. <i>Photochemical and Photobiological Sciences</i> , 2022, 21, 471-491.	2.9	7
2	Crystal structure of a far-red-sensing cyanobacteriochrome reveals an atypical bilin conformation and spectral tuning mechanism. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	7.1	13
3	Natural diversity provides a broad spectrum of cyanobacteriochrome-based diguanylate cyclases. <i>Plant Physiology</i> , 2021, 187, 632-645.	4.8	11
4	Bilin-dependent regulation of chlorophyll biosynthesis by GUN4. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	7.1	18
5	Phytochrome evolution in 3D: deletion, duplication, and diversification. <i>New Phytologist</i> , 2020, 225, 2283-2300.	7.3	77
6	A far-red cyanobacteriochrome lineage specific for verdins. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 27962-27970.	7.1	20
7	Evolution-inspired design of multicolored photoswitches from a single cyanobacteriochrome scaffold. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 15573-15580.	7.1	16
8	Correlating structural and photochemical heterogeneity in cyanobacteriochrome NpR6012g4. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, 4387-4392.	7.1	65
9	Cyanobacteriochrome-based photoswitchable adenylyl cyclases (cPACs) for broad spectrum light regulation of cAMP levels in cells. <i>Journal of Biological Chemistry</i> , 2018, 293, 8473-8483.	3.4	59
10	Phototaxis in a wild isolate of the cyanobacterium <i>Synechococcus elongatus</i> . <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, E12378-E12387.	7.1	61
11	Protonation Heterogeneity Modulates the Ultrafast Photocycle Initiation Dynamics of Phytochrome Cph1. <i>Journal of Physical Chemistry Letters</i> , 2018, 9, 3454-3462.	4.6	24
12	The phycocyanobilin chromophore of streptophyte algal phytochromes is synthesized by HY2. <i>New Phytologist</i> , 2017, 214, 1145-1157.	7.3	27
13	There and Back Again: Loss and Reacquisition of Two Cys Photocycles in Cyanobacteriochromes. <i>Photochemistry and Photobiology</i> , 2017, 93, 741-754.	2.5	31
14	Algal light sensing and photoacclimation in aquatic environments. <i>Plant, Cell and Environment</i> , 2017, 40, 2558-2570.	5.7	46
15	Phytochrome diversification in cyanobacteria and eukaryotic algae. <i>Current Opinion in Plant Biology</i> , 2017, 37, 87-93.	7.1	63
16	Ferredoxin-dependent bilin reductases in eukaryotic algae: Ubiquity and diversity. <i>Journal of Plant Physiology</i> , 2017, 217, 57-67.	3.5	24
17	Light-Regulated Synthesis of Cyclic-di-GMP by a Bidomain Construct of the Cyanobacteriochrome Tlr0924 (SesA) without Stable Dimerization. <i>Biochemistry</i> , 2017, 56, 6145-6154.	2.5	15
18	Cyanobacteriochrome Photoreceptors Lacking the Canonical Cys Residue. <i>Biochemistry</i> , 2016, 55, 6981-6995.	2.5	34

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19	Identification of the Plant Ribokinase and Discovery of a Role for Arabidopsis Ribokinase in Nucleoside Metabolism. <i>Journal of Biological Chemistry</i> , 2016, 291, 22572-22582.	3.4	20
20	¹ H, ¹³ C, and ¹⁵ N chemical shift assignments of cyanobacteriochrome NpR6012g4 in the green-absorbing photoproduct state. <i>Biomolecular NMR Assignments</i> , 2016, 10, 157-161.	0.8	6
21	Identification of Cyanobacteriochromes Detecting Far-Red Light. <i>Biochemistry</i> , 2016, 55, 3907-3919.	2.5	71
22	¹ H, ¹⁵ N, and ¹³ C chemical shift assignments of cyanobacteriochrome NpR6012g4 in the red-absorbing dark state. <i>Biomolecular NMR Assignments</i> , 2016, 10, 139-142.	0.8	6
23	Identification of DXCF cyanobacteriochrome lineages with predictable photocycles. <i>Photochemical and Photobiological Sciences</i> , 2015, 14, 929-941.	2.9	50
24	Conservation and Diversity in the Primary Forward Photodynamics of Red/Green Cyanobacteriochromes. <i>Biochemistry</i> , 2015, 54, 1028-1042.	2.5	32
25	Characterization of Red/Green Cyanobacteriochrome NpR6012g4 by Solution Nuclear Magnetic Resonance Spectroscopy: A Hydrophobic Pocket for the C15- <i>anti</i> Chromophore in the Photoproduct. <i>Biochemistry</i> , 2015, 54, 3772-3783.	2.5	39
26	Photoactivatable genetically encoded calcium indicators for targeted neuronal imaging. <i>Nature Methods</i> , 2015, 12, 852-858.	19.0	85
27	Characterization of Red/Green Cyanobacteriochrome NpR6012g4 by Solution Nuclear Magnetic Resonance Spectroscopy: A Protonated Bilin Ring System in Both Photostates. <i>Biochemistry</i> , 2015, 54, 2581-2600.	2.5	40
28	NpR3784 is the prototype for a distinctive group of red/green cyanobacteriochromes using alternative Phe residues for photoproduct tuning. <i>Photochemical and Photobiological Sciences</i> , 2015, 14, 258-269.	2.9	50
29	Primary endosymbiosis and the evolution of light and oxygen sensing in photosynthetic eukaryotes. <i>Frontiers in Ecology and Evolution</i> , 2014, 2, .	2.2	45
30	Eukaryotic algal phytochromes span the visible spectrum. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014, 111, 3871-3876.	7.1	153
31	PHYTOCHROME C plays a major role in the acceleration of wheat flowering under long-day photoperiod. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014, 111, 10037-10044.	7.1	175
32	Marine algae and land plants share conserved phytochrome signaling systems. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014, 111, 15827-15832.	7.1	108
33	Photoconversion changes bilin chromophore conjugation and protein secondary structure in the violet/orange cyanobacteriochrome NpF2163g3. <i>Photochemical and Photobiological Sciences</i> , 2014, 13, 951-962.	2.9	32
34	Extensive remodeling of a cyanobacterial photosynthetic apparatus in far-red light. <i>Science</i> , 2014, 345, 1312-1317.	12.6	332
35	Conserved Phenylalanine Residues Are Required for Blue-Shifting of Cyanobacteriochrome Photoproducts. <i>Biochemistry</i> , 2014, 53, 3118-3130.	2.5	74
36	Optically Guided Photoactivity: Coordinating Tautomerization, Photoisomerization, Inhomogeneity, and Reactive Intermediates within the RcaE Cyanobacteriochrome. <i>Journal of Physical Chemistry Letters</i> , 2014, 5, 1527-1533.	4.6	10

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37	Genomic analysis reveals key aspects of prokaryotic symbiosis in the phototrophic consortium <i>Chlorochromatium aggregatum</i> . <i>Genome Biology</i> , 2013, 14, R127.	9.6	40
38	Green/red cyanobacteriochromes regulate complementary chromatic acclimation via a protochromic photocycle. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013, 110, 4974-4979.	7.1	147
39	Reactive Ground-State Pathways Are Not Ubiquitous in Red/Green Cyanobacteriochromes. <i>Journal of Physical Chemistry B</i> , 2013, 117, 11229-11238.	2.6	31
40	Retrograde bilin signaling enables <i>Chlamydomonas</i> greening and phototrophic survival. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013, 110, 3621-3626.	7.1	107
41	Cyanobacteriochromes in full color and three dimensions. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013, 110, 806-807.	7.1	28
42	Red/Green Cyanobacteriochromes: Sensors of Color and Power. <i>Biochemistry</i> , 2012, 51, 9667-9677.	2.5	133
43	Femtosecond Photodynamics of the Red/Green Cyanobacteriochrome NpR6012g4 from <i>Nostoc punctiforme</i> . 1. Forward Dynamics. <i>Biochemistry</i> , 2012, 51, 608-618.	2.5	81
44	Phycoviolobilin Formation and Spectral Tuning in the DXCF Cyanobacteriochrome Subfamily. <i>Biochemistry</i> , 2012, 51, 1449-1463.	2.5	129
45	Mechanistic Insight into the Photosensory Versatility of DXCF Cyanobacteriochromes. <i>Biochemistry</i> , 2012, 51, 3576-3585.	2.5	87
46	Femtosecond Photodynamics of the Red/Green Cyanobacteriochrome NpR6012g4 from <i>Nostoc punctiforme</i> . 2. Reverse Dynamics. <i>Biochemistry</i> , 2012, 51, 619-630.	2.5	72
47	Second-Chance Forward Isomerization Dynamics of the Red/Green Cyanobacteriochrome NpR6012g4 from <i>Nostoc punctiforme</i> . <i>Journal of the American Chemical Society</i> , 2012, 134, 130-133.	13.7	58
48	Diverse two-cysteine photocycles in phytochromes and cyanobacteriochromes. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2011, 108, 11854-11859.	7.1	182
49	A Brief History of Phytochromes. <i>ChemPhysChem</i> , 2010, 11, 1172-1180.	2.1	320
50	Distinct classes of red/far-red photochemistry within the phytochrome superfamily. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2009, 106, 6123-6127.	7.1	127
51	ABC Transporter Pdr10 Regulates the Membrane Microenvironment of Pdr12 in <i>Saccharomyces cerevisiae</i> . <i>Journal of Membrane Biology</i> , 2009, 229, 27-52.	2.1	41
52	A Second Conserved GAF Domain Cysteine Is Required for the Blue/Green Photoreversibility of Cyanobacteriochrome Tlr0924 from <i>Thermosynechococcus elongatus</i> . <i>Biochemistry</i> , 2008, 47, 7304-7316.	2.5	119
53	Membrane-active Compounds Activate the Transcription Factors Pdr1 and Pdr3 Connecting Pleiotropic Drug Resistance and Membrane Lipid Homeostasis in <i>Saccharomyces cerevisiae</i> . <i>Molecular Biology of the Cell</i> , 2007, 18, 4932-4944.	2.1	47
54	Insight into the Radical Mechanism of Phycocyanobilin~Ferredoxin Oxidoreductase (PcyA) Revealed by X-ray Crystallography and Biochemical Measurements. <i>Biochemistry</i> , 2007, 46, 1484-1494.	2.5	47

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55	Flexible mapping of homology onto structure with Homolmapper. BMC Bioinformatics, 2007, 8, 123.	2.6	20
56	PHYTOCHROME STRUCTURE AND SIGNALING MECHANISMS. Annual Review of Plant Biology, 2006, 57, 837-858.	18.7	950
57	The Structure of Phytochrome: A Picture Is Worth a Thousand Spectra. Plant Cell, 2006, 18, 4-14.	6.6	100
58	Multiple Roles of a Conserved GAF Domain Tyrosine Residue in Cyanobacterial and Plant Phytochromes. Biochemistry, 2005, 44, 15203-15215.	2.5	89