Jay R Winkler

List of Publications by Year
in descending order

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117 papers	16,602 citations	38660 50 h-index	20307 116 g-index
120 all docs	120 docs citations	120 times ranked	17639 citing authors

#	Article	IF	Citations
1	Powering the planet with solar fuel. Nature Chemistry, 2009, 1, 7-7.	6.6	1,492
2	The Electronic Structure of the Vanadyl Ion. Inorganic Chemistry, 1962, 1, 111-122.	1.9	1,405
3	Earth-Abundant Heterogeneous Water Oxidation Catalysts. Chemical Reviews, 2016, 116, 14120-14136.	23.0	1,259
4	Niâ€“Mo Nanopowders for Efficient Electrochemical Hydrogen Evolution. ACS Catalysis, 2013, 3, 166-169.	5.5	725
5	Long-range electron transfer. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 3534-3539.	3.3	723
6	Earth-abundant hydrogen evolution electrocatalysts. Chemical Science, 2014, 5, 865-878.	3.7	636
7	Electron tunneling through proteins. Quarterly Reviews of Biophysics, 2003, 36, 341-372.	2.4	566
8	Electron-tunneling pathways in proteins. Science, 1992, 258, 1740-1741.	6.0	517
9	Oxoiron(IV) in Chloroperoxidase Compound II Is Basic: Implications for P450 Chemistry. Science, 2004, 304, 1653-1656.	6.0	477
10	Effect of interlayer anions on [NiFe]-LDH nanosheet water oxidation activity. Energy and Environmental Science, 2016, 9, 1734-1743.	15.6	446
11	Copper coordination in blue proteins. Journal of Biological Inorganic Chemistry, 2000, 5, 551-559.	1.1	445
12	Evaluation of Pt, Ni, and Niâ€“Mo electrocatalysts for hydrogen evolution on crystalline Si electrodes. Energy and Environmental Science, 2011, 4, 3573.	15.6	440
13	Tryptophan-Accelerated Electron Flow Through Proteins. Science, 2008, 320, 1760-1762.	6.0	392
14	Pathway Analysis of Protein Electron-Transfer Reactions. Annual Review of Biophysics and Biomolecular Structure, 1992, 21, 349-377.	18.3	378
15	Electron tunneling in proteins: coupling through a beta strand. Science, 1995, 268, 1733-1735.	6.0	342
16	Noninnocence in Metal Complexes: A Dithiolene Dawn. Inorganic Chemistry, 2011, 50, 9741-9751.	1.9	306
17	Electronic structures of hexacyanometalate complexes. Journal of the American Chemical Society, 1968, 90, 4260-4271.	6.6	281
18	A quantitative assessment of the competition between water and anion oxidation at WO3 photoanodes in acidic aqueous electrolytes. Energy and Environmental Science, 2012, 5, 5694.	15.6	273

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19	Fighting Cancer with Corroles. Chemical Reviews, 2017, 117, 2711-2729.	23.0	243
20	Long-Range Electron Tunneling. Journal of the American Chemical Society, 2014, 136, 2930-2939.	6.6	238
21	Lanthanides: Applications in Cancer Diagnosis and Therapy. Journal of Medicinal Chemistry, 2016, 59, 6012-6024.	2.9	225
22	Electron Flow through Metalloproteins. Chemical Reviews, 2014, 114, 3369-3380.	23.0	223
23	Electron flow through metalloproteins. Biochimica Et Biophysica Acta - Bioenergetics, 2010, 1797, 1563-1572.	0.5	208
24	Noncovalent Immobilization of Electrocatalysts on Carbon Electrodes for Fuel Production. Journal of the American Chemical Society, 2013, 135, 18288-18291.	6.6	196
25	Hole hopping through tyrosine/tryptophan chains protects proteins from oxidative damage. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 10920-10925.	3.3	185
26	The Electronic Structures and Spectra of Chromyl and Molybdenyl Ions. Inorganic Chemistry, 1962, 1, 363-368.	1.9	183
27	Hydrogen-evolution characteristics of Niâ€“Mo-coated, radial junction, n+p-silicon microwire array photocathodes. Energy and Environmental Science, 2012, 5, 9653.	15.6	182
28	Electron Tunneling in Single Crystals ofPseudomonas aeruginosaAzurins. Journal of the American Chemical Society, 2001, 123, 11623-11631.	6.6	176
29	Electron Tunneling Through Organic Molecules in Frozen Glasses. Science, 2005, 307, 99-102.	6.0	149
30	Electron tunneling in biological molecules. Pure and Applied Chemistry, 1999, 71, 1753-1764.	0.9	141
31	Electron hopping through proteins. Coordination Chemistry Reviews, 2012, 256, 2478-2487.	9.5	139
32	Electron flow through proteins. Chemical Physics Letters, 2009, 483, 1-9.	1.2	136
33	Electron tunneling in azurin: the coupling across a Î²-sheet. Chemistry and Biology, 1995, 2, 489-496.	6.2	119
34	Enhanced Stability and Activity for Water Oxidation in Alkaline Media with Bismuth Vanadate Photoelectrodes Modified with a Cobalt Oxide Catalytic Layer Produced by Atomic Layer Deposition. Journal of Physical Chemistry Letters, 2013, 4, 4188-4191.	2.1	116
35	Protonâ€“hydride tautomerism in hydrogen evolution catalysis. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 6409-6414.	3.3	114
36	Stabilization of n-cadmium telluride photoanodes for water oxidation to O₂(g) in aqueous alkaline electrolytes using amorphous TiO₂ films formed by atomic-layer deposition. Energy and Environmental Science, 2014, 7, 3334-3337.	15.6	111

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37	Living with Oxygen. Accounts of Chemical Research, 2018, 51, 1850-1857.	7.6	106
38	Bespoke Photoreductants: Tungsten Arylisocyanides. Journal of the American Chemical Society, 2015, 137, 1198-1205.	6.6	97
39	Visible-Light-Induced Olefin Activation Using 3D Aromatic Boron-Rich Cluster Photooxidants. Journal of the American Chemical Society, 2016, 138, 6952-6955.	6.6	95
40	Excited-state reactivity patterns of hexakisarylisocyano complexes of chromium(0), molybdenum(0), and tungsten(0). Journal of the American Chemical Society, 1977, 99, 306-307.	6.6	93
41	Generation of Powerful Tungsten Reductants by Visible Light Excitation. Journal of the American Chemical Society, 2013, 135, 10614-10617.	6.6	91
42	Inner- and outer-sphere metal coordination in blue copper proteins. Journal of Inorganic Biochemistry, 2012, 115, 119-126.	1.5	85
43	Photooxidation of cytochrome P450-BM3. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 18783-18786.	3.3	84
44	Spectroscopy and photochemistry of binuclear iridium(I) complexes. Journal of the American Chemical Society, 1984, 106, 3027-3029.	6.6	77
45	Nanosecond Photoreduction of Cytochrome P450cam by Channel-Specific Ru-diimine Electron Tunneling Wires. Journal of the American Chemical Society, 2003, 125, 12450-12456.	6.6	65
46	Discovery of the magnetic behavior of hemoglobin: A beginning of bioinorganic chemistry. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 13123-13127.	3.3	65
47	Electron flow through biological molecules: does hole hopping protect proteins from oxidative damage?. Quarterly Reviews of Biophysics, 2015, 48, 411-420.	2.4	63
48	Inner-Sphere Electron-Transfer Reorganization Energies of Zinc Porphyrins. Journal of the American Chemical Society, 2004, 126, 15566-15571.	6.6	59
49	Photoelectrochemical oxidation of anions by WO3 in aqueous and nonaqueous electrolytes. Energy and Environmental Science, 2013, 6, 2646.	15.6	57
50	Photoelectrochemical Behavior of a Molecular Ru-Based Water-Oxidation Catalyst Bound to TiO₂-Protected Si Photoanodes. Journal of the American Chemical Society, 2017, 139, 11345-11348.	6.6	56
51	Relaxation Dynamics of Pseudomonas aeruginosa Re^I(CO)₃(Î±-diimine)(HisX)⁺ (X = 83, 107, 109, 124, 126)Cu^{II} Azurins. Journal of the American Chemical Society, 2009, 131, 11788-11800.	6.6	55
52	Phototriggering Electron Flow through Re^Iâ€modified Pseudomonas aeruginosa Azurins. Chemistry - A European Journal, 2011, 17, 5350-5361.	1.7	51
53	Cellular uptake and anticancer activity of carboxylated gallium corroles. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, E2258-66.	3.3	50
54	Addressing the challenge of carbon-free energy. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 12543-12549.	3.3	44

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55	Tryptophan-Accelerated Electron Flow Across a Proteinâ€“Protein Interface. Journal of the American Chemical Society, 2013, 135, 15515-15525.	6.6	43
56	Electrochemistry of the CuA domain of Thermus thermophilus cytochrome ba 3. Journal of Biological Inorganic Chemistry, 1996, 1, 529-531.	1.1	42
57	Role of Ligand Protonation in Dihydrogen Evolution from a Pentamethylcyclopentadienyl Rhodium Catalyst. Inorganic Chemistry, 2017, 56, 11375-11386.	1.9	40
58	Factors affecting bismuth vanadate photoelectrochemical performance. Materials Horizons, 2015, 2, 330-337.	6.4	38
59	Electron Flow through Nitrotyrosinate in Pseudomonas aeruginosa Azurin. Journal of the American Chemical Society, 2013, 135, 11151-11158.	6.6	37
60	Role of the active-site cysteine of Pseudomonas aeruginosa azurin. Crystal structure analysis of the CuII(Cys112Asp) protein. Journal of Biological Inorganic Chemistry, 1997, 2, 464-469.	1.1	35
61	Electronic Excited States of Tungsten(0) Arylisocyanides. Inorganic Chemistry, 2015, 54, 8518-8528.	1.9	34
62	Fluctuating hydrogen-bond networks govern anomalous electron transfer kinetics in a blue copper protein. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 6129-6134.	3.3	34
63	Isotopically Selective Quantification by UPLC-MS of Aqueous Ammonia at Submicromolar Concentrations Using Dansyl Chloride Derivatization. ACS Energy Letters, 2020, 5, 1532-1536.	8.8	34
64	Assembly, characterization, and electrochemical properties of immobilized metal bipyridyl complexes on silicon(111) surfaces. Dalton Transactions, 2014, 43, 15004-15012.	1.6	33
65	Pentamethylcyclopentadienyl rhodium complexes. Polyhedron, 2014, 84, 14-18.	1.0	32
66	Functional and protective hole hopping in metalloenzymes. Chemical Science, 2021, 12, 13988-14003.	3.7	31
67	Redox Properties of Mixed Methyl/Vinylferrocenyl Monolayers on Si(111) Surfaces. Journal of Physical Chemistry C, 2013, 117, 27012-27022.	1.5	29
68	Could tyrosine and tryptophan serve multiple roles in biological redox processes?. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2015, 373, 20140178.	1.6	29
69	Photochemistry of Metal-Isocyanide Complexes and Its Possible Relevance to Solar Energy Conversion. Advances in Chemistry Series, 1978, , 44-56.	0.6	28
70	Hopping maps for photosynthetic reaction centers. Coordination Chemistry Reviews, 2013, 257, 165-170.	9.5	28
71	Two Tryptophans Are Better Than One in Accelerating Electron Flow through a Protein. ACS Central Science, 2019, 5, 192-200.	5.3	28
72	EPR Spectroscopy of Iron- and Nickel-Doped [ZnAl]-Layered Double Hydroxides: Modeling Active Sites in Heterogeneous Water Oxidation Catalysts. Journal of the American Chemical Society, 2020, 142, 1838-1845.	6.6	28

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73	Electron tunneling in rhenium-modified Pseudomonas aeruginosa azurins. Biochimica Et Biophysica Acta - Bioenergetics, 2004, 1655, 59-63.	0.5	27
74	Electrocatalysis of CO₂ Reduction in Brush Polymer Ion Gels. Journal of the American Chemical Society, 2016, 138, 11160-11163.	6.6	27
75	Tuning the formal potential of ferrocyanide over a 2.1ÂV range. Chemical Science, 2019, 10, 3623-3626.	3.7	27
76	Temperature Dependence of Charge and Spin Transfer in Azurin. Journal of Physical Chemistry C, 2021, 125, 9875-9883.	1.5	26
77	Photoredox Catalysis Mediated by Tungsten(0) Arylisocyanides. Journal of the American Chemical Society, 2021, 143, 19389-19398.	6.6	25
78	The Rise of Radicals in Bioinorganic Chemistry. Israel Journal of Chemistry, 2016, 56, 640-648.	1.0	23
79	Hole Hopping through Tryptophan in Cytochrome P450. Biochemistry, 2017, 56, 3531-3538.	1.2	23
80	Structures of ruthenium-modified Pseudomonas aeruginosa azurin and [Ru(2,2â€²-bipyridine)2(imidazole)2]SO4Â·10H2O. Acta Crystallographica Section D: Biological Crystallography, 1999, 55, 379-385.	2.5	22
81	Role of intramolecular hydrogen bonds in promoting electron flow through amino acid and oligopeptide conjugates. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	18
82	Mechanism of Nickelâ€“Iron Water Oxidation Electrocatalysts. Energy & Fuels, 2021, 35, 19164-19169.	2.5	18
83	Cellular uptake and cytotoxicity of a near-IR fluorescent corroleâ€“TiO2 nanoconjugate. Journal of Inorganic Biochemistry, 2014, 140, 39-44.	1.5	16
84	A Super-Oxidized Radical Cationic Icosahedral Boron Cluster. Journal of the American Chemical Society, 2020, 142, 12948-12953.	6.6	16
85	Control of Oligomerization and Oxidation Steps in the Synthesis of Tris(pentafluorophenyl)corrole. European Journal of Organic Chemistry, 2015, 2015, 3022-3025.	1.2	15
86	Enhanced Synthetic Access to Tris-CF₃-Substituted Corroles. Organic Letters, 2020, 22, 3119-3122.	2.4	15
87	Third-Generation W(CNAr)₆ Photoreductants (CNAr = Fused-Ring and Alkynyl-Bridged) Tj ETQq1 1 0.784314 rgBT /Overlo	1.9	15
88	Mixedâ€Metal Tungsten Oxide Photoanode Materials Made by Pulsedâ€Laser in Liquids Synthesis. ChemPhysChem, 2017, 18, 1091-1100.	1.0	14
89	Cathodic NH₄⁺ leaching of nitrogen impurities in CoMo thin-film electrodes in aqueous acidic solutions. Sustainable Energy and Fuels, 2020, 4, 5080-5087.	2.5	14
90	Photoinduced hole hopping through tryptophans in proteins. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	13

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91	Electronic Structures, Spectroscopy, and Electrochemistry of [M(diimine)(CN-BR3)4]2â€“ (M = Fe, Ru; R =) Tj ETQq1 1 0.784314 rgBT	1.9	12
92	Translational Science for Energy and Beyond. Inorganic Chemistry, 2016, 55, 9131-9143.	1.9	11
93	Triphenylsulfonium topophotochemistry. Photochemical and Photobiological Sciences, 2018, 17, 27-34.	1.6	10
94	Mass Spectrometric Characterization of Oligomers in Pseudomonas aeruginosa Azurin Solutions. Journal of Physical Chemistry B, 2011, 115, 4790-4800.	1.2	9
95	Electronic Structure of Tetracyanonickelate(II). Inorganic Chemistry, 2019, 58, 15202-15206.	1.9	9
96	Two-photon spectroscopy of tungsten(0) arylisocyanides using nanosecond-pulsed excitation. Dalton Transactions, 2017, 46, 13188-13193.	1.6	8
97	Hole Hopping Across a Proteinâ€“Protein Interface. Journal of Physical Chemistry B, 2019, 123, 1578-1591.	1.2	8
98	Elements of Life at the Oxo Wall. Chemistry International, 2019, 41, 16-19.	0.3	8
99	Structure, Spectroscopy, and Electrochemistry of Manganese(I) and Rhenium(I) Quinoline Oximes. Inorganic Chemistry, 2019, 58, 737-746.	1.9	8
100	Nanosecond photoreduction of inducible nitric oxide synthase by a Ru-diimine electron tunneling wire bound distant from the active site. Journal of Inorganic Biochemistry, 2009, 103, 906-911.	1.5	7
101	Photooxidative Generation of Dodecaborate-Based Weakly Coordinating Anions. Inorganic Chemistry, 2019, 58, 10516-10526.	1.9	7
102	Title is missing!. , 0, , .		7
103	Light-Induced Nanosecond Relaxation Dynamics of Rhenium-Labeled Pseudomonas aeruginosa Azurins. Journal of Physical Chemistry B, 2020, 124, 788-797.	1.2	6
104	Design of robust 2,2â€²-bipyridine ligand linkers for the stable immobilization of molecular catalysts on silicon(111) surfaces. Physical Chemistry Chemical Physics, 2021, 23, 9921-9929.	1.3	6
105	Hole Hopping through Cytochrome P450. Journal of Physical Chemistry B, 2020, 124, 3065-3073.	1.2	5
106	Synthesis, structural studies, and redox chemistry of bimetallic [Mn(CO)₃] and [Re(CO)₃] complexes. Dalton Transactions, 2021, 50, 2746-2756.	1.6	5
107	Photoredox Catalysis Mediated by Tungsten(0) Arylisocyanides in 1,2-Difluorobenzene. Inorganic Chemistry, 2022, , .	1.9	5
108	Electrochemistry in ionic liquids: Case study of a manganese corrole. Russian Journal of Electrochemistry, 2017, 53, 1189-1193.	0.3	4

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109	Cyano-ambivalence: Spectroscopy and photophysics of [Ru(diimine)(CN-BR3)4]2â^' complexes. Polyhedron, 2020, 188, 114692.	1.0	4
110	Frustration Dynamics and Electron-Transfer Reorganization Energies in Wild-Type and Mutant Azurins. Journal of the American Chemical Society, 2022, 144, 4178-4185.	6.6	3
111	A colloquium on the status and challenges in science for decarbonizing our energy landscape. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 12541-12542.	3.3	2
112	Electron Transfer Proteins. , 2021, , 3-18.		2
113	2D Materials: The Influence of Water on the Optical Properties of Single-Layer Molybdenum Disulfide (Adv. Mater. 17/2015). Advanced Materials, 2015, 27, 2733-2733.	11.1	1
114	An In Vitro Enzymatic Assay to Measure Transcription Inhibition by Gallium(III) and H₃ 5,10,15-tris(pentafluorophenyl)corroles. Journal of Visualized Experiments, 2015, , .	0.2	1
115	Mentoring: Reflections and Suggestions. ACS Central Science, 2019, 5, 1475-1476.	5.3	1
116	Copper(II) Binding to the Intrinsically Disordered C-Terminal Peptide of SARS-CoV-2 Virulence Factor Nsp1. Inorganic Chemistry, 2022, 61, 8992-8996.	1.9	1
117	Driving Force Dependence of Electron Transfer from Electronically Excited [Ir(COD)(Î¼-Me2pz)]2 to Photo-Acid Generators. Journal of Physical Chemistry A, 2017, 121, 7572-7575.	1.1	0