

# 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	PHYTOCHROME STRUCTURE AND SIGNALING MECHANISMS. Annual Review of Plant Biology, 2006, 57, 837-858.	8.6	950
2	Extensive remodeling of a cyanobacterial photosynthetic apparatus in far-red light. Science, 2014, 345, 1312-1317.	6.0	332
3	A Brief History of Phytochromes. ChemPhysChem, 2010, 11, 1172-1180.	1.0	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.	3.3	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.	3.3	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.	3.3	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.	3.3	147
8	Red/Green Cyanobacteriochromes: Sensors of Color and Power. Biochemistry, 2012, 51, 9667-9677.	1.2	133
9	Phycoviolobin Formation and Spectral Tuning in the DXCF Cyanobacteriochrome Subfamily. Biochemistry, 2012, 51, 1449-1463.	1.2	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.	3.3	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.	1.2	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.	3.3	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.	3.3	107
14	The Structure of Phytochrome: A Picture Is Worth a Thousand Spectra. Plant Cell, 2006, 18, 4-14.	3.1	100
15	Multiple Roles of a Conserved GAF Domain Tyrosine Residue in Cyanobacterial and Plant Phytochromes. Biochemistry, 2005, 44, 15203-15215.	1.2	89
16	Mechanistic Insight into the Photosensory Versatility of DXCF Cyanobacteriochromes. Biochemistry, 2012, 51, 3576-3585.	1.2	87
17	Photoactivatable genetically encoded calcium indicators for targeted neuronal imaging. Nature Methods, 2015, 12, 852-858.	9.0	85
18	Femtosecond Photodynamics of the Red/Green Cyanobacteriochrome NpR6012g4 from <i>Nostoc punctiforme</i> . 1. Forward Dynamics. Biochemistry, 2012, 51, 608-618.	1.2	81

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19	Phytochrome evolution in 3D: deletion, duplication, and diversification. <i>New Phytologist</i> , 2020, 225, 2283-2300.	3.5	77
20	Conserved Phenylalanine Residues Are Required for Blue-Shifting of Cyanobacteriochrome Photoproducts. <i>Biochemistry</i> , 2014, 53, 3118-3130.	1.2	74
21	Femtosecond Photodynamics of the Red/Green Cyanobacteriochrome NpR6012g4 from <i>Nostoc punctiforme</i> . 2. Reverse Dynamics. <i>Biochemistry</i> , 2012, 51, 619-630.	1.2	72
22	Identification of Cyanobacteriochromes Detecting Far-Red Light. <i>Biochemistry</i> , 2016, 55, 3907-3919.	1.2	71
23	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.	3.3	65
24	Phytochrome diversification in cyanobacteria and eukaryotic algae. <i>Current Opinion in Plant Biology</i> , 2017, 37, 87-93.	3.5	63
25	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.	3.3	61
26	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.	1.6	59
27	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.	6.6	58
28	Identification of DXCF cyanobacteriochrome lineages with predictable photocycles. <i>Photochemical and Photobiological Sciences</i> , 2015, 14, 929-941.	1.6	50
29	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.	1.6	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> . <i>Molecular Biology of the Cell</i> , 2007, 18, 4932-4944.	0.9	47
31	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.	1.2	47
32	Algal light sensing and photoacclimation in aquatic environments. <i>Plant, Cell and Environment</i> , 2017, 40, 2558-2570.	2.8	46
33	Primary endosymbiosis and the evolution of light and oxygen sensing in photosynthetic eukaryotes. <i>Frontiers in Ecology and Evolution</i> , 2014, 2, .	1.1	45
34	ABC Transporter Pdr10 Regulates the Membrane Microenvironment of Pdr12 in <i>Saccharomyces cerevisiae</i> . <i>Journal of Membrane Biology</i> , 2009, 229, 27-52.	1.0	41
35	Genomic analysis reveals key aspects of prokaryotic symbiosis in the phototrophic consortium <i>Chlorochromatium aggregatum</i> . <i>Genome Biology</i> , 2013, 14, R127.	13.9	40
36	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.	1.2	40

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37	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.	1.2	39
38	Cyanobacteriochrome Photoreceptors Lacking the Canonical Cys Residue. <i>Biochemistry</i> , 2016, 55, 6981-6995.	1.2	34
39	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.	1.6	32
40	Conservation and Diversity in the Primary Forward Photodynamics of Red/Green Cyanobacteriochromes. <i>Biochemistry</i> , 2015, 54, 1028-1042.	1.2	32
41	Reactive Ground-State Pathways Are Not Ubiquitous in Red/Green Cyanobacteriochromes. <i>Journal of Physical Chemistry B</i> , 2013, 117, 11229-11238.	1.2	31
42	There and Back Again: Loss and Reacquisition of Two Cys Photocycles in Cyanobacteriochromes. <i>Photochemistry and Photobiology</i> , 2017, 93, 741-754.	1.3	31
43	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.	3.3	28
44	The phycocyanobilin chromophore of streptophyte algal phytochromes is synthesized by HY2. <i>New Phytologist</i> , 2017, 214, 1145-1157.	3.5	27
45	Ferredoxin-dependent bilin reductases in eukaryotic algae: Ubiquity and diversity. <i>Journal of Plant Physiology</i> , 2017, 217, 57-67.	1.6	24
46	Protonation Heterogeneity Modulates the Ultrafast Photocycle Initiation Dynamics of Phytochrome Cph1. <i>Journal of Physical Chemistry Letters</i> , 2018, 9, 3454-3462.	2.1	24
47	Flexible mapping of homology onto structure with Homolmapper. <i>BMC Bioinformatics</i> , 2007, 8, 123.	1.2	20
48	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.	1.6	20
49	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.	3.3	20
50	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, .	3.3	18
51	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.	3.3	16
52	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.	1.2	15
53	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, .	3.3	13
54	Natural diversity provides a broad spectrum of cyanobacteriochrome-based diguanylate cyclases. <i>Plant Physiology</i> , 2021, 187, 632-645.	2.3	11

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55	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.	2.1	10
56	Protein-chromophore interactions controlling photoisomerization in red/green cyanobacteriochromes. <i>Photochemical and Photobiological Sciences</i> , 2022, 21, 471-491.	1.6	7
57	<sup>1</sup> H, <sup>13</sup> C, and <sup>15</sup> N chemical shift assignments of cyanobacteriochrome NpR6012g4 in the green-absorbing photoproduct state. <i>Biomolecular NMR Assignments</i> , 2016, 10, 157-161.	0.4	6
58	<sup>1</sup> H, <sup>15</sup> N, and <sup>13</sup> C chemical shift assignments of cyanobacteriochrome NpR6012g4 in the red-absorbing dark state. <i>Biomolecular NMR Assignments</i> , 2016, 10, 139-142.	0.4	6