Christine Kirmaier

List of Publications by Year
in descending order

89 papers	4,264 citations	101496 36 h-index	114418 63 g-index
91 all docs	91 docs citations	91 times ranked	2698 citing authors

#	Article	IF	Citations
1	Primary photochemistry of reaction centers from the photosynthetic purple bacteria. Photosynthesis Research, 1987, 13, 225-260.	1.6	398
2	Structural Control of the Photodynamics of Boronâˆ’Dipyrrin Complexes. Journal of Physical Chemistry B, 2005, 109, 20433-20443.	1.2	375
3	Excited-State Energy-Transfer Dynamics in Self-Assembled Triads Composed of Two Porphyrins and an Intervening Bis(dipyrrinato)metal Complex. Inorganic Chemistry, 2003, 42, 6629-6647.	1.9	214
4	Temperature and detection-wavelength dependence of the picosecond electron-transfer kinetics measured in Rhodopseudomonas sphaeroides reaction centers. Resolution of new spectral and kinetic components in the primary charge-separation process. Biochimica Et Biophysica Acta - Bioenergetics, 1985, 810, 33-48.	0.5	211
5	Influence of an amino-acid residue on the optical properties and electron transfer dynamics of a photosynthetic reaction centre complex. Nature, 1988, 336, 182-184.	13.7	168
6	Picosecond-photodichroism studies of the transient states in Rhodopseudomonas sphaeroides reaction centers at 5 K. Effects of electron transfer on the six bacteriochlorin pigments. Biochimica Et Biophysica Acta - Bioenergetics, 1985, 810, 49-61.	0.5	140
7	Investigation into the source of electron transfer asymmetry in bacterial reaction centers. Biochemistry, 1991, 30, 8315-8322.	1.2	104
8	Timeâ€resolved and static optical properties of vibrationally excited porphyrins. Journal of Chemical Physics, 1991, 94, 6020-6029.	1.2	96
9	Photophysical Properties and Electronic Structure of Stable, Tunable Synthetic Bacteriochlorins: Extending the Features of Native Photosynthetic Pigments. Journal of Physical Chemistry B, 2011, 115, 10801-10816.	1.2	93
10	Synthesis and properties of weakly coupled dendrimeric multiporphyrin light-harvesting arrays and hole-storage reservoirsElectronic supplementary information (ESI) available: a description of multiphoton effects at high excitation intensities; the complete Experimental section including descriptions of the syntheses of the arrays; SEC data, 1H NMR spectra, and mass spectra for all new porphyrins and multiporphyrin arrays; a description of exploratory studies in the purification of Zn20Fb; data from a compar. Journal of Materials Chemistry, 2002, 12, 65-80.	6.7	90
11	M-Side Electron Transfer in Reaction Center Mutants with a Lysine near the Nonphotoactive Bacteriochlorophyllâ€. Biochemistry, 1999, 38, 11516-11530.	1.2	88
12	Biohybrid Photosynthetic Antenna Complexes for Enhanced Light-Harvesting. Journal of the American Chemical Society, 2012, 134, 4589-4599.	6.6	87
13	Photophysical Properties and Electronic Structure of Porphyrins Bearing Zero to Four <i>meso</i>-Phenyl Substituents: New Insights into Seemingly Well Understood Tetrapyrroles. Journal of Physical Chemistry A, 2016, 120, 9719-9731.	1.1	75
14	The Nature and Dynamics of the Charge-Separated Intermediate in Reaction Centers in which Bacteriochlorophyll Replaces the Photoactive Bacteriopheophytin. 2. The Rates and Yields of Charge Separation and Recombination. The Journal of Physical Chemistry, 1995, 99, 8910-8917.	2.9	73
15	Quinone Reduction via Secondary B-Branch Electron Transfer in Mutant Bacterial Reaction Centersâ€. Biochemistry, 2003, 42, 1718-1730.	1.2	71
16	Manipulating the Direction of Electron Transfer in the Bacterial Reaction Center by Swapping Phe for Tyr Near BChlM(L181) and Tyr for Phe Near BChlL(M208)â€. Biochemistry, 2001, 40, 12132-12139.	1.2	70
17	Primary photochemistry in the facultative green photosynthetic bacterium Chloroflexus aurantiacus. Journal of Cellular Biochemistry, 1983, 22, 251-261.	1.2	69
18	Effects of Asp Residues Near the L-Side Pigments in Bacterial Reaction Centersâ€. Biochemistry, 1996, 35, 15418-15427.	1.2	60

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19	Comparison of M-Side Electron Transfer in Rb. sphaeroides and Rb. capsulatus Reaction Centers. Journal of Physical Chemistry B, 2002, 106, 1799-1808.	1.2	58
20	Extending the Short and Long Wavelength Limits of Bacteriochlorin Near-Infrared Absorption via Dioxo- and Bisimide-Functionalization. Journal of Physical Chemistry B, 2015, 119, 4382-4395.	1.2	55
21	High Yield of M-Side Electron Transfer in Mutants ofRhodobacter capsulatusReaction Centers Lacking the L-Side Bacteriopheophytinâ€. Biochemistry, 2006, 45, 3845-3851.	1.2	54
22	Primary processes in the bacterial reaction center probed by two-dimensional electronic spectroscopy. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 3563-3568.	3.3	53
23	The question of the intermediate state P+ Chl- in bacterial photosynthesis. FEBS Letters, 1985, 185, 76-82.	1.3	52
24	Influence of Electronic Asymmetry on the Spectroscopic and Photodynamic Properties of the Primary Electron Donor in the Photosynthetic Reaction Center. The Journal of Physical Chemistry, 1996, 100, 17696-17707.	2.9	50
25	Palette of lipophilic bioconjugatable bacteriochlorins for construction of biohybrid light-harvesting architectures. Chemical Science, 2013, 4, 2036.	3.7	47
26	Picosecond measurements of the primary photochemical events in reaction centers isolated from the facultative green photosynthetic bacterium Chloroflexus aurantiacus. FEBS Letters, 1983, 158, 73-78.	1.3	46
27	Subpicosecond characterization of the optical properties of the primary electron donor and the mechanism of the initial electron transfer in Rhodobacter capsulatus reaction centers. FEBS Letters, 1988, 239, 211-218.	1.3	43
28	Design and synthesis of light-harvesting rods for intrinsic rectification of the migration of excited-state energy and ground-state holesElectronic supplementary information (ESI) available: 1H and 13C NMR spectra for all new porphyrin precursors; 1H NMR and LD-MS spectra for all new porphyrins and porphyrin arrays (LD-MS only for deprotected arrays 12â€² and 14â€², and pentad 18); analytical SEC data for all porphyrin arrays. See http://www.rsc.org/suppdata/jm/b1/b108168c/. Journal of Materials Chemistry, 2002, 12, 1530-1552.	6.7	43
29	The Nature and Dynamics of the Charge-Separated Intermediate in Reaction Centers in which Bacteriochlorophyll Replaces the Photoactive Bacteriopheophytin. 1. Spectral Characterization of the Transient State. The Journal of Physical Chemistry, 1995, 99, 8903-8909.	2.9	41
30	B-Side Charge Separation in Bacterial Photosynthetic Reaction Centers:Â Nanosecond Time Scale Electron Transfer from HB-to QBâ€. Biochemistry, 2003, 42, 2016-2024.	1.2	41
31	Augmenting light coverage for photosynthesis through YFP-enhanced charge separation at the Rhodobacter sphaeroides reaction centre. Nature Communications, 2017, 8, 13972.	5.8	40
32	Charge transfer and charge resonance states of the primary electron donor in wild-type and mutant bacterial reaction centers. Biochimica Et Biophysica Acta - Bioenergetics, 1990, 1020, 239-246.	0.5	39
33	Primary Events in Photosynthetic Reaction Centers with Multiple Mutations near the Photoactive Electron Carriers. Journal of Physical Chemistry B, 2001, 105, 5575-5584.	1.2	39
34	Structures of <i>Rhodopseudomonas palustris</i> RC-LH1 complexes with open or closed quinone channels. Science Advances, 2021, 7, .	4.7	38
35	Integration of multiple chromophores with native photosynthetic antennas to enhance solar energy capture and delivery. Chemical Science, 2013, 4, 3924.	3.7	37
36	Insights into the factors controlling the rates of the deactivation processes that compete with charge separation in photosynthetic reaction centers. Chemical Physics, 1993, 176, 615-629.	0.9	36

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37	Probing M-Branch Electron Transfer and Cofactor Environment in the Bacterial Photosynthetic Reaction Center by Addition of a Hydrogen Bond to the M-Side Bacteriopheophytin. Journal of Physical Chemistry B, 2002, 106, 495-503.	1.2	36
38	Distinct Photophysical and Electronic Characteristics of Strongly Coupled Dyads Containing a Perylene Accessory Pigment and a Porphyrin, Chlorin, or Bacteriochlorin. Journal of Physical Chemistry B, 2013, 117, 9288-9304.	1.2	36
39	Engineering of B800 bacteriochlorophyll binding site specificity in the Rhodobacter sphaeroides LH2 antenna. Biochimica Et Biophysica Acta - Bioenergetics, 2019, 1860, 209-223.	0.5	36
40	Effects of Substituents on Synthetic Analogs of Chlorophylls. Part 3: The Distinctive Impact of Auxochromes at the 7â€•<i>versus</i> 3â€Positions. Photochemistry and Photobiology, 2012, 88, 651-674.	1.3	34
41	Panchromatic absorbers for solar light-harvesting. Chemical Communications, 2014, 50, 14512-14515.	2.2	34
42	Subpicosecond Spectroscopy of Charge Separation in <i>Rhodobacter capsulatus</i> Reaction Centers. Israel Journal of Chemistry, 1988, 28, 79-85.	1.0	33
43	Temperature-independent electron transfer in Rhodobacter capsulatus wild-type and HisM200 .fwdarw. Leu photosynthetic reaction centers. The Journal of Physical Chemistry, 1991, 95, 3379-3383.	2.9	32
44	Amphiphilic chlorins and bacteriochlorins in micellar environments. Molecular design, de novo synthesis, and photophysical properties. Chemical Science, 2013, 4, 3459.	3.7	32
45	Versatile design of biohybrid light-harvesting architectures to tune location, density, and spectral coverage of attached synthetic chromophores for enhanced energy capture. Photosynthesis Research, 2014, 121, 35-48.	1.6	32
46	Temperature Dependence of Electron Transfer to the M-Side Bacteriopheophytin in <i>Rhodobacter </i><i>capsulatus</i> Reaction Centers. Journal of Physical Chemistry B, 2008, 112, 5487-5499.	1.2	29
47	Effects of Strong Electronic Coupling in Chlorin and Bacteriochlorin Dyads. Journal of Physical Chemistry A, 2016, 120, 379-395.	1.1	28
48	Photophysical Properties and Electronic Structure of Zinc(II) Porphyrins Bearing 0â€“4 <i>meso</i>-Phenyl Substituents: Zinc Porphine to Zinc Tetraphenylporphyrin (ZnTPP). Journal of Physical Chemistry A, 2020, 124, 7776-7794.	1.1	28
49	Photophysical Properties and Electronic Structure of Chlorin-Imides: Bridging the Gap between Chlorins and Bacteriochlorins. Journal of Physical Chemistry B, 2015, 119, 7503-7515.	1.2	27
50	Synthetic bacteriochlorins bearing polar motifs (carboxylate, phosphonate, ammonium and a short) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5 2015, 39, 5694-5714.	1.4	25
51	B-Side Electron Transfer To Form P+HB- in Reaction Centers from the F(L181)Y/Y(M208)F Mutant of Rhodobacter capsulatus. Journal of Physical Chemistry B, 2004, 108, 11827-11832.	1.2	24
52	Probing the Contribution of Electronic Coupling to the Directionality of Electron Transfer in Photosynthetic Reaction Centers. Journal of Physical Chemistry B, 2005, 109, 24160-24172.	1.2	24
53	Excited-State Photodynamics of Peryleneâˆ’Porphyrin Dyads. 5. Tuning Light-Harvesting Characteristics via Perylene Substituents, Connection Motif, and Three-Dimensional Architecture. Journal of Physical Chemistry B, 2010, 114, 14249-14264.	1.2	23
54	Free-energy dependence of the rate of electron transfer to the primary quinone in beta-type reaction centers. Chemical Physics, 1995, 197, 225-237.	0.9	22

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55	Detergent effects on primary charge separation in wild-type and mutant Rhodobacter capsulatus reaction centers. Chemical Physics, 2003, 294, 305-318.	0.9	22
56	Probing Electronic Communication for Efficient Light-Harvesting Functionality: Dyads Containing a Common Perylene and a Porphyrin, Chlorin, or Bacteriochlorin. Journal of Physical Chemistry B, 2014, 118, 1630-1647.	1.2	22
57	Synthesis of arrays containing porphyrin, chlorin, and perylene-imide constituents for panchromatic light-harvesting and charge separation. RSC Advances, 2018, 8, 23854-23874.	1.7	22
58	Photophysical Properties and Electronic Structure of Bacteriochlorinâ€“Chalcones with Extended Nearâ€Infrared Absorption. Photochemistry and Photobiology, 2013, 89, 586-604.	1.3	21
59	Determination of the Rate and Yield of B-side Quinone Reduction inRhodobacter capsulatusReaction Centersâ€. Biochemistry, 2006, 45, 7314-7322.	1.2	20
60	Effects of Substituents on Synthetic Analogs of Chlorophylls. Part 4: How Formyl Group Location Dictates the Spectral Properties of Chlorophyllsb,dandf. Photochemistry and Photobiology, 2015, 91, 331-342.	1.3	20
61	Origin of Panchromaticity in Multichromophoreâ€“Tetrapyrrole Arrays. Journal of Physical Chemistry A, 2018, 122, 7181-7201.	1.1	20
62	Hidden vibronic and excitonic structure and vibronic coherence transfer in the bacterial reaction center. Science Advances, 2022, 8, eabk0953.	4.7	20
63	Electronic Interactions in the Bacterial Reaction Center Revealed by Two-Color 2D Electronic Spectroscopy. Journal of Physical Chemistry Letters, 2018, 9, 5219-5225.	2.1	19
64	Trapping the P⁺B_L^{âˆ'} Initial Intermediate State of Charge Separation in Photosynthetic Reaction Centers from <i>Rhodobacter capsulatus</i>. Biochemistry, 2009, 48, 2571-2573.	1.2	17
65	De novo synthesis and properties of analogues of the self-assembling chlorosomal bacteriochlorophylls. New Journal of Chemistry, 2011, 35, 2671.	1.4	17
66	Photochemistry of a Bacterial Photosynthetic Reaction Center Missing the Initial Bacteriochlorophyll Electron Acceptor. Journal of Physical Chemistry B, 2012, 116, 9971-9982.	1.2	17
67	Annulated bacteriochlorins for near-infrared photophysical studies. New Journal of Chemistry, 2019, 43, 7209-7232.	1.4	16
68	Manipulating the Energetics and Rates of Electron Transfer in <i>Rhodobacter capsulatus</i> Reaction Centers with Asymmetric Pigment Content. Journal of Physical Chemistry B, 2017, 121, 6989-7004.	1.2	15
69	A perspective on the redox properties of tetrapyrrole macrocycles. Physical Chemistry Chemical Physics, 2021, 23, 19130-19140.	1.3	15
70	Resonance Raman Characterization of Reaction Centers with an Asp Residue near the Photoactive Bacteriopheophytinâ€. Biochemistry, 1998, 37, 6394-6401.	1.2	14
71	Putative Hydrogen Bond to Tyrosine M208 in Photosynthetic Reaction Centers from <i>Rhodobacter capsulatus</i> Significantly Slows Primary Charge Separation. Journal of Physical Chemistry B, 2014, 118, 6721-6732.	1.2	13
72	High Throughput Engineering to Revitalize a Vestigial Electron Transfer Pathway in Bacterial Photosynthetic Reaction Centers. Journal of Biological Chemistry, 2012, 287, 8507-8514.	1.6	11

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73	Enhanced Lightâ€Harvesting Capacity by Micellar Assembly of Free Accessory Chromophores and LH1â€like Antennas. Photochemistry and Photobiology, 2014, 90, 1264-1276.	1.3	11
74	Amphiphilic, hydrophilic, or hydrophobic synthetic bacteriochlorins in biohybrid light-harvesting architectures: consideration of molecular designs. Photosynthesis Research, 2014, 122, 187-202.	1.6	11
75	Switching sidesâ€"Reengineered primary charge separation in the bacterial photosynthetic reaction center. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 865-871.	3.3	11
76	Low-Temperature Studies of Electron Transfer to the M Side of YFH Reaction Centers from <i>Rhodobacter capsulatus</i>. Journal of Physical Chemistry B, 2009, 113, 1132-1142.	1.2	10
77	High yield of secondary B-side electron transfer in mutant Rhodobacter capsulatus reaction centers. Biochimica Et Biophysica Acta - Bioenergetics, 2014, 1837, 1892-1903.	0.5	10
78	Species differences in unlocking Bâ€side electron transfer in bacterial reaction centers. FEBS Letters, 2016, 590, 2515-2526.	1.3	8
79	Optimizing multi-step B-side charge separation in photosynthetic reaction centers from Rhodobacter capsulatus. Biochimica Et Biophysica Acta - Bioenergetics, 2016, 1857, 150-159.	0.5	8
80	Integration of Cyanine, Merocyanine and Styryl Dye Motifs with Synthetic Bacteriochlorins. Photochemistry and Photobiology, 2016, 92, 111-125.	1.3	7
81	New molecular design for blue BODIPYs. New Journal of Chemistry, 2019, 43, 7233-7242.	1.4	7
82	Electronic Structure and Excited-State Dynamics of Ryleneâ€"Tetrapyrrole Panchromatic Absorbers. Journal of Physical Chemistry A, 2021, 125, 7900-7919.	1.1	7
83	Photosynthetic reaction center variants made via genetic code expansion show Tyr at M210 tunes the initial electron transfer mechanism. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	6
84	Relationship between altered structure and photochemistry in mutant reaction centers in which bacteriochlorophyll replaces the photoactive bacteriopheophytin. , 1999, 5, 346-357.		5
85	Consequences of saturation mutagenesis of the protein ligand to the B-side monomeric bacteriochlorophyll in reaction centers from Rhodobacter capsulatus. Photosynthesis Research, 2019, 141, 273-290.	1.6	5
86	Conjugated-linker dependence of the photophysical properties and electronic structure of chlorin dyads. Journal of Porphyrins and Phthalocyanines, 2021, 25, 639-663.	0.4	4
87	Expanding Covalent Attachment Sites of Nonnative Chromophores to Encompass the Câ€Terminal Hydrophilic Domain in Biohybrid Lightâ€Harvesting Architectures. ChemPhotoChem, 2018, 2, 300-313.	1.5	2
88	Picosecond Measurements of Electron Transfer in Bacterial Photosynthetic Reaction Centers. ACS Symposium Series, 1986, , 205-218.	0.5	1
89	In Situ, Protein-Mediated Generation of a Photochemically Active Chlorophyll Analogue in a Mutant Bacterial Photosynthetic Reaction Center. Biochemistry, 2021, 60, 1260-1275.	1.2	1