Nathan C Rockwell

List of Publications by Year
in descending order

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58 papers	4,894 citations	101384 36 h-index	138251 58 g-index
58 all docs	58 docs citations	58 times ranked	3528 citing authors

#	Article	IF	Citations
1	Proteinâ€“chromophore interactions controlling photoisomerization in red/green cyanobacteriochromes. Photochemical and Photobiological Sciences, 2022, 21, 471-491.	1.6	7
2	Crystal structure of a far-redâ€“sensing cyanobacteriochrome reveals an atypical bilin conformation and spectral tuning mechanism. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	13
3	Natural diversity provides a broad spectrum of cyanobacteriochrome-based diguanylate cyclases. Plant Physiology, 2021, 187, 632-645.	2.3	11
4	Bilin-dependent regulation of chlorophyll biosynthesis by GUN4. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	18
5	Phytochrome evolution in 3D: deletion, duplication, and diversification. New Phytologist, 2020, 225, 2283-2300.	3.5	77
6	A far-red cyanobacteriochrome lineage specific for verdins. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 27962-27970.	3.3	20
7	Evolution-inspired design of multicolored photoswitches from a single cyanobacteriochrome scaffold. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 15573-15580.	3.3	16
8	Correlating structural and photochemical heterogeneity in cyanobacteriochrome NpR6012g4. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 4387-4392.	3.3	65
9	Cyanobacteriochrome-based photoswitchable adenylyl cyclases (cPACs) for broad spectrum light regulation of cAMP levels in cells. Journal of Biological Chemistry, 2018, 293, 8473-8483.	1.6	59
10	Phototaxis in a wild isolate of the cyanobacterium <i>Synechococcus elongatus</i>. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, E12378-E12387.	3.3	61
11	Protonation Heterogeneity Modulates the Ultrafast Photocycle Initiation Dynamics of Phytochrome Cph1. Journal of Physical Chemistry Letters, 2018, 9, 3454-3462.	2.1	24
12	The phycocyanobilin chromophore of streptophyte algal phytochromes is synthesized by HY2. New Phytologist, 2017, 214, 1145-1157.	3.5	27
13	There and Back Again: Loss and Reacquisition of Twoâ€Cys Photocycles in Cyanobacteriochromes. Photochemistry and Photobiology, 2017, 93, 741-754.	1.3	31
14	Algal light sensing and photoacclimation in aquatic environments. Plant, Cell and Environment, 2017, 40, 2558-2570.	2.8	46
15	Phytochrome diversification in cyanobacteria and eukaryotic algae. Current Opinion in Plant Biology, 2017, 37, 87-93.	3.5	63
16	Ferredoxin-dependent bilin reductases in eukaryotic algae: Ubiquity and diversity. Journal of Plant Physiology, 2017, 217, 57-67.	1.6	24
17	Light-Regulated Synthesis of Cyclic-di-GMP by a Bidomain Construct of the Cyanobacteriochrome Tlr0924 (SesA) without Stable Dimerization. Biochemistry, 2017, 56, 6145-6154.	1.2	15
18	Cyanobacteriochrome Photoreceptors Lacking the Canonical Cys Residue. Biochemistry, 2016, 55, 6981-6995.	1.2	34

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19	Identification of the Plant Ribokinase and Discovery of a Role for Arabidopsis Ribokinase in Nucleoside Metabolism. Journal of Biological Chemistry, 2016, 291, 22572-22582.	1.6	20
20	1H, 13C, and 15N chemical shift assignments of cyanobacteriochrome NpR6012g4 in the green-absorbing photoproduct state. Biomolecular NMR Assignments, 2016, 10, 157-161.	0.4	6
21	Identification of Cyanobacteriochromes Detecting Far-Red Light. Biochemistry, 2016, 55, 3907-3919.	1.2	71
22	1H, 15N, and 13C chemical shift assignments of cyanobacteriochrome NpR6012g4 in the red-absorbing dark state. Biomolecular NMR Assignments, 2016, 10, 139-142.	0.4	6
23	Identification of DXCF cyanobacteriochrome lineages with predictable photocycles. Photochemical and Photobiological Sciences, 2015, 14, 929-941.	1.6	50
24	Conservation and Diversity in the Primary Forward Photodynamics of Red/Green Cyanobacteriochromes. Biochemistry, 2015, 54, 1028-1042.	1.2	32
25	Characterization of Red/Green Cyanobacteriochrome NpR6012g4 by Solution Nuclear Magnetic Resonance Spectroscopy: A Hydrophobic Pocket for the C15-<i>E,anti</i> Chromophore in the Photoproduct. Biochemistry, 2015, 54, 3772-3783.	1.2	39
26	Photoactivatable genetically encoded calcium indicators for targeted neuronal imaging. Nature Methods, 2015, 12, 852-858.	9.0	85
27	Characterization of Red/Green Cyanobacteriochrome NpR6012g4 by Solution Nuclear Magnetic Resonance Spectroscopy: A Protonated Bilin Ring System in Both Photostates. Biochemistry, 2015, 54, 2581-2600.	1.2	40
28	NpR3784 is the prototype for a distinctive group of red/green cyanobacteriochromes using alternative Phe residues for photoproduct tuning. Photochemical and Photobiological Sciences, 2015, 14, 258-269.	1.6	50
29	Primary endosymbiosis and the evolution of light and oxygen sensing in photosynthetic eukaryotes. Frontiers in Ecology and Evolution, 2014, 2, .	1.1	45
30	Eukaryotic algal phytochromes span the visible spectrum. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 3871-3876.	3.3	153
31	PHYTOCHROME C plays a major role in the acceleration of wheat flowering under long-day photoperiod. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 10037-10044.	3.3	175
32	Marine algae and land plants share conserved phytochrome signaling systems. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 15827-15832.	3.3	108
33	Photoconversion changes bilin chromophore conjugation and protein secondary structure in the violet/orange cyanobacteriochrome NpF2163g3. Photochemical and Photobiological Sciences, 2014, 13, 951-962.	1.6	32
34	Extensive remodeling of a cyanobacterial photosynthetic apparatus in far-red light. Science, 2014, 345, 1312-1317.	6.0	332
35	Conserved Phenylalanine Residues Are Required for Blue-Shifting of Cyanobacteriochrome Photoproducts. Biochemistry, 2014, 53, 3118-3130.	1.2	74
36	Optically Guided Photoactivity: Coordinating Tautomerization, Photoisomerization, Inhomogeneity, and Reactive Intermediates within the RcaE Cyanobacteriochrome. Journal of Physical Chemistry Letters, 2014, 5, 1527-1533.	2.1	10

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37	Genomic analysis reveals key aspects of prokaryotic symbiosis in the phototrophic consortium â€œChlorochromatium aggregatumâ€. Genome Biology, 2013, 14, R127.	13.9	40
38	Green/red cyanobacteriochromes regulate complementary chromatic acclimation via a protochromic photocycle. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 4974-4979.	3.3	147
39	Reactive Ground-State Pathways Are Not Ubiquitous in Red/Green Cyanobacteriochromes. Journal of Physical Chemistry B, 2013, 117, 11229-11238.	1.2	31
40	Retrograde bilin signaling enables <i>Chlamydomonas</i> greening and phototrophic survival. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 3621-3626.	3.3	107
41	Cyanobacteriochromes in full color and three dimensions. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 806-807.	3.3	28
42	Red/Green Cyanobacteriochromes: Sensors of Color and Power. Biochemistry, 2012, 51, 9667-9677.	1.2	133
43	Femtosecond Photodynamics of the Red/Green Cyanobacteriochrome NpR6012g4 from <i>Nostoc punctiforme</i>. 1. Forward Dynamics. Biochemistry, 2012, 51, 608-618.	1.2	81
44	Phycoviolobilin Formation and Spectral Tuning in the DXCF Cyanobacteriochrome Subfamily. Biochemistry, 2012, 51, 1449-1463.	1.2	129
45	Mechanistic Insight into the Photosensory Versatility of DXCF Cyanobacteriochromes. Biochemistry, 2012, 51, 3576-3585.	1.2	87
46	Femtosecond Photodynamics of the Red/Green Cyanobacteriochrome NpR6012g4 from <i>Nostoc punctiforme</i>. 2. Reverse Dynamics. Biochemistry, 2012, 51, 619-630.	1.2	72
47	Second-Chance Forward Isomerization Dynamics of the Red/Green Cyanobacteriochrome NpR6012g4 from Nostoc punctiforme. Journal of the American Chemical Society, 2012, 134, 130-133.	6.6	58
48	Diverse two-cysteine photocycles in phytochromes and cyanobacteriochromes. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 11854-11859.	3.3	182
49	A Brief History of Phytochromes. ChemPhysChem, 2010, 11, 1172-1180.	1.0	320
50	Distinct classes of red/far-red photochemistry within the phytochrome superfamily. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 6123-6127.	3.3	127
51	ABC Transporter Pdr10 Regulates the Membrane Microenvironment of Pdr12 in Saccharomyces cerevisiae. Journal of Membrane Biology, 2009, 229, 27-52.	1.0	41
52	A Second Conserved GAF Domain Cysteine Is Required for the Blue/Green Photoreversibility of Cyanobacteriochrome Tlr0924 from <i>Thermosynechococcus elongatus</i>. Biochemistry, 2008, 47, 7304-7316.	1.2	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>. Molecular Biology of the Cell, 2007, 18, 4932-4944.	0.9	47
54	Insight into the Radical Mechanism of Phycocyanobilinâˆ’Ferredoxin Oxidoreductase (PcyA) Revealed by X-ray Crystallography and Biochemical Measurementsâ€. Biochemistry, 2007, 46, 1484-1494.	1.2	47

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55	Flexible mapping of homology onto structure with Homolmapper. BMC Bioinformatics, 2007, 8, 123.	1.2	20
56	PHYTOCHROME STRUCTURE AND SIGNALING MECHANISMS. Annual Review of Plant Biology, 2006, 57, 837-858.	8.6	950
57	The Structure of Phytochrome: A Picture Is Worth a Thousand Spectra. Plant Cell, 2006, 18, 4-14.	3.1	100
58	Multiple Roles of a Conserved GAF Domain Tyrosine Residue in Cyanobacterial and Plant Phytochromesâ€. Biochemistry, 2005, 44, 15203-15215.	1.2	89