Enyuan Hu

List of Publications by Year
in descending order

109 papers	12,587 citations	31976 53 h-index	26613 107 g-index
115 all docs	115 docs citations	115 times ranked	10357 citing authors

#	Article	IF	Citations
1	Few-Atom Copper Catalyst for the Electrochemical Reduction of CO to Acetate: Synergetic Catalysis between Neighboring Cu Atoms. CCS Chemistry, 2023, 5, 1176-1188.	7.8	13
2	Engineering and characterization of interphases for lithium metal anodes. Chemical Science, 2022, 13, 1547-1568.	7.4	17
3	Mechanistic Insights into the Interplay between Ion Intercalation and Water Electrolysis in Aqueous Batteries. ACS Applied Materials & Interfaces, 2022, 14, 12130-12139.	8.0	1
4	Lowâ€Valence Metal Single Atoms on Graphdiyne Promotes Electrochemical Nitrogen Reduction via Mâ€toâ€N₂ Ï€â€Backdonation. Advanced Functional Materials, 2022, 32, .	14.9	38
5	Isoxazole-Based Electrolytes for Lithium Metal Protection and Lithium-Sulfurized Polyacrylonitrile (SPAN) Battery Operating at Low Temperature. Journal of the Electrochemical Society, 2022, 169, 030513.	2.9	4
6	Additive engineering for robust interphases to stabilize high-Ni layered structures at ultra-high voltage of 4.8â€‰V. Nature Energy, 2022, 7, 484-494.	39.5	138
7	Characterization of the structure and chemistry of the solidâ€“electrolyte interface by cryo-EM leads to high-performance solid-state Li-metal batteries. Nature Nanotechnology, 2022, 17, 768-776.	31.5	75
8	The Role of Electron Localization in Covalency and Electrochemical Properties of Lithiumâ€Ion Battery Cathode Materials. Advanced Functional Materials, 2021, 31, 2001633.	14.9	21
9	Mesoscale-architecture-based crack evolution dictating cycling stability of advanced lithium ion batteries. Nano Energy, 2021, 79, 105420.	16.0	36
10	Identification of LiH and nanocrystalline LiF in the solidâ€“electrolyte interphase of lithium metal anodes. Nature Nanotechnology, 2021, 16, 549-554.	31.5	171
11	Tuning Sodium Occupancy Sites in P2â€Layered Cathode Material for Enhancing Electrochemical Performance. Advanced Energy Materials, 2021, 11, 2003455.	19.5	46
12	A Replacement Reaction Enabled Interdigitated Metal/Solid Electrolyte Architecture for Battery Cycling at 20 mA cm^{â€“2} and 20 mAh cm^{â€“2}. Journal of the American Chemical Society, 2021, 143, 3143-3152.	13.7	132
13	Oxygen-redox reactions in LiCoO2 cathode without Oâ€“O bonding during charge-discharge. Joule, 2021, 5, 720-736.	24.0	56
14	Vacancyâ€Enabled O3 Phase Stabilization for Manganeseâ€Rich Layered Sodium Cathodes. Angewandte Chemie - International Edition, 2021, 60, 8258-8267.	13.8	59
15	Vacancyâ€Enabled O3 Phase Stabilization for Manganeseâ€Rich Layered Sodium Cathodes. Angewandte Chemie, 2021, 133, 8339-8348.	2.0	14
16	Novel Low-Temperature Electrolyte Using Isoxazole as the Main Solvent for Lithium-Ion Batteries. ACS Applied Materials & Interfaces, 2021, 13, 24995-25001.	8.0	38
17	Fluorinated interphase enables reversible aqueous zinc battery chemistries. Nature Nanotechnology, 2021, 16, 902-910.	31.5	560
18	Highly Reversible Aqueous Zinc Batteries enabled by Zincophilicâ€“Zincophobic Interfacial Layers and Interrupted Hydrogenâ€Bond Electrolytes. Angewandte Chemie - International Edition, 2021, 60, 18845-18851.	13.8	150

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19	Understanding the Roles of the Electrode/Electrolyte Interface for Enabling Stable Liâˆ¥Sulfurized Polyacrylonitrile Batteries. ACS Applied Materials & Interfaces, 2021, 13, 31733-31740.	8.0	25
20	Highly Reversible Aqueous Zinc Batteries enabled by Zincophilicâ€"Zincophobic Interfacial Layers and Interrupted Hydrogenâ€Bond Electrolytes. Angewandte Chemie, 2021, 133, 18993-18999.	2.0	11
21	Improved Low Temperature Performance of Graphite/Li Cells Using Isoxazole as a Novel Cosolvent in Electrolytes. Journal of the Electrochemical Society, 2021, 168, 070527.	2.9	25
22	Reversible dual anionic-redox chemistry in NaCrSSe with fast charging capability. Journal of Power Sources, 2021, 502, 230022.	7.8	5
23	Fundamental Linkage Between Structure, Electrochemical Properties, and Chemical Compositions of LiNi_{1â€"<i>x</i>â€"<i>y</i>}Mn<i>_x</i>Co<i>_y</i>O₂ Cathode Materials. ACS Applied Materials & Interfaces, 2021, 13, 2622-2629.	8.0	19
24	Prelithiated Li-Enriched Gradient Interphase toward Practical High-Energy NMCâ€"Silicon Full Cell. ACS Energy Letters, 2021, 6, 320-328.	17.4	50
25	Anionic redox induced anomalous structural transition in Ni-rich cathodes. Energy and Environmental Science, 2021, 14, 6441-6454.	30.8	33
26	Quantifying and Suppressing Proton Intercalation to Enable Highâ€Voltage Znâ€Ion Batteries. Advanced Energy Materials, 2021, 11, 2102016.	19.5	48
27	A new carbon-incorporated lithium phosphate solid electrolyte. Journal of Power Sources, 2021, 514, 230603.	7.8	13
28	Oxygen redox chemistry in P2-Na_{0.6}Li_{0.11}Fe_{0.27}Mn_{0.62}O₂ cathode for high-energy Na-ion batteries. Journal of Materials Chemistry A, 2021, 9, 27651-27659.	10.3	16
29	Sodium storage property and mechanism of NaCr1/4Fe1/4Ni1/4Ti1/4O2 cathode at various cut-off voltages. Energy Storage Materials, 2020, 24, 417-425.	18.0	25
30	Local structure adaptability through multi cations for oxygen redox accommodation in Li-Rich layered oxides. Energy Storage Materials, 2020, 24, 384-393.	18.0	101
31	A Redoxâ€Active 2D Metalâ€"Organic Framework for Efficient Lithium Storage with Extraordinary High Capacity. Angewandte Chemie, 2020, 132, 5311-5315.	2.0	34
32	A Redoxâ€Active 2D Metalâ€"Organic Framework for Efficient Lithium Storage with Extraordinary High Capacity. Angewandte Chemie - International Edition, 2020, 59, 5273-5277.	13.8	189
33	Pair distribution function analysis: Fundamentals and application to battery materials. Chinese Physics B, 2020, 29, 028802.	1.4	23
34	Toward Higher Voltage Solidâ€State Batteries by Metastability and Kinetic Stability Design. Advanced Energy Materials, 2020, 10, 2001569.	19.5	36
35	Solvation Structure Design for Aqueous Zn Metal Batteries. Journal of the American Chemical Society, 2020, 142, 21404-21409.	13.7	680
36	Reversible planar gliding and microcracking in a single-crystalline Ni-rich cathode. Science, 2020, 370, 1313-1317.	12.6	472

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37	Depth-dependent valence stratification driven by oxygen redox in lithium-rich layered oxide. Nature Communications, 2020, 11, 6342.	12.8	34
38	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.	7.1	102
39	Titelbild: A Redoxâ€Active 2D Metalâ€“Organic Framework for Efficient Lithium Storage with Extraordinary High Capacity (Angew. Chem. 13/2020). Angewandte Chemie, 2020, 132, 5005-5005.	2.0	0
40	Controlling Surface Phase Transition and Chemical Reactivity of O3-Layered Metal Oxide Cathodes for High-Performance Na-Ion Batteries. ACS Energy Letters, 2020, 5, 1718-1725.	17.4	64
41	Structure and Interface Design Enable Stable Li-Rich Cathode. Journal of the American Chemical Society, 2020, 142, 8918-8927.	13.7	151
42	Atomically Dispersed Nickel(I) on an Alloyâ€Encapsulated Nitrogenâ€Doped Carbon Nanotube Array for Highâ€Performance Electrochemical CO₂ Reduction Reaction. Angewandte Chemie, 2020, 132, 12153-12159.	2.0	27
43	Atomically Dispersed Nickel(I) on an Alloyâ€Encapsulated Nitrogenâ€Doped Carbon Nanotube Array for Highâ€Performance Electrochemical CO₂ Reduction Reaction. Angewandte Chemie - International Edition, 2020, 59, 12055-12061.	13.8	117
44	Expanded lithiation of titanium disulfide: Reaction kinetics of multi-step conversion reaction. Nano Energy, 2019, 63, 103882.	16.0	21
45	Surface-to-Bulk Redox Coupling through Thermally Driven Li Redistribution in Li- and Mn-Rich Layered Cathode Materials. Journal of the American Chemical Society, 2019, 141, 12079-12086.	13.7	47
46	Unified View of the Local Cation-Ordered State in Inverse Spinel Oxides. Inorganic Chemistry, 2019, 58, 14389-14402.	4.0	21
47	Designing In-Situ-Formed Interphases Enables Highly Reversible Cobalt-Free LiNiO2 Cathode for Li-ion and Li-metal Batteries. Joule, 2019, 3, 2550-2564.	24.0	167
48	A novel P3-type Na_{2/3}Mg_{1/3}Mn_{2/3}O₂ as high capacity sodium-ion cathode using reversible oxygen redox. Journal of Materials Chemistry A, 2019, 7, 1491-1498.	10.3	122
49	Trace doping of multiple elements enables stable battery cycling of LiCoO2 at 4.6â€‰V. Nature Energy, 2019, 4, 594-603.	39.5	572
50	Activating Layered Double Hydroxide with Multivacancies by Memory Effect for Energy-Efficient Hydrogen Production at Neutral pH. ACS Energy Letters, 2019, 4, 1412-1418.	17.4	115
51	Understanding the Low-Voltage Hysteresis of Anionic Redox in Na₂Mn₃O₇. Chemistry of Materials, 2019, 31, 3756-3765.	6.7	112
52	Highâ€Voltage Chargingâ€Induced Strain, Heterogeneity, and Microâ€Cracks in Secondary Particles of a Nickelâ€Rich Layered Cathode Material. Advanced Functional Materials, 2019, 29, 1900247.	14.9	219
53	Achieving High Energy Density through Increasing the Output Voltage: A Highly Reversible 5.3Â V Battery. CheM, 2019, 5, 896-912.	11.7	145
54	Anomalous metal segregation in lithium-rich material provides design rules for stable cathode in lithium-ion battery. Nature Communications, 2019, 10, 1650.	12.8	60

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55	Synthesis and Characterization of a Molecularly Designed Highâ€Performance Organodisulfide as Cathode Material for Lithium Batteries. Advanced Energy Materials, 2019, 9, 1900705.	19.5	34
56	Anionic Redox Reaction-Induced High-Capacity and Low-Strain Cathode with Suppressed Phase Transition. Joule, 2019, 3, 612.	24.0	3
57	Modification of CO₂ Reduction Activity of Nanostructured Silver Electrocatalysts by Surface Halide Anions. ACS Applied Energy Materials, 2019, 2, 102-109.	5.1	46
58	Anionic Redox Reaction-Induced High-Capacity and Low-Strain Cathode with Suppressed Phase Transition. Joule, 2019, 3, 503-517.	24.0	262
59	Advanced Characterization Techniques for Sodiumâ€Ion Battery Studies. Advanced Energy Materials, 2018, 8, 1702588.	19.5	122
60	Another Strategy, Detouring Potential Decay by Fast Completion of Cation Mixing. Advanced Energy Materials, 2018, 8, 1703092.	19.5	30
61	Probing the Complexities of Structural Changes in Layered Oxide Cathode Materials for Li-Ion Batteries during Fast Chargeâ€“Discharge Cycling and Heating. Accounts of Chemical Research, 2018, 51, 290-298.	15.6	78
62	Layered double hydroxides with atomic-scale defects for superior electrocatalysis. Nano Research, 2018, 11, 4524-4534.	10.4	130
63	Structure-Induced Reversible Anionic Redox Activity in Na Layered Oxide Cathode. Joule, 2018, 2, 125-140.	24.0	311
64	Singleâ€Crystalline Ultrathin Co₃O₄ Nanosheets with Massive Vacancy Defects for Enhanced Electrocatalysis. Advanced Energy Materials, 2018, 8, 1701694.	19.5	451
65	Synchrotron Radiation Nanoscale X-ray Imaging Technology And Scientific Big Data Mining Assist Energy Materials Research. Microscopy and Microanalysis, 2018, 24, 542-543.	0.4	0
66	A rechargeable aqueous Zn²⁺-battery with high power density and a long cycle-life. Energy and Environmental Science, 2018, 11, 3168-3175.	30.8	258
67	Suppressing the voltage decay of low-cost P2-type iron-based cathode materials for sodium-ion batteries. Journal of Materials Chemistry A, 2018, 6, 20795-20803.	10.3	54
68	Rejuvenating zinc batteries. Nature Materials, 2018, 17, 480-481.	27.5	88
69	Large-Scale Synthesis and Comprehensive Structure Study of Î´-MnO₂. Inorganic Chemistry, 2018, 57, 6873-6882.	4.0	29
70	Evolution of redox couples in Li- and Mn-rich cathode materials and mitigation of voltage fade by reducing oxygen release. Nature Energy, 2018, 3, 690-698.	39.5	675
71	How Water Accelerates Bivalent Ion Diffusion at the Electrolyte/Electrode Interface. Angewandte Chemie - International Edition, 2018, 57, 11978-11981.	13.8	123
72	How Water Accelerates Bivalent Ion Diffusion at the Electrolyte/Electrode Interface. Angewandte Chemie, 2018, 130, 12154-12157.	2.0	17

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73	High energy-density and reversibility of iron fluoride cathode enabled via an intercalation-extrusion reaction. Nature Communications, 2018, 9, 2324.	12.8	136
74	Suppressing the chromium disproportionation reaction in O3-type layered cathode materials for high capacity sodium-ion batteries. Journal of Materials Chemistry A, 2017, 5, 5442-5448.	10.3	45
75	In situ Visualization of State-of-Charge Heterogeneity within a LiCoO₂ Particle that Evolves upon Cycling at Different Rates. ACS Energy Letters, 2017, 2, 1240-1245.	17.4	159
76	Exploring Lithium Deficiency in Layered Oxide Cathode for Liâ€Ion Battery. Advanced Sustainable Systems, 2017, 1, 1700026.	5.3	1
77	<i>In Situ</i> Neutron Diffraction Studies of the Ion Exchange Synthesis Mechanism of Li₂Mg₂P₃O₉N: Evidence for a Hidden Phase Transition. Journal of the American Chemical Society, 2017, 139, 9192-9202.	13.7	19
78	Designing Air-Stable O3-Type Cathode Materials by Combined Structure Modulation for Na-Ion Batteries. Journal of the American Chemical Society, 2017, 139, 8440-8443.	13.7	303
79	Correlations between Transition-Metal Chemistry, Local Structure, and Global Structure in Li₂Ru_{0.5}Mn_{0.5}O₃ Investigated in a Wide Voltage Window. Chemistry of Materials, 2017, 29, 9053-9065.	6.7	40
80	Utilizing Co²⁺/Co³⁺ Redox Couple in P2â€Layered Na_{0.66}Co_{0.22}Mn_{0.44}Ti_{0.34}O₂ Cathode for Sodiumâ€Ion Batteries. Advanced Science, 2017, 4, 1700219.	11.2	85
81	Liâ€Ion Batteries: Exploring Lithium Deficiency in Layered Oxide Cathode for Liâ€Ion Battery (Adv.) Tj ETQq1 1 0.784314 rgBT /Overlock	5.3	0
82	Finding a Needle in the Haystack: Identification of Functionally Important Minority Phases in an Operating Battery. Nano Letters, 2017, 17, 7782-7788.	9.1	42
83	Visualizing non-equilibrium lithiation of spinel oxide via in situ transmission electron microscopy. Nature Communications, 2016, 7, 11441.	12.8	162
84	Strategies to curb structural changes of lithium/transition metal oxide cathode materials & the changesâ€™ effects on thermal & cycling stability. Chinese Physics B, 2016, 25, 018205.	1.4	13
85	Explore the Effects of Microstructural Defects on Voltage Fade of Li- and Mn-Rich Cathodes. Nano Letters, 2016, 16, 5999-6007.	9.1	64
86	Highâ€Rate Charging Induced Intermediate Phases and Structural Changes of Layerâ€Structured Cathode for Lithiumâ€Ion Batteries. Advanced Energy Materials, 2016, 6, 1600597.	19.5	110
87	Structural integrityâ€"Searching the key factor to suppress the voltage fade of Li-rich layered cathode materials through 3D X-ray imaging and spectroscopy techniques. Nano Energy, 2016, 28, 164-171.	16.0	44
88	Imaging the surface morphology, chemistry and conductivity of LiNi_{1/3}Fe_{1/3}Mn_{4/3}O₄ crystalline facets using scanning transmission X-ray microscopy. Physical Chemistry Chemical Physics, 2016, 18, 22789-22793.	2.8	14
89	Understanding the Degradation Mechanism of Lithium Nickel Oxide Cathodes for Li-Ion Batteries. ACS Applied Materials & Interfaces, 2016, 8, 31677-31683.	8.0	144
90	Utilizing Environmental Friendly Iron as a Substitution Element in Spinel Structured Cathode Materials for Safer High Energy Lithiumâ€Ion Batteries. Advanced Energy Materials, 2016, 6, 1501662.	19.5	35

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91	A highly active and stable hydrogen evolution catalyst based on pyrite-structured cobalt phosphosulfide. Nature Communications, 2016, 7, 10771.	12.8	418
92	Biomass-derived high-performance tungsten-based electrocatalysts on graphene for hydrogen evolution. Journal of Materials Chemistry A, 2015, 3, 18572-18577.	10.3	43
93	Probing Reversible Multielectron Transfer and Structure Evolution of Li_{1.2}Cr_{0.4}Mn_{0.4}O₂ Cathode Material for Li-Ion Batteries in a Voltage Range of 1.0â€“4.8 V. Chemistry of Materials, 2015, 27, 5238-5252.	6.7	57
94	Thermal stability in the blended lithium manganese oxide â€“ Lithium nickel cobalt manganese oxide cathode materials: An in situ time-resolved X-Ray diffraction and mass spectroscopy study. Journal of Power Sources, 2015, 277, 193-197.	7.8	33
95	Structural Changes and Thermal Stability of Charged LiNi_{<i>x</i>}Mn_{<i>y</i>}Co_{<i>z</i>}O₂ Cathode Materials Studied by Combined <i>In Situ</i> Time-Resolved XRD and Mass Spectroscopy. ACS Applied Materials & Interfaces, 2014, 6, 22594-22601.	8.0	731
96	Unexpected high power performance of atomic layer deposition coated Li[Ni1/3Mn1/3Co1/3]O2 cathodes. Journal of Power Sources, 2014, 254, 190-197.	7.8	73
97	Solâ€“Gel Synthesis of Aliovalent Vanadiumâ€Doped LiNi_{0.5}Mn_{1.5}O₄ Cathodes with Excellent Performance at High Temperatures. ChemSusChem, 2014, 7, 829-834.	6.8	60
98	Oxygen-Release-Related Thermal Stability and Decomposition Pathways of Li_{<i>x</i>}Ni_{0.5}Mn_{1.5}O₄ Cathode Materials. Chemistry of Materials, 2014, 26, 1108-1118.	6.7	75
99	A study of building envelope and thermal mass requirements for achieving thermal autonomy in an office building. Energy and Buildings, 2014, 78, 79-88.	6.7	50
100	Tuning chargeâ€“discharge induced unit cell breathing in layer-structured cathode materials for lithium-ion batteries. Nature Communications, 2014, 5, 5381.	12.8	180
101	Empowering the Lithium Metal Battery through a Silicon-Based Superionic Conductor. Journal of the Electrochemical Society, 2014, 161, A1812-A1817.	2.9	137
102	Combining In Situ Synchrotron Xâ€Ray Diffraction and Absorption Techniques with Transmission Electron Microscopy to Study the Origin of Thermal Instability in Overcharged Cathode Materials for Lithiumâ€Ion Batteries. Advanced Functional Materials, 2013, 23, 1047-1063.	14.9	458
103	Correlating Structural Changes and Gas Evolution during the Thermal Decomposition of Charged Li_{<i>x</i>}Ni_{0.8}Co_{0.15}Al_{0.05}O₂ Cathode Materials. Chemistry of Materials, 2013, 25, 337-351.	6.7	317
104	Divalent Iron Nitridophosphates: A New Class of Cathode Materials for Li-Ion Batteries. Chemistry of Materials, 2013, 25, 3929-3931.	6.7	23
105	Phase transition behavior of NaCrO2 during sodium extraction studied by synchrotron-based X-ray diffraction and absorption spectroscopy. Journal of Materials Chemistry A, 2013, 1, 11130.	10.3	84
106	Preparation and Cyclic Performance of Li_{1.2}(Fe_{0.16}Mn_{0.32}Ni_{0.32})O₂Layered Cathode Material by the Mixed Hydroxide Method. Bulletin of the Korean Chemical Society, 2013, 34, 1995-2000.	1.9	9
107	Cathode Materials: Combining In Situ Synchrotron Xâ€Ray Diffraction and Absorption Techniques with Transmission Electron Microscopy to Study the Origin of Thermal Instability in Overcharged Cathode Materials for Lithiumâ€Ion Batteries (Adv. Funct. Mater. 8/2013). Advanced Functional Materials, 2013, 23, 1046-1046.	14.9	7
108	Influence of Cation Ordering and Lattice Distortion on the Chargeâ€“Discharge Behavior of LiMn_{1.5}Ni_{0.5}O₄ Spinel between 5.0 and 2.0 V. Chemistry of Materials, 2012, 24, 3610-3620.	6.7	180

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109	Hydrogen production from bio-oil aqueous fraction with in situ carbon dioxide capture. International Journal of Hydrogen Energy, 2010, 35, 2612-2616.	7.1	52