David W Mulder

List of Publications by Year
in descending order

50 papers	2,896 citations	236925 25 h-index	206112 48 g-index
53 all docs	53 docs citations	53 times ranked	2782 citing authors

#	Article	IF	Citations
1	[FeFe]- and [NiFe]-hydrogenase diversity, mechanism, and maturation. Biochimica Et Biophysica Acta - Molecular Cell Research, 2015, 1853, 1350-1369.	4.1	400
2	Stepwise [FeFe]-hydrogenase H-cluster assembly revealed in the structure of HydAÎ”EFG. Nature, 2010, 465, 248-251.	27.8	295
3	Insights into [FeFe]-Hydrogenase Structure, Mechanism, and Maturation. Structure, 2011, 19, 1038-1052.	3.3	220
4	Electron Transfer Kinetics in CdS Nanorodâ€“[FeFe]-Hydrogenase Complexes and Implications for Photochemical H₂ Generation. Journal of the American Chemical Society, 2014, 136, 4316-4324.	13.7	177
5	The Electron Bifurcating FixABCX Protein Complex from <i>Azotobacter vinelandii</i>: Generation of Low-Potential Reducing Equivalents for Nitrogenase Catalysis. Biochemistry, 2017, 56, 4177-4190.	2.5	140
6	Identification of a Catalytic Iron-Hydride at the H-Cluster of [FeFe]-Hydrogenase. Journal of the American Chemical Society, 2017, 139, 83-86.	13.7	124
7	Mechanistic insights into energy conservation by flavin-based electron bifurcation. Nature Chemical Biology, 2017, 13, 655-659.	8.0	121
8	Activation of HydA^{Î”EFG} Requires a Preformed [4Fe-4S] Cluster. Biochemistry, 2009, 48, 6240-6248.	2.5	119
9	[FeFe]-Hydrogenase Oxygen Inactivation Is Initiated at the H Cluster 2Fe Subcluster. Journal of the American Chemical Society, 2015, 137, 1809-1816.	13.7	119
10	Investigations on the Role of Proton-Coupled Electron Transfer in Hydrogen Activation by [FeFe]-Hydrogenase. Journal of the American Chemical Society, 2014, 136, 15394-15402.	13.7	107
11	Identification of Global Ferredoxin Interaction Networks in Chlamydomonas reinhardtii. Journal of Biological Chemistry, 2013, 288, 35192-35209.	3.4	101
12	EPR and FTIR Analysis of the Mechanism of H₂ Activation by [FeFe]-Hydrogenase HydA1 from Chlamydomonas reinhardtii. Journal of the American Chemical Society, 2013, 135, 6921-6929.	13.7	82
13	Hydrogenase cluster biosynthesis: organometallic chemistry nature's way. Dalton Transactions, 2009, , 4274.	3.3	66
14	Tuning Catalytic Bias of Hydrogen Gas Producing Hydrogenases. Journal of the American Chemical Society, 2020, 142, 1227-1235.	13.7	55
15	A new era for electron bifurcation. Current Opinion in Chemical Biology, 2018, 47, 32-38.	6.1	54
16	Role of Surface-Capping Ligands in Photoexcited Electron Transfer between CdS Nanorods and [FeFe] Hydrogenase and the Subsequent H₂ Generation. Journal of Physical Chemistry C, 2018, 122, 741-750.	3.1	53
17	Proton Reduction Using a Hydrogenase-Modified Nanoporous Black Silicon Photoelectrode. ACS Applied Materials & Interfaces, 2016, 8, 14481-14487.	8.0	44
18	Electron Bifurcation: Thermodynamics and Kinetics of Two-Electron Brokering in Biological Redox Chemistry. Accounts of Chemical Research, 2017, 50, 2410-2417.	15.6	44

#	ARTICLE	IF	CITATIONS
19	CO-Bridged H-Cluster Intermediates in the Catalytic Mechanism of [FeFe]-Hydrogenase CaI. Journal of the American Chemical Society, 2018, 140, 7623-7628.	13.7	44
20	Reduction Potentials of [FeFe]-Hydrogenase Accessory Ironâ€“Sulfur Clusters Provide Insights into the Energetics of Proton Reduction Catalysis. Journal of the American Chemical Society, 2017, 139, 9544-9550.	13.7	42
21	FAD Binding by ApbE Protein from <i>Salmonella enterica</i> : a New Class of FAD-Binding Proteins. Journal of Bacteriology, 2011, 193, 887-895.	2.2	36
22	Diameter Dependent Electron Transfer Kinetics in Semiconductorâ€“Enzyme Complexes. ACS Nano, 2014, 8, 10790-10798.	14.6	32
23	Defining Intermediates of Nitrogenase MoFe Protein during N₂ Reduction under Photochemical Electron Delivery from CdS Quantum Dots. Journal of the American Chemical Society, 2020, 142, 14324-14330.	13.7	32
24	Understanding Degradation at the Lithium-Ion Battery Cathode/Electrolyte Interface: Connecting Transition-Metal Dissolution Mechanisms to Electrolyte Composition. ACS Applied Materials & Interfaces, 2021, 13, 11930-11939.	8.0	31
25	The catalytic mechanism of electron-bifurcating electron transfer flavoproteins (ETFs) involves an intermediary complex with NAD+. Journal of Biological Chemistry, 2019, 294, 3271-3283.	3.4	30
26	Terminal Hydride Species in [FeFe]â€Hydrogenases Are Vibrationally Coupled to the Active Site Environment. Angewandte Chemie - International Edition, 2018, 57, 10605-10609.	13.8	29
27	Quantum Efficiency of Charge Transfer Competing against Nonexponential Processes: The Case of Electron Transfer from CdS Nanorods to Hydrogenase. Journal of Physical Chemistry C, 2019, 123, 886-896.	3.1	24
28	New Frontiers in Hydrogenase Structure and Biosynthesis. Current Chemical Biology, 2008, 2, 178-199.	0.5	24
29	Activation Thermodynamics and H/D Kinetic Isotope Effect of the H_{ox} to H_{red}H⁺ Transition in [FeFe] Hydrogenase. Journal of the American Chemical Society, 2017, 139, 12879-12882.	13.7	23
30	Excitation-Rate Determines Product Stoichiometry in Photochemical Ammonia Production by CdS Quantum Dot-Nitrogenase MoFe Protein Complexes. ACS Catalysis, 2020, 10, 11147-11152.	11.2	23
31	Crystal structure and biochemical characterization of Chlamydomonas FDX2 reveal two residues that, when mutated, partially confer FDX2 the redox potential and catalytic properties of FDX1. Photosynthesis Research, 2016, 128, 45-57.	2.9	22
32	The oxygen reduction reaction catalyzed by <i>Synechocystis</i> sp. PCC 6803 flavodiiron proteins. Sustainable Energy and Fuels, 2019, 3, 3191-3200.	4.9	22
33	The effect of a C298D mutation in CaHydA [FeFe]-hydrogenase: Insights into the protein-metal cluster interaction by EPR and FTIR spectroscopic investigation. Biochimica Et Biophysica Acta - Bioenergetics, 2016, 1857, 98-106.	1.0	19
34	Compositional and structural insights into the nature of the H-cluster precursor on HydF. Dalton Transactions, 2018, 47, 9521-9535.	3.3	16
35	The structure and reactivity of the HoxEFU complex from the cyanobacterium Synechocystis sp. PCC 6803. Journal of Biological Chemistry, 2020, 295, 9445-9454.	3.4	15
36	Catalytic bias in oxidationâ€“reduction catalysis. Chemical Communications, 2021, 57, 713-720.	4.1	15

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37	Structural basis for carbon dioxide binding by 2-ketopropyl coenzyme M oxidoreductase/carboxylase. FEBS Letters, 2011, 585, 459-464.	2.8	14
38	Hydrogen Production by Water Biophotolysis. Advances in Photosynthesis and Respiration, 2014, , 101-135.	1.0	13
39	Probing the MgATP-Bound Conformation of the Nitrogenase Fe Protein by Solution Small-Angle X-ray Scattering. Biochemistry, 2007, 46, 14058-14066.	2.5	12
40	Size-Dependent Asymmetric Auger Interactions in Plasma-Produced n- and p-Type-Doped Silicon Nanocrystals. Journal of Physical Chemistry C, 2019, 123, 5782-5789.	3.1	9
41	A site-differentiated [4Feâ€"4S] cluster controls electron transfer reactivity of <i>Clostridium acetobutylicum</i> [FeFe]-hydrogenase I. Chemical Science, 2022, 13, 4581-4588.	7.4	8
42	Hydrogenases, Nitrogenases, Anoxia, and H2 Production in Water-Oxidizing Phototrophs. , 2013, , 37-75.		7
43	Dissecting Electronic-Structural Transitions in the Nitrogenase MoFe Protein P-Cluster during Reduction. Journal of the American Chemical Society, 2022, 144, 5708-5712.	13.7	7
44	New Frontiers in Hydrogenase Structure and Biosynthesis. Current Chemical Biology, 2008, 2, 178-199.	0.5	6
45	Structural Characterization of Poised States in the Oxygen Sensitive Hydrogenases and Nitrogenases. Methods in Enzymology, 2017, 595, 213-259.	1.0	6
46	An uncharacteristically low-potential flavin governs the energy landscape of electron bifurcation. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, e2117882119.	7.1	5
47	Terminal Hydride Species in [FeFe]â€Hydrogenases Are Vibrationally Coupled to the Active Site Environment. Angewandte Chemie, 2018, 130, 10765-10769.	2.0	4
48	The influence of electron utilization pathways on photosystem I photochemistry in <i>Synechocystis</i> sp. PCC 6803. RSC Advances, 2022, 12, 14655-14664.	3.6	2
49	Small Angle X-Ray Scattering Spectroscopy. Methods in Molecular Biology, 2011, 766, 177-189.	0.9	0
50	CHAPTER 12. <i>In vitro</i> Light-driven Hydrogen Production. Comprehensive Series in Photochemical and Photobiological Sciences, 2018, , 299-322.	0.3	0