Tianbiao Liu

List of Publications by Year
in descending order

92 papers	8,093 citations	46984 47 h-index	48277 88 g-index
107 all docs	107 docs citations	107 times ranked	5779 citing authors

#	ARTICLE	IF	CITATIONS
1	Long-Cycling Aqueous Organic Redox Flow Battery (AORFB) toward Sustainable and Safe Energy Storage. Journal of the American Chemical Society, 2017, 139, 1207-1214.	6.6	488
2	A Total Organic Aqueous Redox Flow Battery Employing a Low Cost and Sustainable Methyl Viologen Anolyte and 4â€HOâ€TEMPO Catholyte. Advanced Energy Materials, 2016, 6, 1501449.	10.2	480
3	TEMPOâ€Based Catholyte for Highâ€Energy Density Nonaqueous Redox Flow Batteries. Advanced Materials, 2014, 26, 7649-7653.	11.1	387
4	Status and Prospects of Organic Redox Flow Batteries toward Sustainable Energy Storage. ACS Energy Letters, 2019, 4, 2220-2240.	8.8	327
5	A Mixed-Valent, Fe(II)Fe(I), Diiron Complex Reproduces the Unique Rotated State of the [FeFe]Hydrogenase Active Site. Journal of the American Chemical Society, 2007, 129, 7008-7009.	6.6	284
6	Radical Compatibility with Nonaqueous Electrolytes and Its Impact on an Allâ€Organic Redox Flow Battery. Angewandte Chemie - International Edition, 2015, 54, 8684-8687.	7.2	271
7	Designer Two-Electron Storage Viologen Anolyte Materials for Neutral Aqueous Organic Redox Flow Batteries. CheM, 2017, 3, 961-978.	5.8	268
8	Highly Reversible Mg Insertion in Nanostructured Bi for Mg Ion Batteries. Nano Letters, 2014, 14, 255-260.	4.5	257
9	A Ï€â€Conjugation Extended Viologen as a Twoâ€Electron Storage Anolyte for Total Organic Aqueous Redox Flow Batteries. Angewandte Chemie - International Edition, 2018, 57, 231-235.	7.2	230
10	An iron complex with pendent amines as a molecular electrocatalyst for oxidation of hydrogen. Nature Chemistry, 2013, 5, 228-233.	6.6	218
11	Highly active nanostructured CoS2/CoS heterojunction electrocatalysts for aqueous polysulfide/iodide redox flow batteries. Nature Communications, 2019, 10, 3367.	5.8	212
12	Unraveling pH dependent cycling stability of ferricyanide/ferrocyanide in redox flow batteries. Nano Energy, 2017, 42, 215-221.	8.2	210
13	A Sulfonate-Functionalized Viologen Enabling Neutral Cation Exchange, Aqueous Organic Redox Flow Batteries toward Renewable Energy Storage. ACS Energy Letters, 2018, 3, 663-668.	8.8	209
14	A facile approach using MgCl2 to formulate high performance Mg2+ electrolytes for rechargeable Mg batteries. Journal of Materials Chemistry A, 2014, 2, 3430.	5.2	197
15	Unprecedented Capacity and Stability of Ammonium Ferrocyanide Catholyte in pH Neutral Aqueous Redox Flow Batteries. Joule, 2019, 3, 149-163.	11.7	184
16	A Ï€â€Conjugation Extended Viologen as a Twoâ€Electron Storage Anolyte for Total Organic Aqueous Redox Flow Batteries. Angewandte Chemie, 2018, 130, 237-241.	1.6	171
17	Coordination Chemistry in magnesium battery electrolytes: how ligands affect their performance. Scientific Reports, 2013, 3, 3130.	1.6	157
18	Improved radical stability of viologen anolytes in aqueous organic redox flow batteries. Chemical Communications, 2018, 54, 6871-6874.	2.2	140

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19	Electrolyzer Design for Flexible Decoupled Water Splitting and Organic Upgrading with Electron Reservoirs. CheM, 2018, 4, 637-649.	5.8	130
20	A pHâ€Neutral, Metalâ€Free Aqueous Organic Redox Flow Battery Employing an Ammonium Anthraquinone Anolyte. Angewandte Chemie - International Edition, 2019, 58, 16629-16636.	7.2	128
21	A Stable, Nonâ€Corrosive Perfluorinated Pinacolatoborate Mg Electrolyte for Rechargeable Mg Batteries. Angewandte Chemie - International Edition, 2019, 58, 6967-6971.	7.2	122
22	Nanocomposite polymer electrolyte for rechargeable magnesium batteries. Nano Energy, 2015, 12, 750-759.	8.2	121
23	Two Pathways for Electrocatalytic Oxidation of Hydrogen by a Nickel Bis(diphosphine) Complex with Pendant Amines in the Second Coordination Sphere. Journal of the American Chemical Society, 2013, 135, 9700-9712.	6.6	119
24	Synthesis of Carboxylic Acid-Modified [FeFe]-Hydrogenase Model Complexes Amenable to Surface Immobilization. Organometallics, 2007, 26, 3976-3984.	1.1	115
25	Electrochemical Dinitrogen Reduction to Ammonia by Mo₂N: Catalysis or Decomposition?. ACS Energy Letters, 2019, 4, 1053-1054.	8.8	114
26	Series of Mixed Valent Fe(II)Fe(I) Complexes That Model the H_{ox} State of [FeFe]Hydrogenase: Redox Properties, Density-Functional Theory Investigation, and Reactivities with Extrinsic CO. Inorganic Chemistry, 2008, 47, 7009-7024.	1.9	111
27	Heterolytic Cleavage of Hydrogen by an Iron Hydrogenase Model: An Feâ€Hâ‹…â‹…â‹…Hâ€N Dihydrogen Bond Characterized by Neutron Diffraction. Angewandte Chemie - International Edition, 2014, 53, 5300-5304.	7.2	102
28	Two electron utilization of methyl viologen anolyte in nonaqueous organic redox flow battery. Journal of Energy Chemistry, 2018, 27, 1326-1332.	7.1	98
29	Synthesis, Characterization, and Reactivity of Fe Complexes Containing Cyclic Diazadiphosphine Ligands: The Role of the Pendant Base in Heterolytic Cleavage of H₂. Journal of the American Chemical Society, 2012, 134, 6257-6272.	6.6	91
30	Tertiary Mg/MgCl₂/AlCl₃ Inorganic Mg²⁺ Electrolytes with Unprecedented Electrochemical Performance for Reversible Mg Deposition. ACS Energy Letters, 2017, 2, 1197-1202.	8.8	91
31	High-performance solar flow battery powered by a perovskite/silicon tandem solar cell. Nature Materials, 2020, 19, 1326-1331.	13.3	90
32	Synthesis, Structures and Electrochemical Properties of Nitro- and Amino-Functionalized Diiron Azadithiolates as Active Site Models of Fe-Only Hydrogenases. Chemistry - A European Journal, 2004, 10, 4474-4479.	1.7	83
33	Electrochemically stable cathode current collectors for rechargeable magnesium batteries. Journal of Materials Chemistry A, 2014, 2, 2473-2477.	5.2	77
34	Synthesis and MÃ¶ssbauer Characterization of Octahedral Iron(II) Carbonyl Complexes FeI₂(CO)₃L and FeI₂(CO)₂L₂: Developing Models of the [Fe]-H₂ase Active Site. Inorganic Chemistry, 2009, 48, 11283-11289.	1.9	75
35	Boosting the energy efficiency and power performance of neutral aqueous organic redox flowÂbatteries. Journal of Materials Chemistry A, 2017, 5, 22137-22145.	5.2	71
36	Sulfur Oxygenates of Biomimetics of the Diiron Subsite of the [FeFe]-Hydrogenase Active Site: Properties and Oxygen Damage Repair Possibilities. Journal of the American Chemical Society, 2009, 131, 8296-8307.	6.6	69

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37	Analysis of a Pentacoordinate Iron Dicarbonyl as Synthetic Analogue of the Hmd or Monoâ€Iron Hydrogenase Active Site. Chemistry - A European Journal, 2010, 16, 3083-3089.	1.7	69
38	A 1.51 V pH neutral redox flow battery towards scalable energy storage. Journal of Materials Chemistry A, 2019, 7, 9130-9136.	5.2	69
39	MgCl₂/AlCl₃electrolytes for reversible Mg deposition/stripping: electrochemical conditioning or not?. Journal of Materials Chemistry A, 2017, 5, 12718-12722.	5.2	67
40	Nickelâ€Catalyzed Electrochemical C(sp³)âˆ'C(sp²) Crossâ€Coupling Reactions of Benzyl Trifluoroborate and Organic Halides**. Angewandte Chemie - International Edition, 2021, 60, 6107-6116.	7.2	67
41	Cobalt Complexes Containing Pendant Amines in the Second Coordination Sphere as Electrocatalysts for H₂ Production. Organometallics, 2014, 33, 5820-5833.	1.1	66
42	A pHâ€Neutral, Metalâ€Free Aqueous Organic Redox Flow Battery Employing an Ammonium Anthraquinone Anolyte. Angewandte Chemie, 2019, 131, 16782-16789.	1.6	63
43	Redox active iron nitrosyl units in proton reduction electrocatalysis. Nature Communications, 2014, 5, 3684.	5.8	58
44	A fundamental study on the [(Î¼-Cl)₃Mg₂(THF)₆]⁺ dimer electrolytes for rechargeable Mg batteries. Chemical Communications, 2015, 51, 2312-2315.	2.2	53
45	Recent advances on MgCl2 based electrolytes for rechargeable Mg batteries. Energy Storage Materials, 2017, 8, 184-188.	9.5	52
46	CO-Migration in the Ligand Substitution Process of the Chelating Diphosphite Diiron Complex (Î¼-pdt)[Fe(CO)₃][Fe(CO){(EtO)₂PN(Me)P(OEt)₂}]. Inorganic Chemistry, 2008, 47, 6948-6955.	1.9	50
47	Iron Complexes for the Electrocatalytic Oxidation of Hydrogen: Tuning Primary and Secondary Coordination Spheres. ACS Catalysis, 2014, 4, 1246-1260.	5.5	47
48	Reversible Electrochemical Interface of Mg Metal and Conventional Electrolyte Enabled by Intermediate Adsorption. ACS Energy Letters, 2020, 5, 200-206.	8.8	44
49	Optimizing Calcium Electrolytes by Solvent Manipulation for Calcium Batteries. Batteries and Supercaps, 2020, 3, 766-772.	2.4	44
50	Electrocatalytic CO2 reduction catalyzed by nitrogenase MoFe and FeFe proteins. Bioelectrochemistry, 2018, 120, 104-109.	2.4	41
51	A Stable, Low Permeable TEMPO Catholyte for Aqueous Total Organic Redox Flow Batteries. Advanced Energy Materials, 2022, 12, .	10.2	40
52	Integrated Saltwater Desalination and Energy Storage through a pH Neutral Aqueous Organic Redox Flow Battery. Advanced Functional Materials, 2020, 30, 2000385.	7.8	39
53	A Self-Trapping, Bipolar Viologen Bromide Electrolyte for Redox Flow Batteries. ACS Energy Letters, 2021, 6, 2891-2897.	8.8	39
54	Preparation, structures and electrochemical property of phosphine substituted diiron azadithiolates relevant to the active site of Fe-only hydrogenases. Journal of Inorganic Biochemistry, 2007, 101, 506-513.	1.5	37

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55	Iron Complexes Bearing Diphosphine Ligands with Positioned Pendant Amines as Electrocatalysts for the Oxidation of H₂. Organometallics, 2015, 34, 2747-2764.	1.1	37
56	Conformational Dynamics and Proton Relay Positioning in Nickel Catalysts for Hydrogen Production and Oxidation. Organometallics, 2013, 32, 7034-7042.	1.1	36
57	Mechanistic insights of cycling stability of ferrocene catholytes in aqueous redox flow batteries. Energy and Environmental Science, 2022, 15, 1315-1324.	15.6	32
58	Metal-Free Electrocatalytic Aerobic Hydroxylation of Arylboronic Acids. Organic Letters, 2018, 20, 361-364.	2.4	29
59	A Stable, Nonâ€Corrosive Perfluorinated Pinacolatoborate Mg Electrolyte for Rechargeable Mg Batteries. Angewandte Chemie, 2019, 131, 7041-7045.	1.6	27
60	Dawn of Calcium Batteries. Angewandte Chemie - International Edition, 2020, 59, 3368-3370.	7.2	27
61	Regioselective 12CO/13CO exchange activity of a mixed-valent Fe(ii)Fe(i) model of the Hox state of [FeFe]-hydrogenase. Chemical Communications, 2008, , 1563.	2.2	26
62	Directing Protons to the Dioxygen Ligand of a Ruthenium(II) Complex with Pendent Amines in the Second Coordination Sphere. Angewandte Chemie - International Edition, 2011, 50, 10936-10939.	7.2	25
63	Mitigating Ringâ€Opening to Develop Stable TEMPO Catholytes for pHâ€Neutral Allâ€Organic Redox Flow Batteries. Advanced Functional Materials, 2022, 32, .	7.8	25
64	Influence of Sulf-Oxygenation on CO/L Substitution and Fe(CO)₃ Rotation in Thiolate-Bridged Diiron Complexes. Inorganic Chemistry, 2009, 48, 8393-8403.	1.9	24
65	<i>In Situ</i> Sulfurized Carbon-Confined Cobalt for Long-Life Mg/S Batteries. ACS Applied Energy Materials, 2020, 3, 2516-2525.	2.5	23
66	A robust ionic liquid magnesium electrolyte enabling Mg/S batteries. Journal of Materials Chemistry A, 2020, 8, 12301-12305.	5.2	21
67	An Energyâ€Dense, Powerful, Robust Bipolar Zincâ€“Ferrocene Redoxâ€Flow Battery. Angewandte Chemie - International Edition, 2022, 61, .	7.2	21
68	Facile Thermal Wâ€“W Bond Homolysis in the N-Heterocyclic Carbene Containing Tungsten Dimer [CpW(CO)₂(IMe)]₂. Organometallics, 2012, 31, 1775-1789.	1.1	20
69	Electrochemical oxidation of H₂ catalyzed by ruthenium hydride complexes bearing P₂N₂ ligands with pendant amines as proton relays. Energy and Environmental Science, 2014, 7, 3630-3639.	15.6	20
70	Progress and prospects of electrolyte chemistry of calcium batteries. Chemical Science, 2022, 13, 5797-5812.	3.7	18
71	An Efficient Viologen-Based Electron Donor to Nitrogenase. Biochemistry, 2019, 58, 4590-4595.	1.2	17
72	Nickelâ€Catalyzed Electrochemical C(sp 3)â^’C(sp 2) Crossâ€Coupling Reactions of Benzyl Trifluoroborate and Organic Halides**. Angewandte Chemie, 2021, 133, 6172-6181.	1.6	17

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73	Computational Insights into Mgâ€Cl Complex Electrolytes for Rechargeable Magnesium Batteries. Batteries and Supercaps, 2019, 2, 792-800.	2.4	16
74	Dinuclear Metalloradicals Featuring Unsupported Metalâ€“Metal Bonds. Angewandte Chemie - International Edition, 2012, 51, 8361-8364.	7.2	15
75	A Strategic High Yield Synthesis of 2,5-Dihydroxy-1,4-benzoquinone Based MOFs. Inorganic Chemistry, 2019, 58, 10756-10760.	1.9	15
76	Tanking up energy through atypical charging. Science, 2021, 372, 788-789.	6.0	15
77	Influence of the Density Functional and Basis Set on the Relative Stabilities of Oxygenated Isomers of Diiron Models for the Active Site of [FeFe]-Hydrogenase. Journal of Chemical Theory and Computation, 2015, 11, 205-214.	2.3	13
78	Evaluation of attractive interactions in the second coordination sphere of iron complexes containing pendant amines. Dalton Transactions, 2019, 48, 4867-4878.	1.6	12
79	Materials challenges of aqueous redox flow batteries. MRS Energy & Sustainability, 2022, 9, 1-12.	1.3	11
80	Multipleâ€Site Concerted Protonâ€“Electron Transfer in a Manganeseâ€Based Complete Functional Model for [FeFe]â€Hydrogenase. Angewandte Chemie - International Edition, 2021, 60, 25839-25845.	7.2	9
81	Tailoring electron transfer pathway for photocatalytic N₂-to-NH₃ reduction in a CdS quantum dots-nitrogenase system. Sustainable Energy and Fuels, 2022, 6, 2256-2263.	2.5	6
82	Chemistry and Electrochemical Performance of Mg Electrolytes for Rechargeable Mg Batteries: A Study of Mg Powder Scavenger. ECS Transactions, 2017, 80, 343-348.	0.3	5
83	Tandem Solar Flow Batteries for Conversion, Storage, and Utilization of Solar Energy. CheM, 2018, 4, 2488-2490.	5.8	5
84	Wiederaufladbare Calciumâ€Batterien. Angewandte Chemie, 2020, 132, 3392-3394.	1.6	4
85	Multipleâ€Site Concerted Protonâˆ'Electron Transfer in a Manganeseâ€Based Complete Functional Model for the [FeFe]â€Hydrogenase. Angewandte Chemie, 0, , .	1.6	2
86	A Stable, Low Permeable TEMPO Catholyte for Aqueous Total Organic Redox Flow Batteries (Adv.) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50	10.2	2
87	RÃ¼cktitelbild: A Stable, Nonâ€Corrosive Perfluorinated Pinacolatoborate Mg Electrolyte for Rechargeable Mg Batteries (Angew. Chem. 21/2019). Angewandte Chemie, 2019, 131, 7218-7218.	1.6	1
88	An Energyâ€Dense, Powerful, Robust Bipolar Zincâ€“Ferrocene Redoxâ€Flow Battery. Angewandte Chemie, 2022, 134, .	1.6	1
89	Synthesis, Structures and Electrochemical Properties of Nitro- and Amino-Functionalized Diiron Azadithiolates as Active Site Models of Fe-Only Hydrogenases. Chemistry - A European Journal, 2005, 11, 803-803.	1.7	0
90	Frontispiece: Heterolytic Cleavage of Hydrogen by an Iron Hydrogenase Model: An Fe-Hâ‹…â‹…â‹…H-N Dihydrogen Bond Characterized by Neutron Diffraction. Angewandte Chemie - International Edition, 2014, 53, n/a-n/a.	7.2	0

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91	InnenrÃ¼cktitelbild: A Ï€â€Conjugation Extended Viologen as a Twoâ€Electron Storage Anolyte for Total Organic Aqueous Redox Flow Batteries (Angew. Chem. 1/2018). Angewandte Chemie, 2018, 130, 365-365.	1.6	0
92	Research Progress of Magnesium Sulfur Batteries. , 2022, , 158-170.		0