Tao Gao

List of Publications by Year
in descending order

78 papers	16,869 citations	23500 58 h-index	69108 77 g-index
81 all docs	81 docs citations	81 times ranked	12306 citing authors

#	Article	IF	Citations
1	Nonaqueous Mg Flow Battery with a Polymer Catholyte. ACS Applied Energy Materials, 2022, 5, 2675-2678.	2.5	6
2	Mitigating irreversible capacity loss for higher-energy lithium batteries. Energy Storage Materials, 2022, 48, 44-73.	9.5	25
3	Acidâ€inâ€Clay Electrolyte for Wideâ€Temperatureâ€Range and Longâ€Cycle Proton Batteries. Advanced Materials, 2022, 34, e2202063.	11.1	16
4	Aqueous Electrolytes Reinforced by Mg and Ca Ions for Highly Reversible Fe Metal Batteries. ACS Central Science, 2022, 8, 729-740.	5.3	7
5	Self-Healable, Highly Stretchable, Ionic Conducting Polymers as Efficient Protecting Layers for Stable Lithium-Metal Electrodes. ACS Applied Materials & Interfaces, 2022, 14, 26014-26023.	4.0	23
6	Enhancing Liâ€Ion Transport in Solid Electrolytes by Confined Water. Small, 2022, 18, .	5.2	2
7	Enhancing the Charging Performance of Lithium-Ion Batteries by Reducing SEI and Charge Transfer Resistances. ACS Applied Materials & Interfaces, 2022, 14, 33004-33012.	4.0	12
8	Interplay of Lithium Intercalation and Plating on a Single Graphite Particle. Joule, 2021, 5, 393-414.	11.7	168
9	The Mechanism of Li Plating on Graphite Particles. ECS Meeting Abstracts, 2021, MA2021-01, 159-159.	0.0	0
10	End-of-life or second-life options for retired electric vehicle batteries. Cell Reports Physical Science, 2021, 2, 100537.	2.8	77
11	Lithium Deposition on Graphite and Silicon: Mechanism, Morphology and Reversibility. ECS Meeting Abstracts, 2021, MA2021-02, 378-378.	0.0	0
12	Operando probing ion and electron transport in porous electrodes. Nano Energy, 2020, 67, 104254.	8.2	13
13	Small-scale desalination of seawater by shock electrodialysis. Desalination, 2020, 476, 114219.	4.0	52
14	A chemically stabilized sulfur cathode for lean electrolyte lithium sulfur batteries. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 14712-14720.	3.3	102
15	Spatial dynamics of lithiation and lithium plating during high-rate operation of graphite electrodes. Energy and Environmental Science, 2020, 13, 2570-2584.	15.6	124
16	A scaling law to determine phase morphologies during ion intercalation. Energy and Environmental Science, 2020, 13, 2142-2152.	15.6	43
17	Modeling the Metalâ€"Insulator Phase Transition in Li_xCoO₂ for Energy and Information Storage. Advanced Functional Materials, 2019, 29, 1902821.	7.8	40
18	High-Energy-Density Rechargeable Mg Battery Enabled by a Displacement Reaction. Nano Letters, 2019, 19, 6665-6672.	4.5	59

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19	A Pyrazineâ€Based Polymer for Fastâ€Charge Batteries. Angewandte Chemie - International Edition, 2019, 58, 17820-17826.	7.2	173
20	A Pyrazineâ€Based Polymer for Fastâ€Charge Batteries. Angewandte Chemie, 2019, 131, 17984-17990.	1.6	19
21	Active control of viscous fingering using electric fields. Nature Communications, 2019, 10, 4002.	5.8	40
22	Tuning Anionic Chemistry To Improve Kinetics of Mg Intercalation. Chemistry of Materials, 2019, 31, 3183-3191.	3.2	91
23	Continuous Separation of Radionuclides from Contaminated Water by Shock Electrodialysis. Environmental Science & Technology, 2019, 54, 527-536.	4.6	39
24	Interphase Engineering Enabled All-Ceramic Lithium Battery. Joule, 2018, 2, 497-508.	11.7	378
25	Highly reversible zinc metal anode for aqueous batteries. Nature Materials, 2018, 17, 543-549.	13.3	2,080
26	Existence of Solid Electrolyte Interphase in Mg Batteries: Mg/S Chemistry as an Example. ACS Applied Materials & Interfaces, 2018, 10, 14767-14776.	4.0	99
27	Flexible ReS2 nanosheets/N-doped carbon nanofibers-based paper as a universal anode for alkali (Li, Na,) Tj ETQq1 1 0.784314 rgBT /Ove	8.2	280
28	A Universal Organic Cathode for Ultrafast Lithium and Multivalent Metal Batteries. Angewandte Chemie, 2018, 130, 7264-7268.	1.6	51
29	A Universal Organic Cathode for Ultrafast Lithium and Multivalent Metal Batteries. Angewandte Chemie - International Edition, 2018, 57, 7146-7150.	7.2	177
30	An artificial interphase enables reversible magnesium chemistry in carbonate electrolytes. Nature Chemistry, 2018, 10, 532-539.	6.6	347
31	Intercalation of Bi nanoparticles into graphite results in an ultra-fast and ultra-stable anode material for sodium-ion batteries. Energy and Environmental Science, 2018, 11, 1218-1225.	15.6	212
32	Hybrid Aqueous/Non-aqueous Electrolyte for Safe and High-Energy Li-Ion Batteries. Joule, 2018, 2, 927-937.	11.7	303
33	Reducing Mg Anode Overpotential via Ion Conductive Surface Layer Formation by Iodine Additive. Advanced Energy Materials, 2018, 8, 1701728.	10.2	107
34	Thermodynamics and Kinetics of Sulfur Cathode during Discharge in MgTFSI₂â€"DME Electrolyte. Advanced Materials, 2018, 30, 1704313.	11.1	122
35	A critical review of cathodes for rechargeable Mg batteries. Chemical Society Reviews, 2018, 47, 8804-8841.	18.7	420
36	A rechargeable aqueous Zn²⁺-battery with high power density and a long cycle-life. Energy and Environmental Science, 2018, 11, 3168-3175.	15.6	258

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37	How Water Accelerates Bivalent Ion Diffusion at the Electrolyte/Electrode Interface. Angewandte Chemie - International Edition, 2018, 57, 11978-11981.	7.2	123
38	How Water Accelerates Bivalent Ion Diffusion at the Electrolyte/Electrode Interface. Angewandte Chemie, 2018, 130, 12154-12157.	1.6	17
39	High energy-density and reversibility of iron fluoride cathode enabled via an intercalation-extrusion reaction. Nature Communications, 2018, 9, 2324.	5.8	136
40	High power rechargeable magnesium/iodine battery chemistry. Nature Communications, 2017, 8, 14083.	5.8	251
41	Superior reversible tin phosphide-carbon spheres for sodium ion battery anode. Nano Energy, 2017, 38, 350-357.	8.2	122
42	Unique aqueous Li-ion/sulfur chemistry with high energy density and reversibility. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 6197-6202.	3.3	151
43	Electrochemical Techniques for Intercalation Electrode Materials in Rechargeable Batteries. Accounts of Chemical Research, 2017, 50, 1022-1031.	7.6	105
44	Spinel LiNi_{0.5}Mn_{1.5}O₄ Cathode for Highâ€Energy Aqueous Lithiumâ€Ion Batteries. Advanced Energy Materials, 2017, 7, 1600922.	10.2	103
45	High-Voltage Aqueous Magnesium Ion Batteries. ACS Central Science, 2017, 3, 1121-1128.	5.3	256
46	Self-Healing Chemistry between Organic Material and Binder for Stable Sodium-Ion Batteries. CheM, 2017, 3, 1050-1062.	5.8	99
47	Flexible Aqueous Liâ€Ion Battery with High Energy and Power Densities. Advanced Materials, 2017, 29, 1701972.	11.1	175
48	Reversible S⁰/MgS_{<i>x</i>} Redox Chemistry in a MgTFSI₂/MgCl₂/DME Electrolyte for Rechargeable Mg/S Batteries. Angewandte Chemie - International Edition, 2017, 56, 13526-13530.	7.2	149
49	Reversible S⁰/MgS_{<i>x</i>} Redox Chemistry in a MgTFSI₂/MgCl₂/DME Electrolyte for Rechargeable Mg/S Batteries. Angewandte Chemie, 2017, 129, 13711-13715.	1.6	58
50	Reverse Microemulsion Synthesis of Sulfur/Graphene Composite for Lithium/Sulfur Batteries. ACS Nano, 2017, 11, 9048-9056.	7.3	73
51	â€œWater-in-Saltâ€• electrolyte enabled LiMn2O4/TiS2 Lithium-ion batteries. Electrochemistry Communications, 2017, 82, 71-74.	2.3	99
52	How Solid-Electrolyte Interphase Forms in Aqueous Electrolytes. Journal of the American Chemical Society, 2017, 139, 18670-18680.	6.6	365
53	Zn/MnO₂ Battery Chemistry With H⁺ and Zn²⁺ Coinsertion. Journal of the American Chemical Society, 2017, 139, 9775-9778.	6.6	1,375
54	Advanced Highâ€Voltage Aqueous Lithiumâ€Ion Battery Enabled by â€œWaterâ€inâ€Bisaltâ€• Electrolyte. Angewandte Chemie, 2016, 128, 7252-7257.	1.6	459

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55	Pomegranate-Structured Conversion-Reaction Cathode with a Built-in Li Source for High-Energy Li-Ion Batteries. ACS Nano, 2016, 10, 5567-5577.	7.3	88
56	Tailoring Surface Acidity of Metal Oxide for Better Polysulfide Entrapment in Liâ€S Batteries. Advanced Functional Materials, 2016, 26, 7164-7169.	7.8	95
57	A Rechargeable Al/S Battery with an Ionicâ€Liquid Electrolyte. Angewandte Chemie, 2016, 128, 10052-10055.	1.6	64
58	A Rechargeable Al/S Battery with an Ionicâ€Liquid Electrolyte. Angewandte Chemie - International Edition, 2016, 55, 9898-9901.	7.2	215
59	Stabilizing high sulfur loading Liâ€"S batteries by chemisorption of polysulfide on three-dimensional current collector. Nano Energy, 2016, 30, 700-708.	8.2	90
60	Stabilizing high voltage LiCoO₂ cathode in aqueous electrolyte with interphase-forming additive. Energy and Environmental Science, 2016, 9, 3666-3673.	15.6	190
61	Activation of Oxygenâ€Stabilized Sulfur for Li and Na Batteries. Advanced Functional Materials, 2016, 26, 745-752.	7.8	80
62	Advanced Highâ€Voltage Aqueous Lithiumâ€Ion Battery Enabled by â€œWaterâ€inâ€Bisaltâ€• Electrolyte. Angewandte Chemie - International Edition, 2016, 55, 7136-7141.	7.2	571
63	High-Performance All-Solid-State Lithiumâ€"Sulfur Battery Enabled by a Mixed-Conductive Li₂S Nanocomposite. Nano Letters, 2016, 16, 4521-4527.	4.5	333
64	In situ lithiated FeF3/C nanocomposite as high energy conversion-reaction cathode for lithium-ion batteries. Journal of Power Sources, 2016, 307, 435-442.	4.0	64
65	Electrospun FeS₂@Carbon Fiber Electrode as a High Energy Density Cathode for Rechargeable Lithium Batteries. ACS Nano, 2016, 10, 1529-1538.	7.3	199
66	Superior Stable Selfâ€Healing SnP₃ Anode for Sodiumâ€Ion Batteries. Advanced Energy Materials, 2015, 5, 1500174.	10.2	197
67	Solid-State Fabrication of SnS₂/C Nanospheres for High-Performance Sodium Ion Battery Anode. ACS Applied Materials & Interfaces, 2015, 7, 11476-11481.	4.0	176
68	Sodium-Ion Batteries: An Advanced MoS₂/Carbon Anode for High-Performance Sodium-Ion Batteries (Small 4/2015). Small, 2015, 11, 472-472.	5.2	11
69	Red Phosphorusâ€"Single-Walled Carbon Nanotube Composite as a Superior Anode for Sodium Ion Batteries. ACS Nano, 2015, 9, 3254-3264.	7.3	359
70	Carbon cage encapsulating nano-cluster Li2S by ionic liquid polymerization and pyrolysis for high performance Liâ€"S batteries. Nano Energy, 2015, 13, 467-473.	8.2	76
71	A Battery Made from a Single Material. Advanced Materials, 2015, 27, 3473-3483.	11.1	291
72	Ether-based electrolyte enabled Na/FeS2 rechargeable batteries. Electrochemistry Communications, 2015, 54, 18-22.	2.3	121

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73	Scalable synthesis of Na₃V₂(PO₄)₃/C porous hollow spheres as a cathode for Na-ion batteries. Journal of Materials Chemistry A, 2015, 3, 10378-10385.	5.2	109
74	Enhancing the Reversibility of Mg/S Battery Chemistry through Li⁺ Mediation. Journal of the American Chemical Society, 2015, 137, 12388-12393.	6.6	225
75	â€œWater-in-saltâ€•electrolyte enables high-voltage aqueous lithium-ion chemistries. Science, 2015, 350, 938-943.	6.0	2,553
76	Hybrid Mg²⁺/Li⁺ Battery with Long Cycle Life and High Rate Capability. Advanced Energy Materials, 2015, 5, 1401507.	10.2	155
77	An Advanced MoS₂/Carbon Anode for High-Performance Sodium-Ion Batteries. Small, 2015, 11, 473-481.	5.2	390
78	Graphene oxide wrapped croconic acid disodium salt for sodium ion battery electrodes. Journal of Power Sources, 2014, 250, 372-378.	4.0	134