Devens Gust

List of Publications by Year
in descending order

92 papers	10,778 citations	50170 46 h-index	45213 90 g-index
95 all docs	95 docs citations	95 times ranked	9049 citing authors

#	Article	IF	Citations
1	Mimicking Photosynthetic Solar Energy Transduction. Accounts of Chemical Research, 2001, 34, 40-48.	7.6	2,052
2	Solar Fuels via Artificial Photosynthesis. Accounts of Chemical Research, 2009, 42, 1890-1898.	7.6	1,845
3	Light-driven production of ATP catalysed by F0F1-ATP synthase in an artificial photosynthetic membrane. Nature, 1998, 392, 479-482.	13.7	488
4	Conversion of light energy to proton potential in liposomes by artificial photosynthetic reaction centres. Nature, 1997, 385, 239-241.	13.7	404
5	Photoinduced Charge Separation and Charge Recombination to a Triplet State in a Caroteneâ^'Porphyrinâ^'Fullerene Triad. Journal of the American Chemical Society, 1997, 119, 1400-1405.	6.6	356
6	Photodriven charge separation in a carotenoporphyrinâ€“quinone triad. Nature, 1984, 307, 630-632.	13.7	290
7	Improving the efficiency of water splitting in dye-sensitized solar cells by using a biomimetic electron transfer mediator. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 15612-15616.	3.3	280
8	Molecular switches controlled by light. Chemical Communications, 2006, , 1169-1178.	2.2	274
9	PREPARATION AND PHOTOPHYSICAL STUDIES OF PORPHYRINâ€€₆₀ DYADS. Photochemistry and Photobiology, 1994, 60, 537-541.	1.3	249
10	Realizing artificial photosynthesis. Faraday Discussions, 2012, 155, 9-26.	1.6	194
11	Efficient Energy Transfer and Electron Transfer in an Artificial Photosynthetic Antennaâ^'Reaction Center Complexâ€. Journal of Physical Chemistry A, 2002, 106, 2036-2048.	1.1	175
12	Data and signal processing using photochromic molecules. Chemical Communications, 2012, 48, 1947-1957.	2.2	175
13	Photoinduced Electron Transfer in Carotenoporphyrinâ^'Fullerene Triads:Â Temperature and Solvent Effects. Journal of Physical Chemistry B, 2000, 104, 4307-4321.	1.2	167
14	A Bioinspired Construct That Mimics the Proton Coupled Electron Transfer between P680^{â€¢+} and the Tyr_Z-His190 Pair of Photosystem II. Journal of the American Chemical Society, 2008, 130, 10466-10467.	6.6	156
15	Triplet and singlet energy transfer in carotene-porphyrin dyads: role of the linkage bonds.. Journal of the American Chemical Society, 1992, 114, 3590-3603.	6.6	148
16	A bioinspired redox relay that mimics radical interactions of the Tyrâ€“His pairs of photosystem II. Nature Chemistry, 2014, 6, 423-428.	6.6	133
17	Metal-free organic sensitizers for use in water-splitting dye-sensitized photoelectrochemical cells. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 1681-1686.	3.3	133
18	STM Contrast, Electron-Transfer Chemistry, and Conduction in Molecules. Journal of Physical Chemistry B, 1997, 101, 10719-10725.	1.2	127

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19	A simple artificial light-harvesting dyad as a model for excess energy dissipation in oxygenic photosynthesis. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 5343-5348.	3.3	125
20	Magnetic Switching of Charge Separation Lifetimes in Artificial Photosynthetic Reaction Centers. Journal of the American Chemical Society, 1998, 120, 10880-10886.	6.6	115
21	Proton-Coupled Electron Transfer in Artificial Photosynthetic Systems. Accounts of Chemical Research, 2018, 51, 445-453.	7.6	114
22	Mimicking the electron transfer chain in photosystem II with a molecular triad thermodynamically capable of water oxidation. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 15578-15583.	3.3	110
23	Photodriven transmembrane charge separation and electron transfer by a carotenoporphyrinâ€“quinone triad. Nature, 1985, 316, 653-655.	13.7	109
24	PHOTOINDUCED ELECTRON TRANSFER IN A CAROTENOBUCKMINSTERFULLERENE DYAD. Photochemistry and Photobiology, 1995, 62, 1009-1014.	1.3	99
25	Synthesis and photochemistry of a caroteneâ€“porphyrinâ€“fullerene model photosynthetic reaction center. Journal of Physical Organic Chemistry, 2004, 17, 724-734.	0.9	86
26	Light Harvesting and Photoprotective Functions of Carotenoids in Compact Artificial Photosynthetic Antenna Designs. Journal of Physical Chemistry B, 2004, 108, 414-425.	1.2	86
27	Photoelectrochemistry of Langmuirâ€'Blodgett Films of Carotenoid Pigments on ITO Electrodes. The Journal of Physical Chemistry, 1996, 100, 814-821.	2.9	84
28	Mimicry of antenna and photo-protective carotenoid functions by a synthetic carotenoporphyrin. Nature, 1981, 290, 329-332.	13.7	83
29	ENERGY TRANSFER FROM CAROTENOID POLYENES TO PORPHYRINS: A LIGHTâ€HARVESTING ANTENNA. Photochemistry and Photobiology, 1980, 32, 691-695.	1.3	82
30	Solvatochromic Study of the Microenvironment of Surface-Bound Spiropyrans. Langmuir, 2003, 19, 8801-8806.	1.6	82
31	Concerted One-Electron Two-Proton Transfer Processes in Models Inspired by the Tyr-His Couple of Photosystem II. ACS Central Science, 2017, 3, 372-380.	5.3	80
32	PHOTOPHYSICAL PROPERTIES OF 2â€NITROâ€5,10,15,20â€TETRAâ€pâ€TOLYLPORPHYRINS. Photochemistry and Photobiology, 1990, 51, 419-426.	1.3	79
33	Conformationally Constrained Macrocyclic Diporphyrinâ€'Fullerene Artificial Photosynthetic Reaction Center. Journal of the American Chemical Society, 2011, 133, 2944-2954.	6.6	79
34	Discrete magnetic microfluidics. Applied Physics Letters, 2006, 89, 034106.	1.5	78
35	Optical Modulation of Molecular Conductance. Nano Letters, 2011, 11, 2709-2714.	4.5	78
36	Photoinduced Electron Transfer in Tetrathiafulvaleneâ€'Porphyrinâ€'Fullerene Molecular Triads. Helvetica Chimica Acta, 2001, 84, 2765.	1.0	77

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37	Fullerenes linked to photosynthetic pigments. Research on Chemical Intermediates, 1997, 23, 621-651.	1.3	71
38	Photoinduced electron transfer in Ï€-extended tetrathiafulvaleneâ€“porphyrinâ€“fullerene triad molecules. Journal of Materials Chemistry, 2002, 12, 2100-2108.	6.7	71
39	Carotenoid Photoprotection in Artificial Photosynthetic Antennas. Journal of the American Chemical Society, 2011, 133, 7007-7015.	6.6	70
40	Mimicking Photosynthetic Electron and Energy Transfer. Advances in Photochemistry, 2007, , 1-65.	0.4	66
41	Porphyrin-Based Hole Conducting Electropolymer. Chemistry of Materials, 2008, 20, 135-142.	3.2	65
42	Energy Transfer, Excited-State Deactivation, and Exciplex Formation in Artificial Caroteno-Phthalocyanine Light-Harvesting Antennasâ€. Journal of Physical Chemistry B, 2007, 111, 6868-6877.	1.2	62
43	Effects of Protonation State on a Tyrosineâ^'Histidine Bioinspired Redox Mediatorâ€. Journal of Physical Chemistry B, 2010, 114, 14450-14457.	1.2	61
44	Ultrafast carotenoid to pheophorbide energy transfer in a biomimetic model for antenna function in photosynthesis. Nature, 1986, 322, 570-572.	13.7	56
45	Artificial Photosynthetic Reaction Centers with Porphyrins as Primary Electron Acceptorsâ€. Journal of Physical Chemistry B, 2004, 108, 10566-10580.	1.2	53
46	Controlling Proton-Coupled Electron Transfer in Bioinspired Artificial Photosynthetic Relays. Journal of the American Chemical Society, 2018, 140, 15450-15460.	6.6	52
47	Very small arrays. Nature, 1997, 386, 21-22.	13.7	49
48	Artificial photosynthetic antennas and reaction centers. Comptes Rendus Chimie, 2017, 20, 296-313.	0.2	41
49	Photon-Controlled Phase Partitioning of Spiropyrans. Journal of Physical Chemistry A, 2000, 104, 6103-6107.	1.1	40
50	Chemical compass behaviour at microtesla magnetic fields strengthens the radical pair hypothesis of avian magnetoreception. Nature Communications, 2019, 10, 3707.	5.8	38
51	Digital back off for computer controlled flash spectrometers. Review of Scientific Instruments, 1987, 58, 1629-1631.	0.6	35
52	Proton-Coupled Electron Transfer Drives Long-Range Proton Translocation in Bioinspired Systems. Journal of the American Chemical Society, 2019, 141, 14057-14061.	6.6	33
53	Stepwise Sequential and Parallel Photoinduced Charge Separation in a Porphyrinâ^'Triquinone Tetradâ€. Journal of Physical Chemistry A, 2003, 107, 3567-3575.	1.1	32
54	Correlation of fluorescence quenching in carotenoporphyrin dyads with the energy of intramolecular charge transfer states. Effect of the number of conjugated double bonds of the carotenoid moiety. Physical Chemistry Chemical Physics, 2003, 5, 469-475.	1.3	32

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55	Multiporphyrin Arrays with Ï€â€“Ï€ Interchromophore Interactions. Journal of the American Chemical Society, 2015, 137, 245-258.	6.6	32
56	Carotenoids as electron or excited-state energy donors in artificial photosynthesis: an ultrafast investigation of a carotenoporphyrin and a carotenofullerene dyad. Physical Chemistry Chemical Physics, 2013, 15, 4775.	1.3	31
57	Local Intermolecular Order Controls Photoinduced Charge Separation at Donor/Acceptor Interfaces in Organic Semiconductors. Advanced Energy Materials, 2016, 6, 1502176.	10.2	31
58	The Photochemistry of Carotenoids: Some Photosynthetic and Photomedical Aspects. Annals of the New York Academy of Sciences, 1993, 691, 32-47.	1.8	26
59	Carotenohematoporphyrins as Tumor-Imaging Dyes. Synthesis and In Vitro Photophysical Characterization. Photochemistry and Photobiology, 1998, 68, 459-466.	1.3	25
60	Building and testing correlations for the estimation of oneâ€electron reduction potentials of a diverse set of organic molecules. Journal of Physical Organic Chemistry, 2015, 28, 320-328.	0.9	24
61	Proton-coupled electron transfer across benzimidazole bridges in bioinspired proton wires. Chemical Science, 2020, 11, 3820-3828.	3.7	23
62	Molecular wires and girders. Nature, 1994, 372, 133-134.	13.7	22
63	Photoinduced electron transfer in a symmetrical diporphyrinâ€“fullerene triad. Physical Chemistry Chemical Physics, 2004, 6, 5509-5515.	1.3	22
64	On the role of excitonic interactions in carotenoidâ€“phthalocyanine dyads and implications for photosynthetic regulation. Photosynthesis Research, 2012, 111, 237-243.	1.6	22
65	Charge separation and energy transfer in a carotenoâ€“C60dyad: photoinduced electron transfer from the carotenoid excited states. Photochemical and Photobiological Sciences, 2006, 5, 1142-1149.	1.6	21
66	New light-harvesting roles of hot and forbidden carotenoid states in artificial photosynthetic constructs. Chemical Science, 2012, 3, 2052.	3.7	21
67	Electronâ€“Nuclear Dynamics Accompanying Proton-Coupled Electron Transfer. Journal of the American Chemical Society, 2021, 143, 3104-3112.	6.6	21
68	Photoinitiated Electron Transfer in Carotenoporphyrinâ€Quinone Triads: Enhanced Quantum Yields via Control of Reaction Exergonicity. Israel Journal of Chemistry, 1988, 28, 87-95.	1.0	20
69	Porphyrins as ITO photosensitizers: substituents control photo-induced electron transfer direction. Journal of Materials Chemistry, 2012, 22, 20334.	6.7	19
70	A porphyrin-stabilized iridium oxide water oxidation catalyst. Canadian Journal of Chemistry, 2011, 89, 152-157.	0.6	18
71	Spin-selective recombination reactions of radical pairs: Experimental test of validity of reaction operators. Journal of Chemical Physics, 2013, 139, 234309.	1.2	18
72	Supramolecular photochemistry applied to artificial photosynthesis and molecular logic devices. Faraday Discussions, 2015, 185, 9-35.	1.6	18

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73	Selective oxidative synthesis of meso-beta fused porphyrin dimers. Journal of Porphyrins and Phthalocyanines, 2013, 17, 247-251.	0.4	15
74	Advanced Nonvolatile Organic Optical Memory Using Self-Assembled Monolayers of Porphyrinâ€“Fullerene Dyads. ACS Applied Materials & Interfaces, 2022, 14, 15461-15467.	4.0	15
75	Bioinspired energy conversion. Pure and Applied Chemistry, 2005, 77, 1001-1008.	0.9	14
76	Tetrapyrrole Singlet Excited State Quenching by Carotenoids in an Artificial Photosynthetic Antennaâ€. Journal of Physical Chemistry B, 2006, 110, 25411-25420.	1.2	14
77	Ultrafast Dynamics of Nonrigid Zinc-Porphyrin Arrays Mimicking the Photosynthetic â€œSpecial Pairâ€• Journal of Physical Chemistry Letters, 2020, 11, 3443-3450.	2.1	11
78	Spectroscopic Analysis of a Biomimetic Model of Tyr_Z Function in PSII. Journal of Physical Chemistry B, 2015, 119, 12156-12163.	1.2	10
79	Reaction Center Models in Liquid Crystals: Identification of Paramagnetic Intermediates. Molecular Crystals and Liquid Crystals, 2003, 394, 19-30.	0.4	9
80	Excited state acidity of bifunctional compounds. Physical Chemistry Chemical Physics, 2002, 4, 3383-3389.	1.3	8
81	Driving Force and Electronic Coupling Effects on Photoinduced Electron Transfer in a Fullerene-based Molecular TriadÂ¶. Photochemistry and Photobiology, 2007, 72, 598-611.	1.3	8
82	Kinetic isotope effect of proton-coupled electron transfer in a hydrogen bonded phenolâ€”pyrrolidino[60]fullerene. Photochemical and Photobiological Sciences, 2015, 14, 2147-2150.	1.6	7
83	Design and synthesis of benzimidazole phenol-porphyrin dyads for the study of bioinspired photoinduced proton-coupled electron transfer. Journal of Porphyrins and Phthalocyanines, 2019, 23, 1336-1345.	0.4	7
84	The Gold Porphyrin First Excited Singlet StateÂ¶. Photochemistry and Photobiology, 2002, 76, 47-50.	1.3	6
85	Design, synthesis and photophysical studies of phenylethynyl-bridged phthalocyanine-fullerene dyads. Journal of Porphyrins and Phthalocyanines, 2015, 19, 934-945.	0.4	6
86	Dual Singlet Excited-State Quenching Mechanisms in an Artificial Caroteno-Phthalocyanine Light Harvesting Antenna. ACS Physical Chemistry Au, 2022, 2, 59-67.	1.9	3
87	Photoinduced Electron and Proton Transfer in a Molecular Triad. Advances in Chemistry Series, 1998, , 177-218.	0.6	2
88	Mimicking Bacterial Photosynthesis. , 2006, , 187-210.		2
89	Mimicking Photosynthetic Electron Transfer. Materials Research Society Symposia Proceedings, 1990, 218, 141.	0.1	1
90	Hybrid Photoelectrochemical-Fuel Cell. ACS Symposium Series, 2004, , 361-367.	0.5	1

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91	Enzymeâ€assisted Reforming of Glucose to Hydrogen in a Photoelectrochemical Cell^{Â¶}. Photochemistry and Photobiology, 2005, 81, 1015-1020.	1.3	0
92	High-efficiency Energy Transfer from Carotenoids to a Phthalocyanine in an Artificial Photosynthetic AntennaÂ¶. Photochemistry and Photobiology, 2007, 76, 116-121.	1.3	0