Nathan C Rockwell

List of Publications by Year
in descending order

58	4,894	36	58
papers	citations	h-index	g-index
		101543	138484

58	58	58	3528
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	PHYTOCHROME STRUCTURE AND SIGNALING MECHANISMS. Annual Review of Plant Biology, 2006, 57, 837-858.	18.7	950
2	Extensive remodeling of a cyanobacterial photosynthetic apparatus in far-red light. Science, 2014, 345, 1312-1317.	12.6	332
3	A Brief History of Phytochromes. ChemPhysChem, 2010, 11, 1172-1180.	2.1	320
4	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.	7.1	182
5	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.	7.1	175
6	Eukaryotic algal phytochromes span the visible spectrum. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 3871-3876.	7.1	153
7	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.	7.1	147
8	Red/Green Cyanobacteriochromes: Sensors of Color and Power. Biochemistry, 2012, 51, 9667-9677.	2.5	133
9	Phycoviolobilin Formation and Spectral Tuning in the DXCF Cyanobacteriochrome Subfamily. Biochemistry, 2012, 51, 1449-1463.	2.5	129
10	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.	7.1	127
11	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.	2.5	119
12	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.	7.1	108
13	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.	7.1	107
14	The Structure of Phytochrome: A Picture Is Worth a Thousand Spectra. Plant Cell, 2006, 18, 4-14.	6.6	100
15	Multiple Roles of a Conserved GAF Domain Tyrosine Residue in Cyanobacterial and Plant Phytochromesâ€. Biochemistry, 2005, 44, 15203-15215.	2.5	89
16	Mechanistic Insight into the Photosensory Versatility of DXCF Cyanobacteriochromes. Biochemistry, 2012, 51, 3576-3585.	2.5	87
17	Photoactivatable genetically encoded calcium indicators for targeted neuronal imaging. Nature Methods, 2015, 12, 852-858.	19.0	85
18	Femtosecond Photodynamics of the Red/Green Cyanobacteriochrome NpR6012g4 from <i>Nostoc punctiforme</i>. 1. Forward Dynamics. Biochemistry, 2012, 51, 608-618.	2.5	81

#	Article	IF	Citations
19	Phytochrome evolution in 3D: deletion, duplication, and diversification. New Phytologist, 2020, 225, 2283-2300.	7.3	77
20	Conserved Phenylalanine Residues Are Required for Blue-Shifting of Cyanobacteriochrome Photoproducts. Biochemistry, 2014, 53, 3118-3130.	2.5	74
21	Femtosecond Photodynamics of the Red/Green Cyanobacteriochrome NpR6012g4 from <i>Nostoc punctiforme</i>. 2. Reverse Dynamics. Biochemistry, 2012, 51, 619-630.	2.5	72
22	Identification of Cyanobacteriochromes Detecting Far-Red Light. Biochemistry, 2016, 55, 3907-3919.	2.5	71
23	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.	7.1	65
24	Phytochrome diversification in cyanobacteria and eukaryotic algae. Current Opinion in Plant Biology, 2017, 37, 87-93.	7.1	63
25	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.	7.1	61
26	Cyanobacteriochrome-based photoswitchable adenylyl cyclases (cPACs) for broad spectrum light regulation of cAMP levels in cells. Journal of Biological Chemistry, 2018, 293, 8473-8483.	3.4	59
27	Second-Chance Forward Isomerization Dynamics of the Red/Green Cyanobacteriochrome NpR6012g4 from Nostoc punctiforme. Journal of the American Chemical Society, 2012, 134, 130-133.	13.7	58
28	Identification of DXCF cyanobacteriochrome lineages with predictable photocycles. Photochemical and Photobiological Sciences, 2015, 14, 929-941.	2.9	50
29	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.	2.9	50
30	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.	2.1	47
31	Insight into the Radical Mechanism of Phycocyanobilinâ˘Ferredoxin Oxidoreductase (PcyA) Revealed by X-ray Crystallography and Biochemical Measurementsâ€. Biochemistry, 2007, 46, 1484-1494.	2.5	47
32	Algal light sensing and photoacclimation in aquatic environments. Plant, Cell and Environment, 2017, 40, 2558-2570.	5.7	46
33	Primary endosymbiosis and the evolution of light and oxygen sensing in photosynthetic eukaryotes. Frontiers in Ecology and Evolution, 2014, 2, .	2.2	45
34	ABC Transporter Pdr10 Regulates the Membrane Microenvironment of Pdr12 in Saccharomyces cerevisiae. Journal of Membrane Biology, 2009, 229, 27-52.	2.1	41
35	Genomic analysis reveals key aspects of prokaryotic symbiosis in the phototrophic consortium â€œChlorochromatium aggregatumâ€. Genome Biology, 2013, 14, R127.	9.6	40
36	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.	2.5	40

#	Article	IF	Citations
37	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.	2.5	39
38	Cyanobacteriochrome Photoreceptors Lacking the Canonical Cys Residue. Biochemistry, 2016, 55, 6981-6995.	2.5	34
39	Photoconversion changes bilin chromophore conjugation and protein secondary structure in the violet/orange cyanobacteriochrome NpF2163g3. Photochemical and Photobiological Sciences, 2014, 13, 951-962.	2.9	32
40	Conservation and Diversity in the Primary Forward Photodynamics of Red/Green Cyanobacteriochromes. Biochemistry, 2015, 54, 1028-1042.	2.5	32
41	Reactive Ground-State Pathways Are Not Ubiquitous in Red/Green Cyanobacteriochromes. Journal of Physical Chemistry B, 2013, 117, 11229-11238.	2.6	31
42	There and Back Again: Loss and Reacquisition of Twoâ€Cys Photocycles in Cyanobacteriochromes. Photochemistry and Photobiology, 2017, 93, 741-754.	2.5	31
43	Cyanobacteriochromes in full color and three dimensions. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 806-807.	7.1	28
44	The phycocyanobilin chromophore of streptophyte algal phytochromes is synthesized by HY2. New Phytologist, 2017, 214, 1145-1157.	7.3	27
45	Ferredoxin-dependent bilin reductases in eukaryotic algae: Ubiquity and diversity. Journal of Plant Physiology, 2017, 217, 57-67.	3.5	24
46	Protonation Heterogeneity Modulates the Ultrafast Photocycle Initiation Dynamics of Phytochrome Cph1. Journal of Physical Chemistry Letters, 2018, 9, 3454-3462.	4.6	24
47	Flexible mapping of homology onto structure with Homolmapper. BMC Bioinformatics, 2007, 8, 123.	2.6	20
48	Identification of the Plant Ribokinase and Discovery of a Role for Arabidopsis Ribokinase in Nucleoside Metabolism. Journal of Biological Chemistry, 2016, 291, 22572-22582.	3.4	20
49	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.	7.1	20
50	Bilin-dependent regulation of chlorophyll biosynthesis by GUN4. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	18
51	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.	7.1	16
52	Light-Regulated Synthesis of Cyclic-di-GMP by a Bidomain Construct of the Cyanobacteriochrome Tlr0924 (SesA) without Stable Dimerization. Biochemistry, 2017, 56, 6145-6154.	2.5	15
53	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, .	7.1	13
54	Natural diversity provides a broad spectrum of cyanobacteriochrome-based diguanylate cyclases. Plant Physiology, 2021, 187, 632-645.	4.8	11

#	Article	IF	Citations
55	Optically Guided Photoactivity: Coordinating Tautomerization, Photoisomerization, Inhomogeneity, and Reactive Intermediates within the RcaE Cyanobacteriochrome. Journal of Physical Chemistry Letters, 2014, 5, 1527-1533.	4.6	10
56	Proteinâ€“chromophore interactions controlling photoisomerization in red/green cyanobacteriochromes. Photochemical and Photobiological Sciences, 2022, 21, 471-491.	2.9	7
57	1H, 13C, and 15N chemical shift assignments of cyanobacteriochrome NpR6012g4 in the green-absorbing photoproduct state. Biomolecular NMR Assignments, 2016, 10, 157-161.	0.8	6
58	1H, 15N, and 13C chemical shift assignments of cyanobacteriochrome NpR6012g4 in the red-absorbing dark state. Biomolecular NMR Assignments, 2016, 10, 139-142.	0.8	6