

# Robert H Crabtree

## List of Publications by Year in descending order

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198  
papers

27,496  
citations

7069

78  
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5519

163  
g-index

205  
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205  
docs citations

205  
times ranked

19805  
citing authors

#	ARTICLE	IF	CITATIONS
1	Dehydrogenation as a Substrate-Activating Strategy in Homogeneous Transition-Metal Catalysis. <i>Chemical Reviews</i> , 2010, 110, 681-703.	23.0	1,457
2	Definition of the hydrogen bond (IUPAC Recommendations 2011). <i>Pure and Applied Chemistry</i> , 2011, 83, 1637-1641.	0.9	1,449
3	The organometallic chemistry of alkanes. <i>Chemical Reviews</i> , 1985, 85, 245-269.	23.0	1,237
4	Molecular Catalysts for Water Oxidation. <i>Chemical Reviews</i> , 2015, 115, 12974-13005.	23.0	964
5	Redox-active ligands in catalysis. <i>Chemical Society Reviews</i> , 2013, 42, 1440-1459.	18.7	880
6	Defining the hydrogen bond: An account (IUPAC Technical Report). <i>Pure and Applied Chemistry</i> , 2011, 83, 1619-1636.	0.9	856
7	Iridium compounds in catalysis. <i>Accounts of Chemical Research</i> , 1979, 12, 331-337.	7.6	808
8	A Functional Model for O-O Bond Formation by the O <sub>2</sub> -Evolving Complex in Photosystem II. <i>Science</i> , 1999, 283, 1524-1527.	6.0	701
9	A New Intermolecular Interaction: Unconventional Hydrogen Bonds with Element-Hydride Bonds as Proton Acceptor. <i>Accounts of Chemical Research</i> , 1996, 29, 348-354.	7.6	639
10	Resolving Heterogeneity Problems and Impurity Artifacts in Operationally Homogeneous Transition Metal Catalysts. <i>Chemical Reviews</i> , 2012, 112, 1536-1554.	23.0	576
11	Highly Active and Robust Cp* Iridium Complexes for Catalytic Water Oxidation. <i>Journal of the American Chemical Society</i> , 2009, 131, 8730-8731.	6.6	561
12	Rhodium and Iridium Complexes of N-Heterocyclic Carbenes via Transmetalation: Structure and Dynamics. <i>Organometallics</i> , 2003, 22, 1663-1667.	1.1	539
13	Half-Sandwich Iridium Complexes for Homogeneous Water-Oxidation Catalysis. <i>Journal of the American Chemical Society</i> , 2010, 132, 16017-16029.	6.6	507
14	Abnormal, mesoionic and remote N-heterocyclic carbene complexes. <i>Coordination Chemistry Reviews</i> , 2013, 257, 755-766.	9.5	501
15	Study of the N-H...B Dihydrogen Bond Including the Crystal Structure of BH <sub>3</sub> NH <sub>3</sub> by Neutron Diffraction. <i>Journal of the American Chemical Society</i> , 1999, 121, 6337-6343.	6.6	475
16	Homogeneous Transition Metal Catalysis of Acceptorless Dehydrogenative Alcohol Oxidation: Applications in Hydrogen Storage and to Heterocycle Synthesis. <i>Chemical Reviews</i> , 2017, 117, 9228-9246.	23.0	432
17	A Pd complex of a tridentate pincer CNC bis-carbene ligand as a robust homogenous Heck catalyst. <i>Chemical Communications</i> , 2001, , 201-202.	2.2	404
18	Secondary Coordination Sphere Interactions Facilitate the Insertion Step in an Iridium(III) CO <sub>2</sub> Reduction Catalyst. <i>Journal of the American Chemical Society</i> , 2011, 133, 9274-9277.	6.6	388

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19	Key factors in pincer ligand design. <i>Chemical Society Reviews</i> , 2018, 47, 1959-1968.	18.7	364
20	Hydrogen storage in liquid organic heterocycles. <i>Energy and Environmental Science</i> , 2008, 1, 134.	15.6	348
21	Light-driven water oxidation for solar fuels. <i>Coordination Chemistry Reviews</i> , 2012, 256, 2503-2520.	9.5	337
22	Characterization of the O <sub>2</sub> -Evolving Reaction Catalyzed by [(terpy)(H <sub>2</sub> O)Mn <sup>III</sup> (O)Mn <sup>IV</sup> (OH <sub>2</sub> )(terpy)](NO <sub>3</sub> ) <sub>3</sub> (terpy = 2,2',6,6'-Terpyridine). <i>Journal of the American Chemical Society</i> , 2001, 123, 423-430.	6.6	336
23	Chelated Iridium(III) Bis-carbene Complexes as Air-Stable Catalysts for Transfer Hydrogenation. <i>Organometallics</i> , 2002, 21, 3596-3604.	1.1	315
24	Abnormal C <sub>5</sub> -Bound N-Heterocyclic Carbenes: Extremely Strong Electron Donor Ligands and Their Iridium(I) and Iridium(III) Complexes. <i>Organometallics</i> , 2004, 23, 2461-2468.	1.1	311
25	Mechanism of C-H Activation by Diiron Methane Monooxygenases: Quantum Chemical Studies. <i>Journal of the American Chemical Society</i> , 1997, 119, 3103-3113.	6.6	302
26	Iridium-Catalyzed Hydrogenation of N-Heterocyclic Compounds under Mild Conditions by an Outer-Sphere Pathway. <i>Journal of the American Chemical Society</i> , 2011, 133, 7547-7562.	6.6	296
27	Deactivation in Homogeneous Transition Metal Catalysis: Causes, Avoidance, and Cure. <i>Chemical Reviews</i> , 2015, 115, 127-150.	23.0	294
28	Distinguishing Homogeneous from Heterogeneous Catalysis in Electrode-Driven Water Oxidation with Molecular Iridium Complexes. <i>Journal of the American Chemical Society</i> , 2011, 133, 10473-10481.	6.6	293
29	Introduction: C-H Activation. <i>Chemical Reviews</i> , 2017, 117, 8481-8482.	23.0	264
30	A visible light water-splitting cell with a photoanode formed by codeposition of a high-potential porphyrin and an iridium water-oxidation catalyst. <i>Energy and Environmental Science</i> , 2011, 4, 2389.	15.6	257
31	A molecular catalyst for water oxidation that binds to metal oxide surfaces. <i>Nature Communications</i> , 2015, 6, 6469.	5.8	256
32	Factors Affecting the Strength of N-H...H-Ir Hydrogen Bonds. <i>Journal of the American Chemical Society</i> , 1995, 117, 3485-3491.	6.6	244
33	Computed Ligand Electronic Parameters from Quantum Chemistry and Their Relation to Tolman Parameters, Lever Parameters, and Hammett Constants. <i>Inorganic Chemistry</i> , 2001, 40, 5806-5811.	1.9	233
34	Multifunctional ligands in transition metal catalysis. <i>New Journal of Chemistry</i> , 2011, 35, 18-23.	1.4	229
35	Comparison of primary oxidants for water-oxidation catalysis. <i>Chemical Society Reviews</i> , 2013, 42, 2247-2252.	18.7	227
36	Anodic deposition of a robust iridium-based water-oxidation catalyst from organometallic precursors. <i>Chemical Science</i> , 2011, 2, 94-98.	3.7	219

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37	Coordination chemistry of halocarbons. <i>Coordination Chemistry Reviews</i> , 1990, 99, 89-115.	9.5	207
38	Efficient selective and atom economic catalytic conversion of glycerol to lactic acid. <i>Nature Communications</i> , 2014, 5, 5084.	5.8	207
39	Reactivity Differences in the Syntheses of Chelating N-Heterocyclic Carbene Complexes of Rhodium Are Ascribed to Ligand Anisotropy. <i>Organometallics</i> , 2004, 23, 1253-1263.	1.1	199
40	Precursor Transformation during Molecular Oxidation Catalysis with Organometallic Iridium Complexes. <i>Journal of the American Chemical Society</i> , 2013, 135, 10837-10851.	6.6	193
41	Anchoring groups for photocatalytic water oxidation on metal oxide surfaces. <i>Chemical Society Reviews</i> , 2017, 46, 6099-6110.	18.7	189
42	Oxidative Synthesis of Amides and Pyrroles via Dehydrogenative Alcohol Oxidation by Ruthenium Diphosphine Diamine Complexes. <i>Organometallics</i> , 2011, 30, 4174-4179.	1.1	180
43	Mechanism of H <sub>2</sub> Activation by Nickel-iron Hydrogenase. <i>Journal of the American Chemical Society</i> , 1998, 120, 548-555.	6.6	173
44	Dihydrogen Complexation. <i>Chemical Reviews</i> , 2016, 116, 8750-8769.	23.0	170
45	Computational structure-activity relationships in H <sub>2</sub> storage: how placement of N atoms affects release temperatures in organic liquid storage materials. <i>Chemical Communications</i> , 2007, , 2231-2233.	2.2	163
46	Outer sphere hydrogenation catalysis. <i>New Journal of Chemistry</i> , 2013, 37, 21-27.	1.4	161
47	Iridium-based complexes for water oxidation. <i>Dalton Transactions</i> , 2015, 44, 12452-12472.	1.6	156
48	Acetylacetonate Anchors for Robust Functionalization of TiO <sub>2</sub> Nanoparticles with Mn(II)-Terpyridine Complexes. <i>Journal of the American Chemical Society</i> , 2008, 130, 14329-14338.	6.6	151
49	Particle Formation during Oxidation Catalysis with Cp* Iridium Complexes. <i>Journal of the American Chemical Society</i> , 2012, 134, 9785-9795.	6.6	150
50	Mechanism of Homogeneous Iridium-Catalyzed Alkylation of Amines with Alcohols from a DFT Study. <i>Organometallics</i> , 2008, 27, 2529-2535.	1.1	149
51	Electrocatalytic Water Oxidation by a Copper(II) Complex of an Oxidation-Resistant Ligand. <i>ACS Catalysis</i> , 2017, 7, 3384-3387.	5.5	149
52	Methanol Dehydrogenation by Iridium N-Heterocyclic Carbene Complexes. <i>Inorganic Chemistry</i> , 2015, 54, 5079-5084.	1.9	146
53	Modeling the Solvent Sphere: A Mechanism of the Shilov Reaction. <i>Journal of the American Chemical Society</i> , 1996, 118, 4442-4450.	6.6	145
54	Reduction of Systematic Uncertainty in DFT Redox Potentials of Transition-Metal Complexes. <i>Journal of Physical Chemistry C</i> , 2012, 116, 6349-6356.	1.5	145

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55	Dimer-of-Dimers Model for the Oxygen-Evolving Complex of Photosystem II. Synthesis and Properties of $[MnIV_4O_5(terpy)_4(H_2O)_2](ClO_4)_6$ . <i>Journal of the American Chemical Society</i> , 2004, 126, 7345-7349.	6.6	127
56	Axially Chiral Bidentate N-Heterocyclic Carbene Ligands Derived from BINAM: $\Delta$ Rhodium and Iridium Complexes in Asymmetric Ketone Hydrosilylation. <i>Organometallics</i> , 2005, 24, 4432-4436.	1.1	127
57	An Iridium(IV) Species, $[Cp^*Ir(NHC)Cl]^+$ , Related to a Water-Oxidation Catalyst. <i>Organometallics</i> , 2011, 30, 965-973.	1.1	127
58	Interplay of Linker, N-Substituent, and Counterion Effects in the Formation and Geometrical Distortion of N-Heterocyclic Biscarbene Complexes of Rhodium(I). <i>Organometallics</i> , 2006, 25, 6099-6107.	1.1	124
59	Catalysed low temperature H <sub>2</sub> release from nitrogen heterocycles. <i>New Journal of Chemistry</i> , 2006, 30, 1675.	1.4	121
60	Cp* Iridium Complexes Give Catalytic Alkane Hydroxylation with Retention of Stereochemistry. <i>Journal of the American Chemical Society</i> , 2010, 132, 12550-12551.	6.6	106
61	Electrochemical Activation of Cp* Iridium Complexes for Electrode-Driven Water-Oxidation Catalysis. <i>Journal of the American Chemical Society</i> , 2014, 136, 13826-13834.	6.6	105
62	An Experimental $\sim$ Theoretical Study of the Factors That Affect the Switch between Ruthenium-Catalyzed Dehydrogenative Amide Formation versus Amine Alkylation. <i>Organometallics</i> , 2010, 29, 6548-6558.	1.1	103
63	Hydroxamate Anchors for Improved Photoconversion in Dye-Sensitized Solar Cells. <i>Inorganic Chemistry</i> , 2013, 52, 6752-6764.	1.9	102
64	Water-stable, hydroxamate anchors for functionalization of TiO <sub>2</sub> surfaces with ultrafast interfacial electron transfer. <i>Energy and Environmental Science</i> , 2010, 3, 917.	15.6	99
65	Proton-coupled electron transfer in manganese complex $[(bpy)_2Mn(O)_2Mn(bpy)_2]^+$ . <i>Journal of the American Chemical Society</i> , 1989, 111, 9249-9250.	6.6	98
66	Nitrogen Fixation by Nitrogenases: $\delta$ A Quantum Chemical Study. <i>Journal of Physical Chemistry B</i> , 1998, 102, 1615-1623.	1.2	97
67	Hypervalency, secondary bonding and hydrogen bonding: siblings under the skin. <i>Chemical Society Reviews</i> , 2017, 46, 1720-1729.	18.7	96
68	Homogeneous tungsten, rhenium, and iridium catalysts in alkane dehydrogenation driven by reflux of substrate or of cosolvent or by inert-gas flow. <i>Organometallics</i> , 1993, 12, 294-298.	1.1	94
69	Bioinorganic Chemistry of Manganese Related to Photosynthetic Oxygen Evolution. <i>Progress in Inorganic Chemistry</i> , 0, , 99-142.	3.0	94
70	Hydroxamate anchors for water-stable attachment to TiO <sub>2</sub> nanoparticles. <i>Energy and Environmental Science</i> , 2009, 2, 1173.	15.6	91
71	Modular Assembly of High-Potential Zinc Porphyrin Photosensitizers Attached to TiO <sub>2</sub> with a Series of Anchoring Groups. <i>Journal of Physical Chemistry C</i> , 2013, 117, 14526-14533.	1.5	90
72	Nitrogen-Containing Liquid Organic Hydrogen Carriers: Progress and Prospects. <i>ACS Sustainable Chemistry and Engineering</i> , 2017, 5, 4491-4498.	3.2	89

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73	A tridentate Ni pincer for aqueous electrocatalytic hydrogen production. <i>New Journal of Chemistry</i> , 2012, 36, 1149.	1.4	88
74	Sodium Periodate as a Primary Oxidant for Water-Oxidation Catalysts. <i>Inorganic Chemistry</i> , 2012, 51, 6147-6152.	1.9	86
75	Selective conversion of glycerol to lactic acid with iron pincer precatalysts. <i>Chemical Communications</i> , 2015, 51, 16201-16204.	2.2	86
76	Outer sphere anion participation can modify the mechanism for conformer interconversion in Pd pincer complexes. <i>Dalton Transactions</i> , 2003, , 831-838.	1.6	84
77	A Pyridine Alkoxide Chelate Ligand That Promotes Both Unusually High Oxidation States and Water-Oxidation Catalysis. <i>Accounts of Chemical Research</i> , 2017, 50, 952-959.	7.6	84
78	Counter-ion effects switch ligand binding from C-2 to C-5 in kinetic carbenes formed from an imidazolium salt and IrH5(PPh3)2. <i>Chemical Communications</i> , 2002, , 2580-2581.	2.2	82
79	Ultrafast Photooxidation of Mn(II) Terpyridine Complexes Covalently Attached to TiO <sub>2</sub> Nanoparticles. <i>Journal of Physical Chemistry C</i> , 2007, 111, 11982-11990.	1.5	82
80	Cp* Iridium Precatalysts for Selective C-H Oxidation via Direct Oxygen Insertion: A Joint Experimental/Computational Study. <i>ACS Catalysis</i> , 2012, 2, 208-218.	5.5	82
81	Deposition of an oxomanganese water oxidation catalyst on TiO <sub>2</sub> nanoparticles: computational modeling, assembly and characterization. <i>Energy and Environmental Science</i> , 2009, 2, 230.	15.6	80
82	Heterogenized Iridium Water-Oxidation Catalyst from a Silatrane Precursor. <i>ACS Catalysis</i> , 2016, 6, 5371-5377.	5.5	79
83	Stabilization of iridium(I), -(III), and -(V) in an oxygen-donor ligand environment and the selective dehydrogenative silylation and hydrosilylation of ethylene with {C(Ph <sub>2</sub> P:O) <sub>3</sub> }Ir(ol) <sub>2</sub> . <i>Organometallics</i> , 1991, 10, 415-418.	1.1	74
84	High-Frequency EPR Study of a New Mononuclear Manganese(III) Complex: [(terpy)Mn(N <sub>3</sub> ) <sub>3</sub> ] (terpy = 1,10,15-triethyl-3,6,9-triazapentaene). <i>Inorganic Chemistry</i> , 2003, 42, 1000-1004.	1.9	74
85	Rapid screening and combinatorial methods in homogeneous organometallic catalysis. <i>Pure and Applied Chemistry</i> , 2001, 73, 119-128.	0.9	74
86	Hydrogen transfer in the presence of amino acid radicals. <i>Theoretical Chemistry Accounts</i> , 1997, 97, 289-300.	0.5	71
87	A Quantum Chemical Study of the Mechanism of Tyrosinase. <i>Journal of Physical Chemistry B</i> , 1999, 103, 1193-1202.	1.2	71
88	Electronic and Steric Effects in the Insertion of Alkynes into an Iridium(III) Hydride. <i>Organometallics</i> , 2005, 24, 62-76.	1.1	71
89	Iridium catalyzed reversible dehydrogenation and hydrogenation of quinoline derivatives under mild conditions. <i>Journal of Organometallic Chemistry</i> , 2015, 792, 184-189.	0.8	71
90	Ion pairing effects in intramolecular heterolytic H <sub>2</sub> activation in an Ir(III) complex: a combined theoretical/experimental study. <i>New Journal of Chemistry</i> , 2003, 27, 80-87.	1.4	69

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91	Bioinspired High-Potential Porphyrin Photoanodes. <i>Journal of Physical Chemistry C</i> , 2012, 116, 4892-4902.	1.5	69
92	Catalyst Activation by Loss of Cyclopentadienyl Ligands in Hydrogen Transfer Catalysis with Cp*Ir <sup>III</sup> Complexes. <i>ACS Catalysis</i> , 2014, 4, 973-985.	5.5	68
93	An Efficient Synthesis of [Ir(cod)Cl] <sub>2</sub> and Its Reaction with PMe <sub>2</sub> Ph to Give <i>i</i> -FAC-[IrH(PMe <sub>2</sub> ) <sub>2</sub> C <sub>6</sub> H <sub>4</sub> ](PMe <sub>2</sub> Ph) <sub>3</sub> . <i>Synthesis and Reactivity in Inorganic, Metal Organic, and Nano Metal Chemistry</i> , 1982, 12, 407-413.	1.8	65
94	Solution Structures of Highly Active Molecular Ir Water-Oxidation Catalysts from Density Functional Theory Combined with High-Energy X-ray Scattering and EXAFS Spectroscopy. <i>Journal of the American Chemical Society</i> , 2016, 138, 5511-5514.	6.6	63
95	Effects of a Nonligating Pendant Hydrogen-Bonding Group in a Metal Complex: $\sigma$ Stabilization of an HF Complex. <i>Organometallics</i> , 1999, 18, 1615-1621.	1.1	60
96	Cp* Iridium Precatalysts for Selective C-H Oxidation with Sodium Periodate As the Terminal Oxidant. <i>Organometallics</i> , 2013, 32, 957-965.	1.1	60
97	Electrocatalytic Nitrogen Fixation for Distributed Fertilizer Production?. <i>ACS Sustainable Chemistry and Engineering</i> , 2016, 4, 5855-5858.	3.2	59
98	Efficiency of Interfacial Electron Transfer from Zn-Porphyrin Dyes into TiO <sub>2</sub> Correlated to the Linker Single Molecule Conductance. <i>Journal of Physical Chemistry C</i> , 2013, 117, 24462-24470.	1.5	55
99	Electron Injection Dynamics from Photoexcited Porphyrin Dyes into SnO <sub>2</sub> and TiO <sub>2</sub> Nanoparticles. <i>Journal of Physical Chemistry C</i> , 2013, 117, 21662-21670.	1.5	54
100	Selective catalytic oxidation of sugar alcohols to lactic acid. <i>Green Chemistry</i> , 2015, 17, 594-600.	4.6	52
101	Stable Iridium(IV) Complexes of an Oxidation-Resistant Pyridine-Alkoxide Ligand: Highly Divergent Redox Properties Depending on the Isomeric Form Adopted. <i>Journal of the American Chemical Society</i> , 2015, 137, 7243-7250.	6.6	51
102	Antimony Complexes for Electrocatalysis: Activity of a Main-Group Element in Proton Reduction. <i>Angewandte Chemie - International Edition</i> , 2017, 56, 9111-9115.	7.2	51
103	CHEMISTRY: A New Oxidation State for Pd?. <i>Science</i> , 2002, 295, 288-289.	6.0	50
104	Acyl Protection Strategy for Synthesis of a Protic NHC Complex via N-Acyl Methanolysis. <i>Organometallics</i> , 2010, 29, 5728-5731.	1.1	50
105	Cycloiridation of $\alpha,\beta$ -Unsaturated Ketones, Esters, and Acetophenone. <i>Organometallics</i> , 2005, 24, 4810-4815.	1.1	46
106	The mechanism of the Ni-Fe hydrogenases: a quantum chemical perspective. <i>Journal of Biological Inorganic Chemistry</i> , 2001, 6, 460-466.	1.1	45
107	Stoichiometric C-C Coupling Reactions in the Coordination Sphere of an Iridium(III) Alkyl. <i>Organometallics</i> , 2004, 23, 3378-3387.	1.1	45
108	Redox Activity of Oxo-Bridged Iridium Dimers in an N,O-Donor Environment: Characterization of Remarkably Stable Ir(IV,V) Complexes. <i>Journal of the American Chemical Society</i> , 2017, 139, 9672-9683.	6.6	45



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109	Seven-Coordinate Iridium(V) Polyhydrides with Chelating Bis(silyl) Ligands. <i>Inorganic Chemistry</i> , 1995, 34, 2937-2941.	1.9	42
110	Probing the Viability of Oxo-Coupling Pathways in Iridium-Catalyzed Oxygen Evolution. <i>Organometallics</i> , 2013, 32, 5384-5390.	1.1	42
111	Experimental and computational studies of borohydride catalyzed hydrosilylation of a variety of C=O and C=N functionalities including esters, amides and heteroarenes. <i>New Journal of Chemistry</i> , 2014, 38, 1694-1700.	1.4	42
112	A Carbene-Rich but Carbonyl-Poor [Ir <sub>6</sub> (IME) <sub>8</sub> (CO) <sub>2</sub> H <sub>14</sub> ] <sup>2+</sup> Polyhydride Cluster as a Deactivation Product from Catalytic Glycerol Dehydrogenation. <i>Angewandte Chemie - International Edition</i> , 2014, 53, 12808-12811.	7.2	42
113	High Oxidation State Iridium Mono- $\frac{1}{4}$ -oxo Dimers Related to Water Oxidation Catalysis. <i>Journal of the American Chemical Society</i> , 2016, 138, 15917-15926.	6.6	41
114	Intramolecular Oxygen Transfer from Nitro Groups to C-C Bonds Mediated by Iridium Hydrides. <i>Organometallics</i> , 2005, 24, 3066-3073.	1.1	40
115	<i>Operando</i> Structure-Activity-Stability Relationship of Iridium Oxides during the Oxygen Evolution Reaction. <i>ACS Catalysis</i> , 2022, 12, 5174-5184.	5.5	40
116	Transfer Hydrogenation with Glycerol as H-Donor: Catalyst Activation, Deactivation and Homogeneity. <i>ACS Sustainable Chemistry and Engineering</i> , 2019, 7, 15845-15853.	3.2	38
117	An $\eta^2$ -vinyl pathway may explain net trans hydrosilylation via transition metal catalysis even in cyclic cases. <i>New Journal of Chemistry</i> , 2003, 27, 771-772.	1.4	37
118	Water-Nucleophilic Attack Mechanism for the Cu <sup>II</sup> (pyalk) <sub>2</sub> Water-Oxidation Catalyst. <i>ACS Catalysis</i> , 2018, 8, 7952-7960.	5.5	37
119	Atom economic synthesis of amides via transition metal catalyzed rearrangement of oxaziridines. <i>Green Chemistry</i> , 2007, 9, 976.	4.6	36
120	Strongly Coupled Phenazine-Porphyrin Dyads: Light-Harvesting Molecular Assemblies with Broad Absorption Coverage. <i>ACS Applied Materials &amp; Interfaces</i> , 2019, 11, 8000-8008.	4.0	36
121	Fuel selection for a regenerative organic fuel cell/flow battery: thermodynamic considerations. <i>Energy and Environmental Science</i> , 2012, 5, 9534.	15.6	35
122	The stability of organometallic ligands in oxidation catalysis. <i>Journal of Organometallic Chemistry</i> , 2014, 751, 174-180.	0.8	34
123	Computational Design of Intrinsic Molecular Rectifiers Based on Asymmetric Functionalization of <i>N</i> -Phenylbenzamide. <i>Journal of Chemical Theory and Computation</i> , 2015, 11, 5888-5896.	2.3	34
124	Optimization of Photoanodes for Photocatalytic Water Oxidation by Combining a Heterogenized Iridium Water-Oxidation Catalyst with a High-Potential Porphyrin Photosensitizer. <i>ChemSusChem</i> , 2017, 10, 4526-4534.	3.6	34
125	Controlling the rectification properties of molecular junctions through molecule-electrode coupling. <i>Nanoscale</i> , 2016, 8, 16357-16362.	2.8	33
126	Catalytic Photodefluorination of Perfluoroalkanes to Perfluoroalkenes with a Ferrocene Photosensitizer. <i>Organometallics</i> , 1998, 17, 1582-1586.	1.1	32



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127	A full set of iridium( $\text{IV}$ ) pyridine-alkoxide stereoisomers: highly geometry-dependent redox properties. <i>Chemical Science</i> , 2017, 8, 1642-1652.	3.7	32
128	Amination of Methane and Ethane by Mercury Photosensitization in the Presence of Ammonia. <i>Angewandte Chemie International Edition in English</i> , 1993, 32, 1491-1492.	4.4	31
129	Direct Interfacial Electron Transfer from High-Potential Porphyrins into Semiconductor Surfaces: A Comparison of Linkers and Anchoring Groups. <i>Journal of Physical Chemistry C</i> , 2018, 122, 13529-13539.	1.5	31
130	Surface-Attached Molecular Catalysts on Visible-Light-Absorbing Semiconductors: Opportunities and Challenges for a Stable Hybrid Water-Splitting Photoanode. <i>ACS Energy Letters</i> , 2020, 5, 3195-3202.	8.8	31
131	Electrocatalytic, Homogeneous Ammonia Oxidation in Water to Nitrate and Nitrite with a Copper Complex. <i>Journal of the American Chemical Society</i> , 2022, 144, 8449-8453.	6.6	31
132	Molecular titanium(IV)-hydroxamate complexes as models for $\text{TiO}_2$ surface binding. <i>Chemical Communications</i> , 2016, 52, 2972-2975.	2.2	30
133	Creating Ligands with Multiple Personalities. <i>Science</i> , 2010, 330, 455-456.	6.0	29
134	Towards multielectron photocatalysis: a porphyrin array for lateral hole transfer and capture on a metal oxide surface. <i>Physical Chemistry Chemical Physics</i> , 2015, 17, 12728-12734.	1.3	29
135	The preparation, properties and some catalytic reactions of mer-hydrido(tetrahydroborato)tris(methyldiphenylphosphine)ruthenium(II) and some related complexes. <i>Journal of Organometallic Chemistry</i> , 1978, 157, 335-344.	0.8	28
136	Origin of Solvent Acceleration in Organolithium Metal-Halogen Exchange Reactions. <i>Organometallics</i> , 1997, 16, 6021-6023.	1.1	28
137	High-Potential Porphyrins Supported on $\text{SnO}_2$ and $\text{TiO}_2$ Surfaces for Photoelectrochemical Applications. <i>Journal of Physical Chemistry C</i> , 2016, 120, 28971-28982.	1.5	28
138	New Ir Bis-Carbonyl Precursor for Water Oxidation Catalysis. <i>Inorganic Chemistry</i> , 2016, 55, 2427-2435.	1.9	28
139	Unusual Stability of a Bacteriochlorin Electrocatalyst under Reductive Conditions. A Case Study on $\text{CO}_2$ Conversion to CO. <i>ACS Catalysis</i> , 2018, 8, 10131-10136.	5.5	28
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