

James A Birrell

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/2844694/publications.pdf>

Version: 2024-02-01

44
papers

1,544
citations

304743

22
h-index

315739

38
g-index

50
all docs

50
docs citations

50
times ranked

1395
citing authors

#	ARTICLE	IF	CITATIONS
1	Structural adaptations of photosynthetic complex I enable ferredoxin-dependent electron transfer. <i>Science</i> , 2019, 363, 257-260.	12.6	162
2	Proton Coupled Electronic Rearrangement within the H-Cluster as an Essential Step in the Catalytic Cycle of [FeFe] Hydrogenases. <i>Journal of the American Chemical Society</i> , 2017, 139, 1440-1443.	13.7	142
3	The Spectroscopy of Nitrogenases. <i>Chemical Reviews</i> , 2020, 120, 5005-5081.	47.7	132
4	Mechanism of Protection of Catalysts Supported in Redox Hydrogel Films. <i>Journal of the American Chemical Society</i> , 2015, 137, 5494-5505.	13.7	81
5	Reaction Coordinate Leading to H ₂ Production in [FeFe]-Hydrogenase Identified by Nuclear Resonance Vibrational Spectroscopy and Density Functional Theory. <i>Journal of the American Chemical Society</i> , 2017, 139, 16894-16902.	13.7	78
6	Spectroscopic and Computational Evidence that [FeFe] Hydrogenases Operate Exclusively with CO-Bridged Intermediates. <i>Journal of the American Chemical Society</i> , 2020, 142, 222-232.	13.7	63
7	Intercluster Redox Coupling Influences Protonation at the H-cluster in [FeFe] Hydrogenases. <i>Journal of the American Chemical Society</i> , 2017, 139, 15122-15134.	13.7	56
8	Reversible H ₂ oxidation and evolution by hydrogenase embedded in a redox polymer film. <i>Nature Catalysis</i> , 2021, 4, 251-258.	34.4	54
9	Unique Spectroscopic Properties of the H-Cluster in a Putative Sensory [FeFe] Hydrogenase. <i>Journal of the American Chemical Society</i> , 2018, 140, 1057-1068.	13.7	53
10	The catalytic cycle of [FeFe] hydrogenase: A tale of two sites. <i>Coordination Chemistry Reviews</i> , 2021, 449, 214191.	18.8	49
11	Sulfide Protects [FeFe] Hydrogenases From O ₂ . <i>Journal of the American Chemical Society</i> , 2018, 140, 9346-9350.	13.7	47
12	Investigating the function of [2Fe-2S] cluster N1a, the off-pathway cluster in complex I, by manipulating its reduction potential. <i>Biochemical Journal</i> , 2013, 456, 139-146.	3.7	44
13	Semisynthetic Hydrogenases Propel Biological Energy Research into a New Era. <i>Joule</i> , 2017, 1, 61-76.	24.0	40
14	Caught in the H inactive : Crystal Structure and Spectroscopy Reveal a Sulfur Bound to the Active Site of an O ₂ -stable State of [FeFe] Hydrogenase. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 16786-16794.	13.8	40
15	Artificial Maturation of the Highly Active Heterodimeric [FeFe] Hydrogenase from <i>Desulfovibrio desulfuricans</i> ATCC 7757. <i>Israel Journal of Chemistry</i> , 2016, 56, 852-863.	2.3	39
16	Investigating the Kinetic Competency of Cr-HydA1 [FeFe] Hydrogenase Intermediate States via Time-Resolved Infrared Spectroscopy. <i>Journal of the American Chemical Society</i> , 2019, 141, 16064-16070.	13.7	38
17	Truncation of subunit ND2 disrupts the threefold symmetry of the antiporter-like subunits in complex I from higher metazoans. <i>FEBS Letters</i> , 2010, 584, 4247-4252.	2.8	36
18	His-Ligation to the [4Fe-4S] Subcluster Tunes the Catalytic Bias of [FeFe] Hydrogenase. <i>Journal of the American Chemical Society</i> , 2019, 141, 472-481.	13.7	32

#	ARTICLE	IF	CITATIONS
19	A Combined Spectroscopic and Computational Study on the Mechanism of Iron-Catalyzed Aminofunctionalization of Olefins Using Hydroxylamine Derived N ⁺ O Reagent as the α -Amino α -Source and α -Oxidant. <i>Journal of the American Chemical Society</i> , 2022, 144, 2637-2656.	13.7	29
20	Spectroscopic and biochemical insight into an electron-bifurcating [FeFe] hydrogenase. <i>Journal of Biological Inorganic Chemistry</i> , 2020, 25, 135-149.	2.6	28
21	The mitochondrial-encoded subunits of respiratory complex I (NADH:ubiquinone oxidoreductase): identifying residues important in mechanism and disease. <i>Biochemical Society Transactions</i> , 2011, 39, 799-806.	3.4	27
22	A ternary mechanism for NADH oxidation by positively charged electron acceptors, catalyzed at the flavin site in respiratory complex I. <i>FEBS Letters</i> , 2011, 585, 2318-2322.	2.8	26
23	Divergent assembly mechanisms of the manganese/iron cofactors in R2lox and R2c proteins. <i>Journal of Inorganic Biochemistry</i> , 2016, 162, 164-177.	3.5	24
24	Importance of Hydrogen Bonding in Fine Tuning the [2Fe-2S] Cluster Redox Potential of HydC from <i>Thermotoga maritima</i> . <i>Biochemistry</i> , 2016, 55, 4344-4355.	2.5	23
25	Asymmetry in the Ligand Coordination Sphere of the [FeFe] Hydrogenase Active Site Is Reflected in the Magnetic Spin Interactions of the Aza-propanedithiolate Ligand. <i>Journal of Physical Chemistry Letters</i> , 2019, 10, 6794-6799.	4.6	22
26	Redox α Polymer α Based High α Current α Density Gas α Diffusion H ₂ α Oxidation Bioanode Using [FeFe] Hydrogenase from <i>Desulfovibrio desulfuricans</i> in a Membrane α Free Biofuel Cell. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 16506-16510.	13.8	21
27	Electrochemical Investigations on the Inactivation of the [FeFe] Hydrogenase from <i>Desulfovibrio desulfuricans</i> by O ₂ or Light under Hydrogen α Producing Conditions. <i>ChemPlusChem</i> , 2017, 82, 540-545.	2.8	20
28	Insight into the Redox Behavior of the [4Fe α 4S] Subcluster in [FeFe] Hydrogenases. <i>ACS Catalysis</i> , 2020, 10, 13084-13095.	11.2	20
29	The Nonphysiological Reductant Sodium Dithionite and [FeFe] Hydrogenase: Influence on the Enzyme Mechanism. <i>Journal of the American Chemical Society</i> , 2021, 143, 18159-18171.	13.7	18
30	Spectroscopic Evidence of Reversible Disassembly of the [FeFe] Hydrogenase Active Site. <i>Journal of Physical Chemistry Letters</i> , 2017, 8, 3834-3839.	4.6	15
31	Reactivation of sulfide-protected [FeFe] hydrogenase in a redox-active hydrogel. <i>Chemical Communications</i> , 2020, 56, 9958-9961.	4.1	12
32	Bioelectrocatalysis based on direct electron transfer of fungal pyrroloquinoline quinone-dependent dehydrogenase lacking the cytochrome domain. <i>Electrochimica Acta</i> , 2020, 359, 136982.	5.2	10
33	In Vivo Biogenesis of a De Novo Designed Iron α Sulfur Protein. <i>ACS Synthetic Biology</i> , 2020, 9, 3400-3407.	3.8	10
34	Viologen-modified electrodes for protection of hydrogenases from high potential inactivation while performing H ₂ oxidation at low overpotential. <i>Dalton Transactions</i> , 2018, 47, 10685-10691.	3.3	9
35	The Laser-Induced Potential Jump: A Method for Rapid Electron Injection into Oxidoreductase Enzymes. <i>Journal of Physical Chemistry B</i> , 2020, 124, 8750-8760.	2.6	8
36	Spin Polarization Reveals the Coordination Geometry of the [FeFe] Hydrogenase Active Site in Its CO-Inhibited State. <i>Journal of Physical Chemistry Letters</i> , 2020, 11, 4597-4602.	4.6	7

#	ARTICLE	IF	CITATIONS
37	Kristallstruktur und Spektroskopie offenbaren einen Schwefel-Liganden am aktiven Zentrum einer O ₂ -stabilen [FeFe]-Hydrogenase. <i>Angewandte Chemie</i> , 2020, 132, 16930.	2.0	6
38	The Asp1 pyrophosphatase from <i>S. pombe</i> hosts a [2Fe-2S] ₂ ⁺ cluster in vivo. <i>Journal of Biological Inorganic Chemistry</i> , 2021, 26, 93-108.	2.6	4
39	Vibrational Perturbation of the [FeFe] Hydrogenase H-Cluster Revealed by ¹³ C- ² H-ADT Labeling. <i>Journal of the American Chemical Society</i> , 2021, 143, 8237-8243.	13.7	4
40	Stability of the H-cluster under whole-cell conditions—formation of an H _{trans} -like state and its reactivity towards oxygen. <i>Journal of Biological Inorganic Chemistry</i> , 2022, 27, 345-355.	2.6	4
41	A Beginner's Guide to Thermodynamic Modelling of [FeFe] Hydrogenase. <i>Catalysts</i> , 2021, 11, 238.	3.5	2
42	Eine Redoxpolymer-basierte Gasdiffusions-H ₂ -Oxidationsbioanode mit hoher Stromdichte unter Verwendung von [FeFe]-Hydrogenase aus <i>Desulfovibrio desulfuricans</i> integriert in einer membranfreien Biobrennstoffzelle. <i>Angewandte Chemie</i> , 2020, 132, 16649.	2.0	2
43	Time-Resolved Infrared Spectroscopy Reveals the pH-Independence of the First Electron Transfer Step in the [FeFe] Hydrogenase Catalytic Cycle. <i>Journal of Physical Chemistry Letters</i> , 0, , 5986-5990.	4.6	2
44	Enhancing the catalytic current response of H ₂ oxidation gas diffusion bioelectrodes using an optimized viologen-based redox polymer and [NiFe] hydrogenase. <i>Electrochemical Science Advances</i> , 0, , e2100100.	2.8	1