Jillian L Dempsey

List of Publications by Year
in descending order

86 papers	7,008 citations	117625 34 h-index	58581 82 g-index
88 all docs	88 docs citations	88 times ranked	8046 citing authors

#	Article	IF	Citations
1	A Practical Beginnerâ€™s Guide to Cyclic Voltammetry. Journal of Chemical Education, 2018, 95, 197-206.	2.3	2,137
2	Hydrogen Evolution Catalyzed by Cobaloximes. Accounts of Chemical Research, 2009, 42, 1995-2004.	15.6	946
3	Evaluation of Homogeneous Electrocatalysts by Cyclic Voltammetry. Inorganic Chemistry, 2014, 53, 9983-10002.	4.0	403
4	Proton-Coupled Electron Flow in Protein Redox Machines. Chemical Reviews, 2010, 110, 7024-7039.	47.7	270
5	Mechanism of H₂ Evolution from a Photogenerated Hydridocobaloxime. Journal of the American Chemical Society, 2010, 132, 16774-16776.	13.7	211
6	Electrochemical Reduction of BrÃ¸nsted Acids by Glassy Carbon in Acetonitrileâ€"Implications for Electrocatalytic Hydrogen Evolution. Inorganic Chemistry, 2014, 53, 8350-8361.	4.0	211
7	Molecular Chemistry of Consequence to Renewable Energy. Inorganic Chemistry, 2005, 44, 6879-6892.	4.0	200
8	Kinetics of Electron Transfer Reactions of H₂-Evolving Cobalt Diglyoxime Catalysts. Journal of the American Chemical Society, 2010, 132, 1060-1065.	13.7	187
9	Electrochemical and spectroscopic methods for evaluating molecular electrocatalysts. Nature Reviews Chemistry, 2017, 1, .	30.2	178
10	Quantifying Ligand Exchange Reactions at CdSe Nanocrystal Surfaces. Chemistry of Materials, 2016, 28, 4762-4770.	6.7	154
11	Reaction Pathways of Hydrogen-Evolving Electrocatalysts: Electrochemical and Spectroscopic Studies of Proton-Coupled Electron Transfer Processes. ACS Catalysis, 2016, 6, 3644-3659.	11.2	117
12	Oxygen and hydrogen photocatalysis by two-electron mixed-valence coordination compounds. Coordination Chemistry Reviews, 2005, 249, 1316-1326.	18.8	103
13	Long-Lived and Efficient Emission from Mononuclear Amidophosphine Complexes of Copper. Inorganic Chemistry, 2007, 46, 7244-7246.	4.0	102
14	Catalytic hydrogen evolution from a covalently linked dicobaloxime. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 15589-15593.	7.1	102
15	Reaction Parameters Influencing Cobalt Hydride Formation Kinetics: Implications for Benchmarking H₂-Evolution Catalysts. Journal of the American Chemical Society, 2017, 139, 239-244.	13.7	100
16	On decomposition, degradation, and voltammetric deviation: the electrochemist's field guide to identifying precatalyst transformation. Chemical Society Reviews, 2019, 48, 2927-2945.	38.1	92
17	Linear Free Energy Relationships in the Hydrogen Evolution Reaction: Kinetic Analysis of a Cobaloxime Catalyst. ACS Catalysis, 2016, 6, 3326-3335.	11.2	89
18	Excited-State Proton-Coupled Electron Transfer: Different Avenues for Promoting Proton/Electron Movement with Solar Photons. ACS Energy Letters, 2017, 2, 1246-1256.	17.4	79

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19	Potential-Dependent Electrocatalytic Pathways: Controlling Reactivity with p<i>K</i>_a for Mechanistic Investigation of a Nickel-Based Hydrogen Evolution Catalyst. Journal of the American Chemical Society, 2015, 137, 13371-13380.	13.7	69
20	Decoding Proton-Coupled Electron Transfer with Potentialâ€“p<i>K</i>_a Diagrams. Inorganic Chemistry, 2017, 56, 1225-1231.	4.0	68
21	Photo-induced Proton-Coupled Electron Transfer Reactions of Acridine Orange: Comprehensive Spectral and Kinetics Analysis. Journal of the American Chemical Society, 2014, 136, 12221-12224.	13.7	67
22	Molecular-Level Insight into Semiconductor Nanocrystal Surfaces. Journal of the American Chemical Society, 2021, 143, 1251-1266.	13.7	61
23	Charge Recombination Dynamics in Sensitized SnO₂/TiO₂ Core/Shell Photoanodes. Journal of Physical Chemistry C, 2015, 119, 28353-28360.	3.1	59
24	Synthesis and photophysical characterization of porphyrin and porphyrinâ€“Ru(ii) polypyridyl chromophoreâ€“catalyst assemblies on mesoporous metal oxides. Chemical Science, 2014, 5, 3115.	7.4	56
25	Electrode initiated proton-coupled electron transfer to promote degradation of a nickel(<scp>ii</scp>) coordination complex. Chemical Science, 2015, 6, 2827-2834.	7.4	55
26	Mapping the Topology of PbS Nanocrystals through Displacement Isotherms of Surface-Bound Metal Oleate Complexes. Chemistry of Materials, 2020, 32, 2561-2571.	6.7	48
27	A RhIIâˆ'AuIIBimetallic Core with a Direct Metalâˆ'Metal Bond. Inorganic Chemistry, 2007, 46, 2362-2364.	4.0	47
28	Electrochemical hydrogenation of a homogeneous nickel complex to form a surface adsorbed hydrogen-evolving species. Chemical Communications, 2015, 51, 5290-5293.	4.1	47
29	Revealing the Relationship between Semiconductor Electronic Structure and Electron Transfer Dynamics at Metal Oxideâ€“Chromophore Interfaces. Journal of Physical Chemistry C, 2013, 117, 25259-25268.	3.1	45
30	Bathochromic Shifts in Rhenium Carbonyl Dyes Induced through Destabilization of Occupied Orbitals. Inorganic Chemistry, 2018, 57, 5389-5399.	4.0	42
31	Ferromagnetic excited-state Mn<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msup><mml:mrow /><mml:mrow><mml:mn>2</mml:mn><mml:mo>+</mml:mo></mml:mrow></mml:msup></mml:math>dimers in Zn<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mrow /><mml:mrow><mml:mn>1</mml:mn><mml:mo>âˆ'</mml:mo><mml:mi>x</mml:mi></mml:mrow></mml:msub></mml:math>Mn<i>x< quantum dots observed by time-resolved magnetophotoluminescence. Physical Review B, 2014, 89, .	3.2	40
32	Reactivity of Proton Sources with a Nickel Hydride Complex in Acetonitrile: Implications for the Study of Fuel-Forming Catalysts. Inorganic Chemistry, 2016, 55, 5079-5087.	4.0	40
33	Qualitative extension of the ECâ€² Zone Diagram to a molecular catalyst for a multi-electron, multi-substrate electrochemical reaction. Dalton Transactions, 2016, 45, 9970-9976.	3.3	37
34	Switching between Stepwise and Concerted Proton-Coupled Electron Transfer Pathways in Tungsten Hydride Activation. Journal of the American Chemical Society, 2018, 140, 14655-14669.	13.7	36
35	Electron-Promoted X-Type Ligand Displacement at CdSe Quantum Dot Surfaces. Nano Letters, 2019, 19, 1151-1157.	9.1	32
36	A stable dye-sensitized photoelectrosynthesis cell mediated by a NiO overlayer for water oxidation. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 12564-12571.	7.1	32

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37	Determining the Overpotential of Electrochemical Fuel Synthesis Mediated by Molecular Catalysts: Recommended Practices, Standard Reduction Potentials, and Challenges. ChemElectroChem, 2021, 8, 4161-4180.	3.4	31
38	Identification of an Electrode-Adsorbed Intermediate in the Catalytic Hydrogen Evolution Mechanism of a Cobalt Dithiolene Complex. Inorganic Chemistry, 2017, 56, 1988-1998.	4.0	29
39	Exchange equilibria of carboxylate-terminated ligands at PbS nanocrystal surfaces. Physical Chemistry Chemical Physics, 2018, 20, 23649-23655.	2.8	29
40	Redox-Induced Structural Reorganization Dictates Kinetics of Cobalt(III) Hydride Formation via Proton-Coupled Electron Transfer. Journal of the American Chemical Society, 2021, 143, 3393-3406.	13.7	24
41	Decoding Proton-Coupled Electron Transfer with Potentialâ€“p<i>K</i>_a Diagrams: Applications to Catalysis. Inorganic Chemistry, 2019, 58, 6647-6658.	4.0	20
42	Cultivating Advanced Technical Writing Skills through a Graduate-Level Course on Writing Research Proposals. Journal of Chemical Education, 2017, 94, 696-702.	2.3	15
43	Influence of Proton Acceptors on the Proton-Coupled Electron Transfer Reaction Kinetics of a Rutheniumâ€“Tyrosine Complex. Journal of Physical Chemistry B, 2017, 121, 10530-10542.	2.6	15
44	The Chemistry Women Mentorship Network (ChemWMN): A Tool for Creating Critical Mass in Academic Chemistry. Inorganic Chemistry, 2019, 58, 12493-12496.	4.0	14
45	Mechanistic basis for tuning iridium hydride photochemistry from H2 evolution to hydride transfer hydrodechlorination. Chemical Science, 2020, 11, 6442-6449.	7.4	14
46	Growth and Post-Deposition Treatments of SrTiO₃ Films for Dye-Sensitized Photoelectrosynthesis Cell Applications. ACS Applied Materials & Interfaces, 2016, 8, 12282-12290.	8.0	12
47	Unraveling Changes to PbS Nanocrystal Surfaces Induced by Thiols. Chemistry of Materials, 2022, 34, 1710-1721.	6.7	12
48	Theoretical Modeling of Lowâ€Energy Electronic Absorption Bands in Reduced Cobaloximes. ChemPhysChem, 2014, 15, 2951-2958.	2.1	11
49	Proton-Coupled Electron Transfer Reactions with Photometric Bases Reveal Free Energy Relationships for Proton Transfer. Journal of Physical Chemistry B, 2016, 120, 7896-7905.	2.6	11
50	Interfacial electron transfer yields in dye-sensitized NiO photocathodes correlated to excited-state dipole orientation of ruthenium chromophores. Canadian Journal of Chemistry, 2018, 96, 865-874.	1.1	11
51	Proton-Coupled Electron Transfer Kinetics for the Photoinduced Generation of a Cobalt(III)-Hydride Complex. Inorganic Chemistry, 2019, 58, 16510-16517.	4.0	11
52	Revealing the Molecular Identity of Defect Sites on PbS Quantum Dot Surfaces with Redox-Active Chemical Probes. Chemistry of Materials, 2021, 33, 2655-2665.	6.7	11
53	Synthesis and electrochemical characterization of a tridentate Schiff-base ligated Fe(II) complex. Polyhedron, 2016, 114, 200-204.	2.2	10
54	When Electrochemistry Met Methane: Rapid Catalyst Oxidation Fuels Hydrocarbon Functionalization. ACS Central Science, 2017, 3, 1137-1139.	11.3	10

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55	Enabling Aqueous NiO Photocathodes by Passivating Surface Sites That Facilitate Proton-Coupled Charge Transfer. ACS Applied Energy Materials, 2020, 3, 10702-10713.	5.1	10
56	Redox mediators accelerate electrochemically-driven solubility cycling of molecular transition metal complexes. Chemical Science, 2020, 11, 9836-9851.	7.4	10
57	Tunneling and Thermally Activated Electron Transfer in Dye-Sensitized SnO₂ | TiO₂ Core | Shell Nanostructures. Journal of Physical Chemistry C, 2020, 124, 25148-25159.	3.1	10
58	Analysis of multi-electron, multi-step homogeneous catalysis by rotating disc electrode voltammetry: theory, application, and obstacles. Analyst, The, 2020, 145, 1258-1278.	3.5	10
59	Effects of Ligand Shell Composition on Surface Reduction in PbS Quantum Dots. Chemistry of Materials, 2021, 33, 8612-8622.	6.7	10
60	Atomic layer deposition of SnOx onto mesoporous, nanocrsytalline TiO2 and SnO2 thin films. Polyhedron, 2019, 171, 433-447.	2.2	9
61	A compendium and meta-analysis of flatband potentials for TiO2, ZnO, and SnO2 semiconductors in aqueous media. Chemical Physics Reviews, 2022, 3, .	5.7	9
62	Quantitative Effects of Disorder on Chemically Modified Amorphous Carbon Electrodes. ACS Applied Energy Materials, 2020, 3, 8038-8047.	5.1	8
63	Metal hydrides find the sweet spot. Nature Chemistry, 2015, 7, 101-102.	13.6	7
64	Ligand steals spotlight from metal to orchestrate hydrogen production. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 478-479.	7.1	7
65	Redox reactivity of photogenerated osmium(ii) complexes. Dalton Transactions, 2011, 40, 10633.	3.3	6
66	Gains and Losses in PbS Quantum Dot Solar Cells with Submicron Periodic Grating Structures. Journal of Physical Chemistry C, 2016, 120, 8005-8013.	3.1	6
67	Impact of Background Oxygen Pressure on the Pulsed-Laser Deposition of ZnO Nanolayers and on Their Corresponding Performance as Electron Acceptors in PbS Quantum-Dot Solar Cells. ACS Applied Nano Materials, 2019, 2, 767-777.	5.0	6
68	A Vision for Sustainable Energy: The Center for Hybrid Approaches in Solar Energy to Liquid Fuels (CHASE). Electrochemical Society Interface, 2021, 30, 65-68.	0.4	6
69	How a highly driven reaction hits the brakes. Science, 2019, 364, 436-437.	12.6	5
70	Photoconductive ZnO films with embedded quantum dot or ruthenium dye sensitizers. APL Materials, 2013, 1, .	5.1	4
71	Interfacial Electron Transfer through Ultrathin ALD TiO<i>_x</i> Layers: A Comparative Study of TiO₂/TiO<i>_x</i> and SnO₂/TiO<i>_x</i> Core/Shell Nanocrystals. Journal of Physical Chemistry C, 2021, 125, 12937-12959.	3.1	4
72	The ligand-to-metal charge transfer excited state of [Re(dmpe)3]2+. Photosynthesis Research, 2022, 151, 155-161.	2.9	4

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73	PCET2018 Highlights: Proton-Coupled Electron Transfers for Energy Conversion Strategies. ACS Energy Letters, 2018, 3, 2477-2479.	17.4	3
74	The Chemistry Women Mentorship Network (ChemWMN): A Tool for Creating Critical Mass in Academic Chemistry. ACS Central Science, 2019, 5, 1625-1629.	11.3	3
75	Checking in with Women Materials Scientists During a Global Pandemic: May 2020. Chemistry of Materials, 2020, 32, 4859-4862.	6.7	3
76	Electrosynthetic Route to Cyclopentadienyl Rhenium Hydride Complexes Enabled by Electrochemical Investigations of their Redox-Induced Formation. Organometallics, 2020, 39, 1730-1743.	2.3	3
77	Assessment of Photoreleasable Linkers and Light-Capturing Antennas on a Photoresponsive Cobalamin Scaffold. Journal of Organic Chemistry, 2022, 87, 5076-5084.	3.2	3
78	Delayed photoacidity produced through the tripletâ€"triplet annihilation of a neutral pyranine derivative. Physical Chemistry Chemical Physics, 2019, 21, 16353-16358.	2.8	2
79	Mixed Tin-Titanium Oxides by Atomic Layer Deposition on Planar Substrates: Physical and Electronic Structure. Applied Surface Science, 2022, 573, 151564.	6.1	2
80	Ultrathin Tin-Doped Titanium Oxide by Atomic Layer Deposition on a Mesoporous Substrate: Physical/Electronic Structure, Spectroelectrochemistry, and Interfacial Charge Transfer. Journal of Physical Chemistry C, 2022, 126, 5265-5282.	3.1	2
81	Disparity in Optical Charge Generation and Recombination Processes in Upright and Inverted PbS Quantum-Dot Solar Cells. Journal of Physical Chemistry C, 2015, 119, 4606-4611.	3.1	1
82	Hop to It. Biochemistry, 2017, 56, 5623-5624.	2.5	1
83	The Chemistry Women Mentorship Network (ChemWMN): A Tool for Creating Critical Mass in Academic Chemistry. Chemistry of Materials, 2019, 31, 8239-8242.	6.7	1
84	Enhanced Performance in PbS Quantum Dots Solar Cells via Pulsed Laser Deposited ZnO Layer. , 2017, , .		0
85	Celebrating the Year of the Periodic Table: Emerging Investigators in Inorganic Chemistry. Inorganic Chemistry, 2019, 58, 10433-10435.	4.0	0
86	Role of Axial Ligation in Gating the Reactivity of Dimethylplatinum(III) Diimine Radical Cations. Organometallics, 2021, 40, 333-345.	2.3	0