Stefan Weber

List of Publications by Year
in descending order

91 papers	3,920 citations	109321 35 h-index	133252 59 g-index
97 all docs	97 docs citations	97 times ranked	3206 citing authors

#	Article	IF	Citations
1	Light-driven enzymatic catalysis of DNA repair: a review of recent biophysical studies on photolyase. Biochimica Et Biophysica Acta - Bioenergetics, 2005, 1707, 1-23.	1.0	309
2	Magnetically sensitive light-induced reactions in cryptochrome are consistent with its proposed role as a magnetoreceptor. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 4774-4779.	7.1	290
3	Magnetic sensitivity of cryptochrome 4 from a migratory songbird. Nature, 2021, 594, 535-540.	27.8	171
4	On the Reaction Mechanism of Adduct Formation in LOV Domains of the Plant Blue-Light Receptor Phototropin. Journal of the American Chemical Society, 2004, 126, 11067-11076.	13.7	127
5	Direct Observation of a Photoinduced Radical Pair in a Cryptochrome Blueâ€Light Photoreceptor. Angewandte Chemie - International Edition, 2009, 48, 404-407.	13.8	127
6	Magnetic-field effect on the photoactivation reaction of <i>Escherichia coli</i> DNA photolyase. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 14395-14399.	7.1	113
7	Blue Light Perception in Plants. Journal of Biological Chemistry, 2003, 278, 10973-10982.	3.4	101
8	The Electronic Structure of the Flavin Cofactor in DNA Photolyase. Journal of the American Chemical Society, 2001, 123, 3790-3798.	13.7	90
9	Transient EPR of Light-Induced Spin-Correlated Radical Pairs: Manifestation of Zero Quantum Coherence. The Journal of Physical Chemistry, 1994, 98, 2706-2712.	2.9	87
10	Electron Nuclear Double Resonance Differentiates Complementary Roles for Active Site Histidines in (6-4) Photolyase. Journal of Biological Chemistry, 2007, 282, 4738-4747.	3.4	80
11	Comparative electron paramagnetic resonance investigation of reduced graphene oxide and carbon nanotubes with different chemical functionalities for quantum dot attachment. Applied Physics Letters, 2014, 104, .	3.3	80
12	Photoactivation of the flavin cofactor in Xenopus laevis (6-4) photolyase: Observation of a transient tyrosyl radical by time-resolved electron paramagnetic resonance. Proceedings of the National Academy of Sciences of the United States of America, 2002, 99, 1319-1322.	7.1	78
13	Extended Electron-Transfer in Animal Cryptochromes Mediated by a Tetrad of Aromatic Amino Acids. Biophysical Journal, 2016, 111, 301-311.	0.5	77
14	Millitesla magnetic field effects on the photocycle of an animal cryptochrome. Scientific Reports, 2017, 7, 42228.	3.3	76
15	Spinâ€“Orbit Charge Recombination Intersystem Crossing in Phenothiazineâ€“Anthracene Compact Dyads: Effect of Molecular Conformation on Electronic Coupling, Electronic Transitions, and Electron Spin Polarizations of the Triplet States. Journal of Physical Chemistry C, 2018, 122, 27850-27865.	3.1	76
16	Charge transfer and surface defect healing within ZnO nanoparticle decorated graphene hybrid materials. Nanoscale, 2016, 8, 9682-9687.	5.6	74
17	Longâ€Lived Chargeâ€Transfer State Induced by Spinâ€Orbit Charge Transfer Intersystem Crossing (SOCTâ€ISC) in a Compact Spiro Electron Donor/Acceptor Dyad. Angewandte Chemie - International Edition, 2020, 59, 11591-11599.	13.8	74
18	EPR, ENDOR, and TRIPLE Resonance Spectroscopy on the Neutral Flavin Radical in Escherichia coli DNA Photolyase. Biochemistry, 1999, 38, 16740-16748.	2.5	73

#	Article	IF	Citations
19	About defect phenomena in ZnO nanocrystals. Nanoscale, 2021, 13, 9160-9171.	5.6	73
20	Transient radical pairs studied by time-resolved EPR. Biochimica Et Biophysica Acta - Bioenergetics, 2005, 1707, 117-126.	1.0	66
21	The Photoinduced Triplet of Flavins and Its Protonation States. Journal of the American Chemical Society, 2004, 126, 11393-11399.	13.7	58
22	Origin of Light-Induced Spin-Correlated Radical Pairs in Cryptochrome. Journal of Physical Chemistry B, 2010, 114, 14745-14754.	2.6	57
23	Surface passivation of crystalline silicon by plasma-enhanced chemical vapor deposition double layers of silicon-rich silicon oxynitride and silicon nitride. Journal of Applied Physics, 2011, 109, .	2.5	54
24	g-Tensor of the Neutral Flavin Radical Cofactor of DNA Photolyase Revealed by 360-GHz Electron Paramagnetic Resonance Spectroscopy. Journal of Physical Chemistry B, 2002, 106, 8885-8890.	2.6	53
25	Variable Electron Transfer Pathways in an Amphibian Cryptochrome. Journal of Biological Chemistry, 2013, 288, 9249-9260.	3.4	52
26	Structural basis of enzymatic benzene ring reduction. Nature Chemical Biology, 2015, 11, 586-591.	8.0	52
27	Characterization of a Flavin Radical Product in a C57M Mutant of a LOV1 Domain by Electron Paramagnetic Resonanceâ€. Biochemistry, 2003, 42, 8506-8512.	2.5	50
28	The biophysical, molecular, and anatomical landscape of pigeon CRY4: A candidate light-based quantal magnetosensor. Science Advances, 2020, 6, eabb9110.	10.3	50
29	Photochemically Induced Dynamic Nuclear Polarization in a C450A Mutant of the LOV2 Domain of theAvenasativaBlue-Light Receptor Phototropin. Journal of the American Chemical Society, 2005, 127, 17245-17252.	13.7	48
30	Light-induced reactions of Escherichia coli DNA photolyase monitored by Fourier transform infrared spectroscopy. FEBS Journal, 2005, 272, 1855-1866.	4.7	47
31	Electronic Coupling and Spinâ€“Orbit Charge-Transfer Intersystem Crossing in Phenothiazineâ€“Perylene Compact Electron Donor/Acceptor Dyads. Journal of Physical Chemistry C, 2019, 123, 7010-7024.	3.1	47
32	Unexpected Electron Transfer in Cryptochrome Identified by Timeâ€Resolved EPR Spectroscopy. Angewandte Chemie - International Edition, 2011, 50, 12647-12651.	13.8	43
33	A 1-phytase type III effector interferes with plant hormone signaling. Nature Communications, 2017, 8, 2159.	12.8	40
34	Probing the N(5)?H Bond of the Isoalloxazine Moiety of Flavin Radicals by X- and W-Band Pulsed Electron-Nuclear Double Resonance. ChemPhysChem, 2005, 6, 292-299.	2.1	37
35	Spectroscopic characterization of radicals and radical pairs in fruit fly cryptochromeÂâ€“Âprotonated and nonprotonated flavin radicalâ€states. FEBS Journal, 2015, 282, 3175-3189.	4.7	37
36	Ordering of PCDTBT Revealed by Timeâ€Resolved Electron Paramagnetic Resonance Spectroscopy of Its Triplet Excitons. Angewandte Chemie - International Edition, 2015, 54, 7707-7710.	13.8	36

#	Article	IF	Citations
37	G-Tensors of the Flavin Adenine Dinucleotide Radicals in Glucose Oxidase:â€‰ A Comparative Multifrequency Electron Paramagnetic Resonance and Electronâˆ’Nuclear Double Resonance Study. Journal of Physical Chemistry B, 2008, 112, 3568-3574.	2.6	35
38	Substrate Binding to DNA Photolyase Studied by Electron Paramagnetic Resonance Spectroscopy. Biophysical Journal, 2001, 81, 1195-1204.	0.5	34
39	Synthesis and Application of a Perfluorinated Ammoniumyl Radical Cation as a Very Strong Deelectronator. Angewandte Chemie - International Edition, 2020, 59, 9453-9459.	13.8	34
40	Hindered Rotation of a Cofactor Methyl Group as a Probe for Proteinâˆ’Cofactor Interaction. Journal of the American Chemical Society, 2010, 132, 8935-8944.	13.7	33
41	Toward an Understanding of Thin-Film Transistor Performance in Solution-Processed Amorphous Zinc Tin Oxide (ZTO) Thin Films. ACS Applied Materials & Interfaces, 2017, 9, 21328-21337.	8.0	33
42	Determination of Radicalâ€“Radical Distances in Lightâ€Active Proteins and Their Implication for Biological Magnetoreception. Angewandte Chemie - International Edition, 2017, 56, 8550-8554.	13.8	32
43	Photoactivation of <i>Drosophila melanogaster</i> cryptochrome through sequential conformational transitions. Science Advances, 2019, 5, eaaw1531.	10.3	30
44	Light-induced activation of class II cyclobutane pyrimidine dimer photolyases. DNA Repair, 2010, 9, 495-505.	2.8	29
45	Following Radical Pair Reactions in Solution: A Step Change in Sensitivity Using Cavity Ring-Down Detection. Journal of the American Chemical Society, 2011, 133, 17807-17815.	13.7	29
46	Intersystem crossing <i>via</i> charge recombination in a perylenеâ€“naphthalimide compact electron donor/acceptor dyad. Journal of Materials Chemistry C, 2020, 8, 8305-8319.	5.5	28
47	pH Tuning of Waterâ€Soluble Arylazopyrazole Photoswitches. Chemistry - A European Journal, 2020, 26, 13203-13212.	3.3	27
48	The Electronic State of Flavoproteins: Investigations with Proton Electronâ€“Nuclear Double Resonance. Applied Magnetic Resonance, 2010, 37, 339-352.	1.2	26
49	Natural Abundance Solution ¹³C NMR Studies of a Phototropin with Photoinduced Polarization. Journal of the American Chemical Society, 2008, 130, 13544-13545.	13.7	25
50	Unambiguous Determination of theg-Matrix Orientation in a Neutral Flavin Radical by Pulsed Electronâˆ’Nuclear Double Resonance at 94 GHz. Journal of the American Chemical Society, 2005, 127, 10780-10781.	13.7	24
51	New roles of flavoproteins in molecular cell biology: Blueâ€light active flavoproteins studied by electron paramagnetic resonance. FEBS Journal, 2009, 276, 4290-4303.	4.7	23
52	Exploring Charge Migration in Light-Harvesting Complexes Using Electron Paramagnetic Resonance Line Narrowing. Journal of Physical Chemistry B, 2003, 107, 2127-2138.	2.6	22
53	Determination of the g-matrix orientation in flavin radicals by high-field/high-frequency electron-nuclear double resonance. Magnetic Resonance in Chemistry, 2005, 43, S96-S102.	1.9	22
54	The integrative metabolomic-transcriptomic landscape of glioblastome multiforme. Oncotarget, 2017, 8, 49178-49190.	1.8	22

#	Article	IF	Citations
55	Longâ€Lived Chargeâ€Transfer State Induced by Spinâ€Orbit Charge Transfer Intersystem Crossing (SOCTâ€ISC) in a Compact Spiro Electron Donor/Acceptor Dyad. Angewandte Chemie, 2020, 132, 11688-11696.	2.0	22
56	Detecting a New Source for Photochemically Induced Dynamic Nuclear Polarization in the LOV2 Domain of Phototropin by Magnetic-Field Dependent ¹³C NMR Spectroscopy. Journal of Physical Chemistry B, 2014, 118, 11622-11632.	2.6	21
57	Microenvironment-Derived Regulation of HIF Signaling Drives Transcriptional Heterogeneity in Glioblastoma Multiforme. Molecular Cancer Research, 2018, 16, 655-668.	3.4	21
58	Tryptophan 13C nuclear-spin polarization generated by intraprotein electron transfer in a LOV2 domain of the blue-light receptor phototropin. Biochemical Society Transactions, 2009, 37, 382-386.	3.4	20
59	Long-Lived Hydrated FMN Radicals: EPR Characterization and Implications for Catalytic Variability in Flavoproteins. Journal of the American Chemical Society, 2018, 140, 16521-16527.	13.7	19
60	Radicals in Flavoproteins. Topics in Current Chemistry, 2011, 321, 41-65.	4.0	17
61	The road not taken: a theoretical view of an unexpected cryptochrome charge transfer path. Physical Chemistry Chemical Physics, 2012, 14, 11518.	2.8	17
62	One Protein, Two Chromophores: Comparative Spectroscopic Characterization of 6,7-Dimethyl-8-ribityllumazine and Riboflavin Bound to Lumazine Protein. Journal of Physical Chemistry B, 2014, 118, 13092-13105.	2.6	15
63	Synthesis and Application of a Perfluorinated Ammoniumyl Radical Cation as a Very Strong Deelectronator. Angewandte Chemie, 2020, 132, 9540-9546.	2.0	15
64	Micro and nano patternable magnetic carbon. Journal of Applied Physics, 2016, 120, .	2.5	14
65	Methyl groups matter: Photo-CIDNP characterizations of the semiquinone radicals of FMN and demethylated FMN analogs. Journal of Chemical Physics, 2019, 151, 235103.	3.0	14
66	Intersubunit distances in full-length, dimeric, bacterial phytochrome Agp1, as measured by pulsed electron-electron double resonance (PELDOR) between different spin label positions, remain unchanged upon photoconversion. Journal of Biological Chemistry, 2017, 292, 7598-7606.	3.4	13
67	Lightâ€generated Paramagnetic Intermediates in BLUF Domains^{â€}. Photochemistry and Photobiology, 2011, 87, 574-583.	2.5	12
68	Global analysis of complex PELDOR time traces. Journal of Magnetic Resonance, 2018, 295, 17-26.	2.1	11
69	EPR spectroscopy on flavin radicals in flavoproteins. Methods in Enzymology, 2019, 620, 251-275.	1.0	10
70	Non-classical disproportionation revealed by photo-chemically induced dynamic nuclear polarization NMR. Magnetic Resonance, 2021, 2, 281-290.	1.9	10
71	EPR of radical intermediates in flavoenzymes. Electron Paramagnetic Resonance, 0, , 222-253.	0.2	9
72	How can EPR spectroscopy help to unravel molecular mechanisms of flavin-dependent photoreceptors?. Frontiers in Molecular Biosciences, 2015, 2, 49.	3.5	8

#	Article	IF	Citations
73	Completing the Picture: Determination of ¹³C Hyperfine Coupling Constants of Flavin Semiquinone Radicals by Photochemically Induced Dynamic Nuclear Polarization Spectroscopy. Journal of Physical Chemistry Letters, 2022, 13, 5160-5167.	4.6	8
74	Vibrational Spectra of the Ground and the Singlet Excited Ï€Ï€* State of 6,7-Dimethyl-8-ribityllumazine. Journal of Physical Chemistry B, 2011, 115, 3689-3697.	2.6	7
75	Direct Evidence of an Excited-State Triplet Species upon Photoactivation of the Chlorophyll Precursor Protochlorophyllide. Journal of Physical Chemistry Letters, 2017, 8, 1219-1223.	4.6	7
76	Martini 3 Model of Cellulose Microfibrils: On the Route to Capture Large Conformational Changes of Polysaccharides. Molecules, 2022, 27, 976.	3.8	7
77	Application of commercially available fluorophores as triplet spin probes in EPR spectroscopy. Molecular Physics, 2019, 117, 2688-2699.	1.7	6
78	Orientations and water dynamics of photoinduced secondary charge-separated states for magnetoreception by cryptochrome. Communications Chemistry, 2021, 4, .	4.5	6
79	Metabolic alterations in meningioma reflect the clinical course. BMC Cancer, 2021, 21, 211.	2.6	5
80	pH-dependence of signaling-state formation in Drosophila cryptochrome. Archives of Biochemistry and Biophysics, 2021, 700, 108787.	3.0	5
81	Influence of the cofactor structure on the photophysical processes initiating signal transduction in a phototropin-derived LOV domain. Journal of Chemical Physics, 2019, 151, 235102.	3.0	4
82	Distance measurements in the F0F1-ATP synthase from E. coli using smFRET and PELDOR spectroscopy. European Biophysics Journal, 2020, 49, 1-10.	2.2	4
83	OOP-ESEEM Spectroscopy: Accuracies of Distances of Spin-Correlated Radical Pairs in Biomolecules. Frontiers in Molecular Biosciences, 0, 9, .	3.5	4
84	Yersinia pseudotuberculosis cytotoxic necrotizing factor interacts with glycosaminoglycans. FASEB Journal, 2021, 35, e21647.	0.5	3
85	The Effect of Low Pressure Plasma Polymerization Modes on the Properties of the Deposited Plasma Polymers. Plasma Processes and Polymers, 2016, 13, 744-751.	3.0	2
86	Molecular Physics. Molecular Physics, 2019, 117, 2593-2593.	1.7	2
87	Coupled Methyl Group Rotation in FMN Radicals Revealed by Selective Deuterium Labeling. Journal of Physical Chemistry B, 2020, 124, 1678-1690.	2.6	2
88	Selective 13C labelling reveals the electronic structure of flavocoenzyme radicals. Scientific Reports, 2021, 11, 18234.	3.3	2
89	Bestimmung des Radikalâ€Radikalâ€Abstands in lichtaktiven Proteinen im angeregten Zustand und dessen Bedeutung fÃ¼r die biologische Magnetorezeption. Angewandte Chemie, 2017, 129, 8670-8674.	2.0	0
90	Frontispiz: Synthesis and Application of a Perfluorinated Ammoniumyl Radical Cation as a Very Strong Deelectronator. Angewandte Chemie, 2020, 132, .	2.0	0

#	Article	IF	Citations
91	Frontispiece: Synthesis and Application of a Perfluorinated Ammoniumyl Radical Cation as a Very Strong Deelectronator. Angewandte Chemie - International Edition, 2020, 59, .	13.8	0