Zhenpeng Yao

List of Publications by Year
in descending order

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56 papers	3,514 citations	185998 28 h-index	174990 52 g-index
65 all docs	65 docs citations	65 times ranked	4076 citing authors

#	Article	IF	Citations
1	Rational design of layered oxide materials for sodium-ion batteries. Science, 2020, 370, 708-711.	6.0	616
2	Interface chemistry of an amide electrolyte for highly reversible lithium metal batteries. Nature Communications, 2020, 11, 4188.	5.8	226
3	Revealing High Na-Content P2-Type Layered Oxides as Advanced Sodium-Ion Cathodes. Journal of the American Chemical Society, 2020, 142, 5742-5750.	6.6	206
4	Inverse design of nanoporous crystalline reticular materials with deep generative models. Nature Machine Intelligence, 2021, 3, 76-86.	8.3	172
5	Machine learning the quantum-chemical properties of metalâ€“organic frameworks for accelerated materials discovery. Matter, 2021, 4, 1578-1597.	5.0	170
6	Data-Driven Strategies for Accelerated Materials Design. Accounts of Chemical Research, 2021, 54, 849-860.	7.6	168
7	Electrochemistry of Selenium with Sodium and Lithium: Kinetics and Reaction Mechanism. ACS Nano, 2016, 10, 8788-8795.	7.3	155
8	Intermediate phases in sodium intercalation into MoS2 nanosheets and their implications for sodium-ion batteries. Nano Energy, 2017, 38, 342-349.	8.2	151
9	Enabling the high capacity of lithium-rich anti-fluorite lithium iron oxide by simultaneous anionic and cationic redox. Nature Energy, 2017, 2, 963-971.	19.8	140
10	Identification Schemes for Metalâ€“Organic Frameworks To Enable Rapid Search and Cheminformatics Analysis. Crystal Growth and Design, 2019, 19, 6682-6697.	1.4	123
11	Niobium-doped layered cathode material for high-power and low-temperature sodium-ion batteries. Nature Communications, 2022, 13, .	5.8	85
12	Self-Optimized Metalâ€“Organic Framework Electrocatalysts with Structural Stability and High Current Tolerance for Water Oxidation. ACS Catalysis, 2021, 11, 7132-7143.	5.5	77
13	Ti Substitution Facilitating Oxygen Oxidation in Na2/3Mg1/3Ti1/6Mn1/2O2 Cathode. CheM, 2019, 5, 2913-2925.	5.8	75
14	Direct Observation of Defectâ€Aided Structural Evolution in a Nickelâ€Rich Layered Cathode. Angewandte Chemie - International Edition, 2020, 59, 22092-22099.	7.2	75
15	In Situ Atomicâ€Scale Observation of Reversible Potassium Storage in Sb₂S₃@Carbon Nanowire Anodes. Advanced Functional Materials, 2020, 30, 2005417.	7.8	75
16	Dynamic imaging of crystalline defects in lithium-manganese oxide electrodes during electrochemical activation to high voltage. Nature Communications, 2019, 10, 1692.	5.8	68
17	Kinetically-Driven Phase Transformation during Lithiation in Copper Sulfide Nanoflakes. Nano Letters, 2017, 17, 5726-5733.	4.5	67
18	Discovery of Calciumâ€Metal Alloy Anodes for Reversible Caâ€Ion Batteries. Advanced Energy Materials, 2019, 9, 1802994.	10.2	61

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19	Revealing the Conversion Mechanism of Transition Metal Oxide Electrodes during Lithiation from First-Principles. Chemistry of Materials, 2017, 29, 9011-9022.	3.2	60
20	Interplay of cation and anion redox in Li ₄ Mn ₂ O ₅ cathode material and prediction of improved Li ₄ (Mn,M) ₂ O ₅ electrodes for Li-ion batteries. Science Advances, 2018, 4, eaao6754.	4.7	58
21	Theory-guided experimental design in battery materials research. Science Advances, 2022, 8, eabm2422.	4.7	52
22	Multistep Lithiation of Tin Sulfide: An Investigation Using in Situ Electron Microscopy. ACS Nano, 2018, 12, 3638-3645.	7.3	50
23	Strain-Induced Metastable Phase Stabilization in Ga₂O₃ Thin Films. ACS Applied Materials & Interfaces, 2019, 11, 5536-5543.	4.0	42
24	Atomicâ€Scale Observation of Electrochemically Reversible Phase Transformations in SnSe₂ Single Crystals. Advanced Materials, 2018, 30, e1804925.	11.1	38
25	A high-performance anode material based on FeMnO3/graphene composite. Journal of Alloys and Compounds, 2017, 695, 1223-1230.	2.8	34
26	Unblocking Oxygen Charge Compensation for Stabilized Highâ€Voltage Structure in P2â€Type Sodiumâ€Ion Cathode. Advanced Science, 2022, 9, e2200498.	5.6	32
27	First-Principles Study of Lithium Cobalt Spinel Oxides: Correlating Structure and Electrochemistry. ACS Applied Materials & Interfaces, 2018, 10, 13479-13490.	4.0	31
28	In Situ Electron Microscopy Investigation of Sodiation of Titanium Disulfide Nanoflakes. ACS Nano, 2019, 13, 9421-9430.	7.3	30
29	Origin of Fractureâ€Resistance to Large Volume Change in Cuâ€Substituted Co₃O₄ Electrodes. Advanced Materials, 2018, 30, 1704851.	11.1	29
30	Revealing the Effects of Electrode Crystallographic Orientation on Battery Electrochemistry via the Anisotropic Lithiation and Sodiation of ReS₂. ACS Nano, 2018, 12, 7875-7882.	7.3	28
31	Constructing Naâ€Ion Cathodes via Alkaliâ€Site Substitution. Advanced Functional Materials, 2020, 30, 1910840.	7.8	28
32	Probing Electrochemically Induced Structural Evolution and Oxygen Redox Reactions in Layered Lithium Iridate. Chemistry of Materials, 2019, 31, 4341-4352.	3.2	26
33	Dynamic imaging of metastable reaction pathways in lithiated cobalt oxide electrodes. Nano Energy, 2018, 44, 15-22.	8.2	24
34	In Situ, Atomicâ€Resolution Observation of Lithiation and Sodiation of WS₂ Nanoflakes: Implications for Lithiumâ€Ion and Sodiumâ€Ion Batteries. Small, 2021, 17, e2100637.	5.2	22
35	Artificial Neuron Networks Enabled Identification and Characterizations of 2D Materials and van der Waals Heterostructures. ACS Nano, 2022, 16, 2721-2729.	7.3	22
36	Expanded lithiation of titanium disulfide: Reaction kinetics of multi-step conversion reaction. Nano Energy, 2019, 63, 103882.	8.2	21

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37	Computational Discovery of Stable Heteroanionic Oxychalcogenides ABXO (A, B = Metals; X = S, Se, and) Tj ETQq1 1 0.784314 rgBT /O	3.2	21
38	Frank-van der Merwe growth in bilayer graphene. Matter, 2021, 4, 3339-3353.	5.0	20
39	Direct Observation of Defectâ€Aided Structural Evolution in a Nickelâ€Rich Layered Cathode. Angewandte Chemie, 2020, 132, 22276-22283.	1.6	15
40	Stability and conductivity of cation- and anion-substituted <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>LiBH</mml:mi><mml:mn>4</mml:mn></mml:msub></mml:math> -based solid-state electrolytes. Physical Review Materials, 2018, 2, .	0.9	15
41	All roads lead to Rome: Sodiation of different-stacked SnS2. Nano Energy, 2020, 67, 104276.	8.2	14
42	On the irreversible sodiation of tin disulfide. Nano Energy, 2021, 79, 105458.	8.2	14
43	Quaternary Pavonites A_{1+x}Sn_{2â€“x}Bi_{5+x}S₁₀ (A⁺ = Li⁺, Na⁺): Site Occupancy Disorder Defines Electronic Structure. Inorganic Chemistry, 2018, 57, 2260-2268.	1.9	12
44	Cubine, a Quasi Two-Dimensional Copperâ€“Bismuth Nanosheet. Chemistry of Materials, 2017, 29, 9819-9828.	3.2	11
45	Stable bismuth-antimony alloy cathode with a conversion-dissolution/deposition mechanism for high-performance zinc batteries. Materials Today, 2021, 51, 87-95.	8.3	10
46	Exploring the Origin of Anionic Redox Activity in Super Li-Rich Iron Oxide-Based High-Energy-Density Cathode Materials. Chemistry of Materials, 2022, 34, 4536-4547.	3.2	10
47	Accelerated discovery of boron-dipyrromethene sensitizer for solar cells by integrating data mining and first principle. Journal of Materiomics, 2021, 7, 790-801.	2.8	7
48	Fast and extensive intercalation chemistry in Wadsley-Roth phase based high-capacity electrodes. Journal of Energy Chemistry, 2022, 69, 601-611.	7.1	6
49	Toward MXene interconnects. Matter, 2021, 4, 1447-1449.	5.0	5
50	Kinetics of Sodium and Selenium Reactions in Sodium Ion Batteries. Microscopy and Microanalysis, 2016, 22, 826-829.	0.2	4
51	Lithium-Ion Batteries: Atomic-Scale Observation of Electrochemically Reversible Phase Transformations in SnSe2 Single Crystals (Adv. Mater. 51/2018). Advanced Materials, 2018, 30, 1870393.	11.1	4
52	Anisotropic Lithiation and Sodiation of ReS2 Studied by In-situ TEM. Microscopy and Microanalysis, 2018, 24, 1570-1571.	0.2	2
53	Atomic-resolution in-situ TEM Studies of Lithium Electrochemistry in Co3O4-Carbon Nanotube Nanocomposite. Microscopy and Microanalysis, 2016, 22, 762-763.	0.2	0
54	In-situ Electron Diffraction Studies of Sodium Electrochemistry in MoS2. Microscopy and Microanalysis, 2017, 23, 2050-2051.	0.2	0

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55	In-situ Investigation of Multi-Step Lithiation of Tin Sulfide. Microscopy and Microanalysis, 2018, 24, 1864-1865.	0.2	0
56	Lithium/Sodiumâ€Ion Batteries: In Situ, Atomicâ€Resolution Observation of Lithiation and Sodiation of WS₂ Nanoflakes: Implications for Lithiumâ€Ion and Sodiumâ€Ion Batteries (Small 24/2021). Small, 2021, 17, 2170120.	5.2	0