

# Diana Kirilovsky

## List of Publications by Year in descending order

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107  
papers

6,297  
citations

66234

42  
h-index

74018

75  
g-index

111  
all docs

111  
docs citations

111  
times ranked

2746  
citing authors

#	ARTICLE	IF	CITATIONS
1	A Soluble Carotenoid Protein Involved in Phycobilisome-Related Energy Dissipation in Cyanobacteria. <i>Plant Cell</i> , 2006, 18, 992-1007.	3.1	396
2	A photoactive carotenoid protein acting as light intensity sensor. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2008, 105, 12075-12080.	3.3	324
3	Photoprotection in cyanobacteria: the orange carotenoid protein (OCP)-related non-photochemical-quenching mechanism. <i>Photosynthesis Research</i> , 2007, 93, 7-16.	1.6	201
4	UV-B Radiation-Induced Donor- and Acceptor-Side Modifications of Photosystem II in the Cyanobacterium <i>Synechocystis</i> PCC 6803. <i>Biochemistry</i> , 1999, 38, 12786-12794.	1.2	195
5	A 12 Å... carotenoid translocation in a photoswitch associated with cyanobacterial photoprotection. <i>Science</i> , 2015, 348, 1463-1466.	6.0	192
6	In Vitro Reconstitution of the Cyanobacterial Photoprotective Mechanism Mediated by the Orange Carotenoid Protein in <i>Synechocystis</i> PCC 6803. <i>Plant Cell</i> , 2011, 23, 2631-2643.	3.1	171
7	The orange carotenoid protein in photoprotection of photosystem II in cyanobacteria. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2012, 1817, 158-166.	0.5	171
8	Cyanobacterial photoprotection by the orange carotenoid protein. <i>Nature Plants</i> , 2016, 2, 16180.	4.7	166
9	The Orange Carotenoid Protein: a blue-green light photoactive protein. <i>Photochemical and Photobiological Sciences</i> , 2013, 12, 1135-1143.	1.6	162
10	Structural Determinants Underlying Photoprotection in the Photoactive Orange Carotenoid Protein of Cyanobacteria. <i>Journal of Biological Chemistry</i> , 2010, 285, 18364-18375.	1.6	152
11	Biosynthetic Ca <sup>2+</sup> /Sr <sup>2+</sup> Exchange in the Photosystem II Oxygen-evolving Enzyme of <i>Thermosynechococcus elongatus</i> . <i>Journal of Biological Chemistry</i> , 2004, 279, 22809-22819.	1.6	145
12	Light-Induced Energy Dissipation in Iron-Starved Cyanobacteria: Roles of OCP and IsiA Proteins. <i>Plant Cell</i> , 2007, 19, 656-672.	3.1	134
13	Site, Rate, and Mechanism of Photoprotective Quenching in Cyanobacteria. <i>Journal of the American Chemical Society</i> , 2011, 133, 18304-18311.	6.6	128
14	Occurrence and function of the orange carotenoid protein in photoprotective mechanisms in various cyanobacteria. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2008, 1777, 1344-1354.	0.5	126
15	Identification of a protein required for recovery of full antenna capacity in OCP-related photoprotective mechanism in cyanobacteria. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010, 107, 11620-11625.	3.3	125
16	Structural and Functional Modularity of the Orange Carotenoid Protein: Distinct Roles for the N- and C-Terminal Domains in Cyanobacterial Photoprotection. <i>Plant Cell</i> , 2014, 26, 426-437.	3.1	114
17	The Cyanobacterial Photoactive Orange Carotenoid Protein Is an Excellent Singlet Oxygen Quencher. <i>Plant Cell</i> , 2014, 26, 1781-1791.	3.1	110
18	Modulating energy arriving at photochemical reaction centers: orange carotenoid protein-related photoprotection and state transitions. <i>Photosynthesis Research</i> , 2015, 126, 3-17.	1.6	110

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19	Influence of zeaxanthin and echinenone binding on the activity of the Orange Carotenoid Protein. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2009, 1787, 280-288.	0.5	106
20	Crystal structure of the FRP and identification of the active site for modulation of OCP-mediated photoprotection in cyanobacteria. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013, 110, 10022-10027.	3.3	102
21	Redox Control of psbA Gene Expression in the Cyanobacterium <i>Synechocystis</i> PCC 6803. Involvement of the Cytochrome b6/fComplex. <i>Plant Physiology</i> , 2000, 122, 505-516.	2.3	89
22	Picosecond Kinetics of Light Harvesting and Photoprotective Quenching in Wild-Type and Mutant Phycobilisomes Isolated from the Cyanobacterium <i>Synechocystis</i> PCC 6803. <i>Biophysical Journal</i> , 2012, 102, 1692-1700.	0.2	87
23	Structure, Diversity, and Evolution of a New Family of Soluble Carotenoid-Binding Proteins in Cyanobacteria. <i>Molecular Plant</i> , 2016, 9, 1379-1394.	3.9	83
24	Changing Color for Photoprotection: The Orange Carotenoid Protein. <i>Trends in Plant Science</i> , 2020, 25, 92-104.	4.3	83
25	Essential role of two tyrosines and two tryptophans on the photoprotection activity of the Orange Carotenoid Protein. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2011, 1807, 293-301.	0.5	82
26	The Essential Role of the N-Terminal Domain of the Orange Carotenoid Protein in Cyanobacterial Photoprotection: Importance of a Positive Charge for Phycobilisome Binding. <i>Plant Cell</i> , 2012, 24, 1972-1983.	3.1	82
27	Regulation of psbA and psaE Expression by Light Quality in <i>Synechocystis</i> Species PCC 6803. A Redox Control Mechanism. <i>Plant Physiology</i> , 2001, 125, 1988-2000.	2.3	81
28	Photoactivation Mechanism, Timing of Protein Secondary Structure Dynamics and Carotenoid Translocation in the Orange Carotenoid Protein. <i>Journal of the American Chemical Society</i> , 2019, 141, 520-530.	6.6	80
29	Different Functions of the Paralogs to the N-Terminal Domain of the Orange Carotenoid Protein in the Cyanobacterium <i>Anabaena</i> sp. PCC 7120. <i>Plant Physiology</i> , 2016, 171, 1852-1866.	2.3	76
30	Influence of the Redox Potential of the Primary Quinone Electron Acceptor on Photoinhibition in Photosystem II. <i>Journal of Biological Chemistry</i> , 2007, 282, 12492-12502.	1.6	75
31	Orange carotenoid protein burrows into the phycobilisome to provide photoprotection. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, E1655-62.	3.3	75
32	Redox properties of the photosystem II cytochromes b559 and c550 in the cyanobacterium <i>Thermosynechococcus elongatus</i> . <i>Journal of Biological Inorganic Chemistry</i> , 2003, 8, 206-216.	1.1	74
33	ApcD, ApcF and ApcE are not required for the Orange Carotenoid Protein related phycobilisome fluorescence quenching in the cyanobacterium <i>Synechocystis</i> PCC 6803. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2012, 1817, 1418-1427.	0.5	71
34	The Photophysics of the Orange Carotenoid Protein, a Light-Powered Molecular Switch. <i>Journal of Physical Chemistry B</i> , 2012, 116, 2568-2574.	1.2	70
35	Influence of DCMU and ferricyanide on photodamage in photosystem II. <i>Biochemistry</i> , 1994, 33, 3087-3095.	1.2	69
36	Revisiting cyanobacterial state transitions. <i>Photochemical and Photobiological Sciences</i> , 2020, 19, 585-603.	1.6	69

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37	State Transitions or $\hat{I}$ pH-Dependent Quenching of Photosystem II Fluorescence in Red Algae. <i>Biochemistry</i> , 1996, 35, 9435-9445.	1.2	67
38	Characterization of the Synechocystis PCC 6803 Fluorescence Recovery Protein involved in photoprotection. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2013, 1827, 348-354.	0.5	62
39	Biosynthesis of soluble carotenoid holoproteins in <i>Escherichia coli</i> . <i>Scientific Reports</i> , 2015, 5, 9085.	1.6	62
40	Paralogs of the C-Terminal Domain of the Cyanobacterial Orange Carotenoid Protein Are Carotenoid Donors to Helical Carotenoid Proteins. <i>Plant Physiology</i> , 2017, 175, 1283-1303.	2.3	52
41	Controlling Light Harvesting with Light. <i>Journal of the American Chemical Society</i> , 2016, 138, 11616-11622.	6.6	50
42	Echinenone vibrational properties: From solvents to the orange carotenoid protein. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2015, 1847, 1044-1054.	0.5	48
43	Redox Control of ntcA Gene Expression in <i>Synechocystis</i> sp. PCC 6803. Nitrogen Availability and Electron Transport Regulate the Levels of the NtcA Protein. <i>Plant Physiology</i> , 2001, 125, 969-981.	2.3	47
44	Regulation of Orange Carotenoid Protein Activity in Cyanobacterial Photoprotection. <i>Plant Physiology</i> , 2015, 169, 737-747.	2.3	47
45	$\hat{I}$ pH-Dependent Photosystem II Fluorescence Quenching Induced by Saturating, Multiturnover Pulses in Red Algae1. <i>Plant Physiology</i> , 1998, 118, 103-113.	2.3	41
46	Resolving the contribution of the uncoupled phycobilisomes to cyanobacterial pulse-amplitude modulated (PAM) fluorometry signals. <i>Photosynthesis Research</i> , 2016, 127, 91-102.	1.6	40
47	Mechanisms Modulating Energy Arriving at Reaction Centers in Cyanobacteria. <i>Advances in Photosynthesis and Respiration</i> , 2014, , 471-501.	1.0	40
48	Structural and EPR Characterization of the Soluble Form of Cytochrome c-550 and of the psbV2 Gene Product from the Cyanobacterium <i>Thermosynechococcus elongatus</i> . <i>Plant and Cell Physiology</i> , 2003, 44, 697-706.	1.5	39
49	The Photoactive Orange Carotenoid Protein and Photoprotection in Cyanobacteria. <i>Advances in Experimental Medicine and Biology</i> , 2010, 675, 139-159.	0.8	39
50	Structural rearrangements in the C-terminal domain homolog of Orange Carotenoid Protein are crucial for carotenoid transfer. <i>Communications Biology</i> , 2018, 1, 125.	2.0	39
51	The small CAB-like proteins of the cyanobacterium <i>Synechocystis</i> sp. PCC 6803: Their involvement in chlorophyll biogenesis for Photosystem II. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2011, 1807, 1143-1151.	0.5	38
52	Near-infrared-induced Transitions in the Manganese Cluster of Photosystem II: Action Spectra for the S2 and S3 Redox States. <i>Plant and Cell Physiology</i> , 2005, 46, 837-842.	1.5	37
53	Reversible and irreversible photoinhibition in herbicide-resistant mutants of <i>Synechocystis</i> 6714. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 1988, 933, 124-131.	0.5	36
54	Protection of reaction center II from photodamage by low temperature and anaerobiosis in spinach chloroplasts. <i>FEBS Letters</i> , 1991, 279, 201-204.	1.3	36

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55	Cytochrome c550 in the Cyanobacterium <i>Thermosynechococcus elongatus</i> . <i>Journal of Biological Chemistry</i> , 2004, 279, 52869-52880.	1.6	36
56	State transitions in the cyanobacterium <i>Synechococcus elongatus</i> 7942 involve reversible quenching of the photosystem II core. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2018, 1859, 1059-1066.	0.5	36
57	Light-controlled carotenoid transfer between water-soluble proteins related to cyanobacterial photoprotection. <i>FEBS Journal</i> , 2019, 286, 1908-1924.	2.2	36
58	Expression of the <i>psbA</i> gene during photoinhibition and recovery in <i>Synechocystis</i> PCC 6714: inhibition and damage of transcriptional and translational machinery prevent the restoration of photosystem II activity. <i>Plant Molecular Biology</i> , 1997, 34, 1-13.	2.0	34
59	Photoelectron Generation by Photosystem II Core Complexes Tethered to Gold Surfaces. <i>ChemSusChem</i> , 2010, 3, 471-475.	3.6	34
60	Primary events occurring in photoinhibition in <i>Synechocystis</i> 6714 wild-type and an atrazine-resistant mutant. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 1990, 1020, 87-93.	0.5	33
61	Excited States of the Inactive and Active Forms of the Orange Carotenoid Protein. <i>Journal of Physical Chemistry B</i> , 2013, 117, 9121-9128.	1.2	33
62	The Cytochrome <i>b<sub>6</sub>f</i> Complex Is Not Involved in Cyanobacterial State Transitions. <i>Plant Cell</i> , 2019, 31, 911-931.	3.1	33
63	Mutations responsible for high light sensitivity in an atrazine-resistant mutant of <i>Synechocystis</i> 6714. <i>Plant Molecular Biology</i> , 1989, 13, 355-363.	2.0	31
64	Redox control of <i>psbA</i> expression in cyanobacteria <i>Synechocystis</i> strains. <i>Journal of Photochemistry and Photobiology B: Biology</i> , 1999, 48, 104-113.	1.7	31
65	UV-B radiation induced exchange of the D1 reaction centre subunits produced from the <i>psbA2</i> and <i>psbA3</i> genes in the cyanobacterium <i>Synechocystis</i> sp. PCC 6803. <i>FEBS Journal</i> , 2000, 267, 2640-2648.	0.2	31
66	Effects of formate binding on the quinone-iron electron acceptor complex of photosystem II. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2011, 1807, 216-226.	0.5	30
67	Specificity of the Cyanobacterial Orange Carotenoid Protein: Influences of Orange Carotenoid Protein and Phycobilisome Structures. <i>Plant Physiology</i> , 2014, 164, 790-804.	2.3	30
68	Ultrafast spectroscopy tracks carotenoid configurations in the orange and red carotenoid proteins from cyanobacteria. <i>Photosynthesis Research</i> , 2017, 131, 105-117.	1.6	30
69	Interdomain interactions reveal the molecular evolution of the orange carotenoid protein. <i>Nature Plants</i> , 2019, 5, 1076-1086.	4.7	30
70	The cyanobacterial Fluorescence Recovery Protein has two distinct activities: Orange Carotenoid Protein amino acids involved in FRP interaction. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2017, 1858, 308-317.	0.5	28
71	Different roles for <i>ApcD</i> and <i>ApcF</i> in <i>Synechococcus elongatus</i> and <i>Synechocystis</i> sp. PCC 6803 phycobilisomes. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2019, 1860, 488-498.	0.5	25
72	Two-Step Structural Changes in Orange Carotenoid Protein Photoactivation Revealed by Time-Resolved Fourier Transform Infrared Spectroscopy. <i>Journal of Physical Chemistry B</i> , 2019, 123, 3259-3266.	1.2	24

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73	Photosynthetic cytochrome c550. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2012, 1817, 1152-1163.	0.5	22
74	The role of the high potential form of the cytochrome b559: Study of <i>Thermosynechococcus elongatus</i> mutants. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2014, 1837, 908-919.	0.5	20
75	State transitions in cyanobacteria studied with picosecond fluorescence at room temperature. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2020, 1861, 148255.	0.5	18
76	Inverse regulation of light harvesting and photoprotection is mediated by a 3' end-derived sRNA in cyanobacteria. <i>Plant Cell</i> , 2021, 33, 358-380.	3.1	18
77	Comparison of state 1-state 2 transitions in the green alga <i>Chlamydomonas reinhardtii</i> and in the red alga <i>Rhodella violacea</i> : effect of kinase and phosphatase inhibitors. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 1995, 1232, 91-95.	0.5	16
78	A High Redox Potential Form of Cytochrome c550 in Photosystem II from <i>Thermosynechococcus elongatus</i> . <i>Journal of Biological Chemistry</i> , 2011, 286, 5985-5994.	1.6	16
79	Dissipating energy by carotenoids. <i>Nature Chemical Biology</i> , 2015, 11, 242-243.	3.9	16
80	Switching an Individual Phycobilisome Off and On. <i>Journal of Physical Chemistry Letters</i> , 2018, 9, 2426-2432.	2.1	16
81	Structural, Mechanistic and Genomic Insights into OCP-Mediated Photoprotection. <i>Advances in Botanical Research</i> , 2013, 65, 1-26.	0.5	14
82	A kaleidoscope of photosynthetic antenna proteins and their emerging roles. <i>Plant Physiology</i> , 2022, 189, 1204-1219.	2.3	14
83	In vitro reassociation of phycobiliproteins and membranes to form functional membrane-bound phycobilisomes. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 1983, 724, 416-426.	0.5	13
84	The primary structure of D1 near the QB pocket influences oxygen evolution. <i>Photosynthesis Research</i> , 1993, 38, 387-394.	1.6	13
85	Structural dynamics in the C terminal domain homolog of orange carotenoid Protein reveals residues critical for carotenoid uptake. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2020, 1861, 148214.	0.5	13
86	State transitions and photosystems spatially resolved in individual cells of the cyanobacterium <i>Synechococcus elongatus</i> . <i>Plant Physiology</i> , 2021, 186, 569-580.	2.3	12
87	Recovery of Photosystem II Activity in Photoinhibited <i>Synechocystis</i> Cells: Light-Dependent Translation Activity Is Required besides Light-Independent Synthesis of the D1 Protein. <i>Biochemistry</i> , 2000, 39, 2032-2041.	1.2	11
88	A method to decompose spectral changes in <i>Synechocystis</i> PCC 6803 during light-induced state transitions. <i>Photosynthesis Research</i> , 2016, 130, 237-249.	1.6	11
89	Evolution and function of light-harvesting antenna in oxygenic photosynthesis. <i>Advances in Botanical Research</i> , 2019, , 247-293.	0.5	10
90	A new phenotype for a herbicide resistant mutant of <i>Synechocystis</i> 6714 with a high sensitivity to photoinhibition. <i>Plant Science</i> , 1996, 115, 165-174.	1.7	9

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91	Apparent destabilization of the S1 state related to herbicide resistance in a cyanobacterium mutant. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 1991, 1060, 37-44.	0.5	8
92	The Orange Carotenoid Protein of Cyanobacteria. , 2009, , 3-17.		8
93	Unifying Perspective of the Ultrafast Photodynamics of Orange Carotenoid Proteins from <i>Synechocystis</i> : Peril of High-Power Excitation, Existence of Different S* States, and Influence of Tagging. <i>Jacs Au</i> , 2022, 2, 1084-1095.	3.6	8
94	Light stress in green and red <i>Planktothrix</i> strains: The orange carotenoid protein and its related photoprotective mechanism. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2020, 1861, 148037.	0.5	7
95	Effects of Modification of Light Parameters on the Production of Cryptophycin, Cyanotoxin with Potent Anticancer Activity, in <i>Nostoc</i> sp.. <i>Toxins</i> , 2020, 12, 809.	1.5	7
96	Structure-function-dynamics relationships in the peculiar <i>Planktothrix</i> PCC7805 OCP1: Impact of his-tagging and carotenoid type. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2022, 1863, 148584.	0.5	6
97	Modulating Energy Transfer from Phycobilisomes to Photosystems: State Transitions and OCP-Related Non-Photochemical Quenching. <i>Advances in Photosynthesis and Respiration</i> , 2020, , 367-396.	1.0	5
98	Specificity of energy transfer to photosystem II by in vitro reassociated homologous and heterologous membrane-bound phycobilisomes. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 1984, 767, 451-459.	0.5	4
99	Photoprotection in Cyanobacteria: The Orange Carotenoid Protein and Energy Dissipation. , 2011, , 395-421.		4
100	Elucidation of the essential amino acids involved in the binding of the cyanobacterial Orange Carotenoid Protein to the phycobilisome. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2022, 1863, 148504.	0.5	4
101	Orange Carotenoid Protein (OCP) Related NPQ in <i>Synechocystis</i> PCC 6803 OCP-Phycobilisomes Interactions. , 2008, , 997-1000.		3
102	Immobilization of Orange Carotenoid Protein on mesoporous silica SBA-15 for the development of photoactivable nanodevices. <i>Microporous and Mesoporous Materials</i> , 2022, 340, 112007.	2.2	2
103	Light Induced Energy Dissipation in Iron-Starved Cyanobacteria. , 2008, , 1607-1610.		1
104	Site-Directed Mutagenesis of Cytochrome b559 in the Cyanobacterium <i>Thermosynechococcus elongatus</i> . , 2008, , 15-18.		1
105	Non-photochemical-quenching Mechanisms in the Cyanobacterium <i>Thermosynechococcus elongatus</i> . , 2008, , 993-996.		1
106	Heterocyst Formation under the Control of a Cell-Specific Antisense RNA. <i>Plant and Cell Physiology</i> , 2019, 60, 1631-1632.	1.5	0
107	Photosynthesis   The Orange Carotenoid Protein and the Regulation of Energy Transfer in Cyanobacteria. , 2021, , 375-383.		0