Shuaifeng Lou

List of Publications by Year
in descending order

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114 papers	5,500 citations	71061 41 h-index	91828 69 g-index
115 all docs	115 docs citations	115 times ranked	6047 citing authors

#	Article	IF	Citations
1	Superior performance of ordered macroporous TiNb 2 O 7 anodes for lithium ion batteries: Understanding from the structural and pseudocapacitive insights on achieving high rate capability. Nano Energy, 2017, 34, 15-25.	8.2	351
2	Understanding undesirable anode lithium plating issues in lithium-ion batteries. RSC Advances, 2016, 6, 88683-88700.	1.7	292
3	Interface Issues and Challenges in Allâ€Solidâ€State Batteries: Lithium, Sodium, and Beyond. Advanced Materials, 2021, 33, e2000721.	11.1	248
4	ZIFâ€8 with Ferrocene Encapsulated: A Promising Precursor to Singleâ€Atom Fe Embedded Nitrogenâ€Doped Carbon as Highly Efficient Catalyst for Oxygen Electroreduction. Small, 2018, 14, e1704282.	5.2	202
5	Ultrahigh Mass Activity for Carbon Dioxide Reduction Enabled by Goldâ€“Iron Coreâ€“Shell Nanoparticles. Journal of the American Chemical Society, 2017, 139, 15608-15611.	6.6	191
6	Pseudocapacitive Li+ intercalation in porous Ti2Nb10O29 nanospheres enables ultra-fast lithium storage. Energy Storage Materials, 2018, 11, 57-66.	9.5	163
7	High-rate capability of three-dimensionally ordered macroporous T-Nb2O5 through Li+ intercalation pseudocapacitance. Journal of Power Sources, 2017, 361, 80-86.	4.0	139
8	Improved electrochemical performance of micro-sized SiO-based composite anode by prelithiation of stabilized lithium metal powder. Journal of Power Sources, 2017, 347, 170-177.	4.0	129
9	Insights into interfacial effect and local lithium-ion transport in polycrystalline cathodes of solid-state batteries. Nature Communications, 2020, 11, 5700.	5.8	122
10	Achieving long-life Prussian blue analogue cathode for Na-ion batteries via triple-cation lattice substitution and coordinated water capture. Nano Energy, 2019, 61, 201-210.	8.2	121
11	Tiâ€Based Oxide Anode Materials for Advanced Electrochemical Energy Storage: Lithium/Sodium Ion Batteries and Hybrid Pseudocapacitors. Small, 2019, 15, e1904740.	5.2	121
12	Enabling reliable lithium metal batteries by a bifunctional anionic electrolyte additive. Energy Storage Materials, 2018, 11, 197-204.	9.5	117
13	Facile synthesis of nanostructured TiNb₂O₇ anode materials with superior performance for high-rate lithium ion batteries. Chemical Communications, 2015, 51, 17293-17296.	2.2	108
14	Lithium-rich Li_{1.2}Ni_{0.13}Co_{0.13}Mn_{0.54}O₂ oxide coated by Li₃PO₄ and carbon nanocomposite layers as high performance cathode materials for lithium ion batteries. Journal of Materials Chemistry A, 2015, 3, 2634-2641.	5.2	103
15	A two-dimensional nitrogen-rich carbon/silicon composite as high performance anode material for lithium ion batteries. Chemical Engineering Journal, 2018, 341, 37-46.	6.6	95
16	Substrate strain tunes operando geometric distortion and oxygen reduction activity of CuN2C2 single-atom sites. Nature Communications, 2021, 12, 6335.	5.8	95
17	Micro-sized spherical silicon@carbon@graphene prepared by spray drying as anode material for lithium-ion batteries. Journal of Alloys and Compounds, 2017, 723, 434-440.	2.8	89
18	Facilitating the redox reaction of polysulfides by an electrocatalytic layer-modified separator for lithiumâ€“sulfur batteries. Journal of Materials Chemistry A, 2017, 5, 10936-10945.	5.2	87

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19	Synergistic engineering of defects and architecture in Co3O4@C nanosheets toward Li/Na ion batteries with enhanced pseudocapacitances. Nano Energy, 2020, 78, 105366.	8.2	86
20	Polyvinylpyrrolidoneâ€Coordinated Singleâ€Site Platinum Catalyst Exhibits High Activity for Hydrogen Evolution Reaction. Angewandte Chemie - International Edition, 2020, 59, 15902-15907.	7.2	80
21	An Li-rich oxide cathode material with mosaic spinel grain and a surface coating for high performance Li-ion batteries. Journal of Materials Chemistry A, 2014, 2, 15640.	5.2	75
22	A dual-salt coupled fluoroethylene carbonate succinonitrile-based electrolyte enables Li-metal batteries. Journal of Materials Chemistry A, 2020, 8, 2066-2073.	5.2	75
23	1,3,6-Hexanetricarbonitrile as electrolyte additive for enhancing electrochemical performance of high voltage Li-rich layered oxide cathode. Journal of Power Sources, 2017, 361, 227-236.	4.0	68
24	Ultrathin Si Nanosheets Dispersed in Graphene Matrix Enable Stable Interface and High Rate Capability of Anode for Lithiumâ€ion Batteries. Advanced Functional Materials, 2022, 32, .	7.8	67
25	Improved electrochemical performance and capacity fading mechanism of nano-sized LiMn_{0.9}Fe_{0.1}PO₄ cathode modified by polyacene coating. Journal of Materials Chemistry A, 2015, 3, 1569-1579.	5.2	64
26	Ni-MOF derived NiO/C nanospheres grown in situ on reduced graphene oxide towards high performance hybrid supercapacitor. Journal of Alloys and Compounds, 2019, 801, 158-165.	2.8	64
27	Multi-scale Imaging of Solid-State Battery Interfaces: From Atomic Scale to Macroscopic Scale. CheM, 2020, 6, 2199-2218.	5.8	64
28	Pd-around-CeO_{2â^'x}hybrid nanostructure catalyst: three-phase-transfer synthesis, electrocatalytic properties and dual promoting mechanism. Journal of Materials Chemistry A, 2014, 2, 1429-1435.	5.2	58
29	Inducing uniform lithium nucleation by integrated lithium-rich li-in anode with lithiophilic 3D framework. Energy Storage Materials, 2020, 33, 423-431.	9.5	56
30	Intercalation pseudocapacitive electrochemistry of Nb-based oxides for fast charging of lithium-ion batteries. Nano Energy, 2021, 81, 105635.	8.2	52
31	A three-dimensional silicon/nitrogen-doped graphitized carbon composite as high-performance anode material for lithium ion batteries. Journal of Alloys and Compounds, 2019, 777, 190-197.	2.8	51
32	Engineering of Nitrogen Coordinated Single Cobalt Atom Moieties for Oxygen Electroreduction. ACS Applied Materials & Interfaces, 2019, 11, 41258-41266.	4.0	50
33	Interrelated interfacial issues between a Li₇La₃Zr₂O₁₂-based garnet electrolyte and Li anode in the solid-state lithium battery: a review. Journal of Materials Chemistry A, 2021, 9, 5952-5979.	5.2	50
34	Accelerating anodic biofilms formation and electron transfer in microbial fuel cells: Role of anionic biosurfactants and mechanism. Bioelectrochemistry, 2017, 117, 48-56.	2.4	49
35	In-situ thermal polymerization boosts succinonitrile-based composite solid-state electrolyte for high performance Li-metal battery. Journal of Power Sources, 2021, 496, 229861.	4.0	49
36	Unravelling the Interface Layer Formation and Gas Evolution/Suppression on a TiNb₂O₇ Anode for Lithium-Ion Batteries. ACS Applied Materials & Interfaces, 2018, 10, 27056-27062.	4.0	47

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37	Stable Silicon Anodes by Molecular Layer Deposited Artificial Zincone Coatings. Advanced Functional Materials, 2021, 31, 2010526.	7.8	46
38	Pseudocapacitive Li+ storage boosts ultrahigh rate performance of structure-tailored CoFe2O4@Fe2O3 hollow spheres triggered by engineered surface and near-surface reactions. Nano Energy, 2019, 66, 104179.	8.2	45
39	Changing of SEI Film and Electrochemical Properties about MCMB Electrodes during Long-Term Charge/Discharge Cycles. Journal of the Electrochemical Society, 2013, 160, A2093-A2099.	1.3	44
40	A New Anion Receptor for Improving the Interface between Lithium- and Manganese-Rich Layered Oxide Cathode and the Electrolyte. Chemistry of Materials, 2017, 29, 2141-2149.	3.2	44
41	Anisotropically Electrochemicalâ€“Mechanical Evolution in Solidâ€State Batteries and Interfacial Tailored Strategy. Angewandte Chemie - International Edition, 2019, 58, 18647-18653.	7.2	43
42	A quasi-solid-state Liâ€“S battery with high energy density, superior stability and safety. Journal of Materials Chemistry A, 2019, 7, 6533-6542.	5.2	42
43	Amorphous carbon-encapsulated Si nanoparticles loading on MCMB with sandwich structure for lithium ion batteries. Electrochimica Acta, 2019, 306, 590-598.	2.6	41
44	Self-doping Ti1-Nb2+O7 anode material for lithium-ion battery and its electrochemical performance. Journal of Alloys and Compounds, 2017, 728, 534-540.	2.8	40
45	Accelerated aging and degradation mechanism of LiFePO₄/graphite batteries cycled at high discharge rates. RSC Advances, 2018, 8, 25695-25703.	1.7	40
46	A Review of Magnesium Aluminum Chloride Complex Electrolytes for Mg Batteries. Advanced Functional Materials, 2021, 31, 2100650.	7.8	39
47	Lithium deposition on graphite anode during long-term cycles and the effect on capacity loss. RSC Advances, 2014, 4, 26335-26341.	1.7	36
48	Mild Synthesis of Pt/SnO₂/Graphene Nanocomposites with Remarkably Enhanced Ethanol Electroâ€oxidation Activity and Durability. Chemistry - A European Journal, 2016, 22, 193-198.	1.7	36
49	Formation of an Artificial Mg²⁺-Permeable Interphase on Mg Anodes Compatible with Ether and Carbonate Electrolytes. ACS Applied Materials & Interfaces, 2021, 13, 24565-24574.	4.0	36
50	Capacity degradation mechanism and improvement actions for 4 V-class all-solid-state lithium-metal polymer batteries. Chemical Engineering Journal, 2020, 392, 123665.	6.6	34
51	Reversible Silicon Anodes with Long Cycles by Multifunctional Volumetric Buffer Layers. ACS Applied Materials & Interfaces, 2021, 13, 4093-4101.	4.0	34
52	Unraveling the Origins of the â€œUnreactive Coreâ€•in Conversion Electrodes to Trigger High Sodium-Ion Electrochemistry. ACS Energy Letters, 2019, 4, 2007-2012.	8.8	33
53	Scalable mesoporous silicon microparticles composed of interconnected nanoplates for superior lithium storage. Chemical Engineering Journal, 2019, 375, 121923.	6.6	32
54	Electrochemical performance degeneration mechanism of LiCoO₂ with high state of charge during long-term charge/discharge cycling. RSC Advances, 2015, 5, 81235-81242.	1.7	31

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55	Crystallographic engineering to reduce diffusion barrier for enhanced intercalation pseudocapacitance of TiNb2O7 in fast-charging batteries. Energy Storage Materials, 2022, 47, 178-186.	9.5	30
56	Surfaceâ€toâ€Bulk Synergistic Modification of Single Crystal Cathode Enables Stable Cycling of Sulfideâ€Based Allâ€Solidâ€State Batteries at 4.4 V. Advanced Energy Materials, 2022, 12, .	10.2	30
57	Improved high-voltage performance of LiNi 1/3 Co 1/3 Mn 1/3 O 2 cathode with Tris(2,2,2-trifluoroethyl) phosphite as electrolyte additive. Electrochimica Acta, 2017, 243, 72-81.	2.6	29
58	Unravelling the Enhanced Highâ€Temperature Performance of Lithiumâ€Rich Oxide Cathode with Methyl Diphenylphosphinite as Electrolyte Additive. ChemElectroChem, 2018, 5, 1569-1575.	1.7	29
59	Role of fluorine surface modification in improving electrochemical cyclability of concentration gradient Li[Ni_{0.73}Co_{0.12}Mn_{0.15}]O₂ cathode material for Li-ion batteries. RSC Advances, 2016, 6, 26307-26316.	1.7	28
60	Pseudocapacitive Li+ intercalation in ZnO/ZnO@C composites enables high-rate lithium-ion storage and stable cyclability. Ceramics International, 2017, 43, 11998-12004.	2.3	28
61	Stable silicon anodes realized by multifunctional dynamic cross-linking structure with self-healing chemistry and enhanced ionic conductivity for lithium-ion batteries. Nano Energy, 2022, 99, 107334.	8.2	27
62	CoS/N-doped carbon core/shell nanocrystals as an anode material for potassium-ion storage. Journal of Solid State Electrochemistry, 2019, 23, 27-32.	1.2	25
63	An Interphase-enhanced Liquid Na-K Anode for Dendrite-free Alkali Metal Batteries Enabled by SiCl4 Electrolyte Additive. Energy Storage Materials, 2021, 37, 199-206.	9.5	25
64	Stable lithium anode enabled by biphasic hybrid SEI layer toward high-performance lithium metal batteries. Chemical Engineering Journal, 2022, 433, 133570.	6.6	24
65	High-performance carbon-coated LiMnPO4 nanocomposites by facile two-step solid-state synthesis for lithium-ion battery. Journal of Solid State Electrochemistry, 2015, 19, 281-288.	1.2	23
66	Perovskite LaCo_xMn_{1â€“x}O_{3â^’Ïƒ} with Tunable Defect and Surface Structures as Cathode Catalysts for Liâ€“O₂ Batteries. ACS Applied Materials & Interfaces, 2020, 12, 10452-10460.	4.0	23
67	Insights into the role of oxygen functional groups and defects in the rechargeable nonaqueous Liâ€“O2 batteries. Electrochimica Acta, 2018, 292, 838-845.	2.6	22
68	Correlating the electrocatalytic stability of platinum monolayer catalysts with their structural evolution in the oxygen reduction reaction. Journal of Materials Chemistry A, 2018, 6, 20725-20736.	5.2	22
69	Scalable submicron/micron silicon particles stabilized in a robust graphite-carbon architecture for enhanced lithium storage. Journal of Colloid and Interface Science, 2019, 555, 783-790.	5.0	22
70	Improved electrochemical performance of NaAlO2-coated LiCoO2 for lithium-ion batteries. Journal of Solid State Electrochemistry, 2017, 21, 1195-1201.	1.2	21
71	Enhanced electrochemical performance of Li4Ti5O12 through in-situ coating 70Li2S-30P2S5 solid electrolyte for all-solid-state lithium batteries. Journal of Alloys and Compounds, 2018, 752, 8-13.	2.8	21
72	Regulating Li deposition by constructing homogeneous LiF protective layer for high-performance Li metal anode. Chemical Engineering Journal, 2022, 427, 131625.	6.6	21

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73	Poly (vinyl ethylene carbonate)-based dual-salt gel polymer electrolyte enabling high voltage lithium metal batteries. Chemical Engineering Journal, 2022, 437, 135419.	6.6	21
74	Carbon fibers/ZnO nanowires hybrid nanogenerator based on an insulating interface barrier. RSC Advances, 2017, 7, 21452-21458.	1.7	20
75	Surface nitrided and carbon coated TiNb2O7 anode material with excellent performance for lithium-ion batteries. Journal of Alloys and Compounds, 2020, 835, 155241.	2.8	20
76	Improved Electrochemical Performance of LiNi_{0.8}Co_{0.15}Al_{0.05}O₂ Cathode Material by Coating of Graphene Nanodots. Journal of the Electrochemical Society, 2019, 166, A1038-A1044.	1.3	19
77	Stabilizing Lithium Metal Anode Enabled by a Natural Polymer Layer for Lithiumâ€“Sulfur Batteries. ACS Applied Materials & Interfaces, 2021, 13, 28252-28260.	4.0	19
78	Rapid Prediction of the Open-Circuit-Voltage of Lithium Ion Batteries Based on an Effective Voltage Relaxation Model. Energies, 2018, 11, 3444.	1.6	18
79	Improving electrochemical performance of Nano-Si/N-doped carbon through tunning the microstructure from two dimensions to three dimensions. Electrochimica Acta, 2020, 332, 135507.	2.6	18
80	Recovery Strategy and Mechanism of Aged Lithium Ion Batteries after Shallow Depth of Discharge at Elevated Temperature. ACS Applied Materials & Interfaces, 2016, 8, 5234-5242.	4.0	17
81	Black phosphorus-modified sulfurized polyacrylonitrile with high C-rate and cycling performance in ether-based electrolyte for lithium sulfur batteries. Chemical Communications, 2020, 56, 12797-12800.	2.2	15
82	Hierarchical pores from microscale to macroscale boost ultrahigh lithium intercalation pseudocapacitance of biomass carbon. Journal of Energy Storage, 2021, 33, 102068.	3.9	15
83	Fast lithium transport kinetics regulated by low energy-barrier LixMnO2 for long-life lithium metal batteries. Energy Storage Materials, 2021, 41, 1-7.	9.5	15
84	Tracking Battery Dynamics by Operando Synchrotron X-ray Imaging: Operation from Liquid Electrolytes to Solid-State Electrolytes. Accounts of Materials Research, 2021, 2, 1177-1189.	5.9	15
85	Interface Modifications by Tris(2,2,2-trifluoroethyl) Borate for Improving the High-Voltage Performance of LiNi_{1/3}Co_{1/3}Mn_{1/3}O₂Cathode. Journal of the Electrochemical Society, 2017, 164, A1924-A1932.	1.3	13
86	Anisotropically Electrochemicalâ€“Mechanical Evolution in Solidâ€State Batteries and Interfacial Tailored Strategy. Angewandte Chemie, 2019, 131, 18820-18826.	1.6	12
87	Solvate ionic liquid boosting favorable interfaces kinetics to achieve the excellent performance of Li4Ti5O12 anodes in Li10GeP2S12 based solid-state batteries. Chemical Engineering Journal, 2020, 382, 123046.	6.6	12
88	Nanocable with thick active intermediate layer for stable and high-areal-capacity sodium storage. Nano Energy, 2020, 78, 105265.	8.2	12
89	FeOF/TiO₂ Hetero-Nanostructures for High-Areal-Capacity Fluoride Cathodes. ACS Applied Materials & Interfaces, 2020, 12, 33803-33809.	4.0	12
90	Unraveling the advances of trace doping engineering for potassium ion battery anodes via tomography. Journal of Energy Chemistry, 2021, 58, 355-363.	7.1	12

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91	Tailoring lithium-peroxide reaction kinetics with CuN2C2 single-atom moieties for lithium-oxygen batteries. Nano Energy, 2022, 93, 106810.	8.2	12
92	Improvement of bond strength between ZnO nanorods and carbon fibers using magnetron sputtered ZnO films as the interphase. CrystEngComm, 2017, 19, 868-875.	1.3	11
93	Unraveling the Relationship between Ti⁴⁺ Doping and Li⁺ Mobility Enhancement in Ti⁴⁺ Doped Li₃V₂(PO₄)₃. ACS Applied Energy Materials, 2020, 3, 715-722.	2.5	11
94	Superior Electrochemical Performance of WNb₂O₈ Nanorods Triggered by Ultraâ€Efficient Li⁺ Diffusion. ChemistrySelect, 2020, 5, 1209-1213.	0.7	11
95	Toward Promising Turnkey Solution for Next-Generation Lithium Ion Batteries: Scale Preparation, Fading Analysis, and Enhanced Performance of Microsized Si/C Composites. ACS Applied Energy Materials, 2018, 1, 6977-6985.	2.5	10
96	Accelerated Aging Analysis on Cycle Life of LiFePO₄/Graphite Batteries Based on Different Rates. ChemElectroChem, 2018, 5, 2301-2309.	1.7	10
97	Enhanced Methanol Oxidation in Acid Media on Pt/S,â€‰P Coâ€doped Graphene with 3D Porous Network Structure Engineering. ChemElectroChem, 2019, 6, 1157-1165.	1.7	10
98	Oxygen vacancies Nb2O5-: Ultrastable lithium storage anode materials for advanced rechargeable batteries. Applied Surface Science, 2022, 600, 154068.	3.1	10
99	Evaluation of Oxygen Reduction Activity by the Thin-Film Rotating Disk Electrode Methodology: the Effects of Potentiodynamic Parameters. Electrocatalysis, 2016, 7, 305-316.	1.5	9
100	Interface Reinforcement of a Prussian Blue Cathode Using a Non-Flammable Co-Solvent Cresyl Diphenyl Phosphate for a High-Safety Na-Ion Battery. ACS Sustainable Chemistry and Engineering, 2021, 9, 5809-5817.	3.2	9
101	Ï€â€Conjugation Induced Anchoring of Ferrocene on Graphdiyne Enable Shuttleâ€Free Redox Mediation in Lithiumâ€Oxygen Batteries. Advanced Science, 2022, 9, e2103964.	5.6	9
102	Molecular bridges stabilize lithium metal anode and solid-state electrolyte interface. Chemical Engineering Journal, 2022, 432, 134271.	6.6	9
103	A porous N-doped carbon aggregate as sulfur host for lithium-sulfur batteries. Ionics, 2019, 25, 2131-2138.	1.2	8
104	Monovacancy Coupled Pyridinic N Site Enables Surging Oxygen Reduction Activity of Metal-Free CNx Catalyst. ACS Sustainable Chemistry and Engineering, 2021, 9, 1264-1271.	3.2	8
105	DNA Helix Structure Inspired Flexible Lithium-Ion Batteries with High Spiral Deformability and Long-Lived Cyclic Stability. Nano Letters, 2022, 22, 5553-5560.	4.5	8
106	Excellent room-temperature performance of lithium metal polymer battery with enhanced interfacial compatibility. Electrochimica Acta, 2018, 283, 1261-1268.	2.6	7
107	Synthesis of Well-Defined Pt-Based Catalysts for Methanol Oxidation Reaction Based on Electronâ€“Hole Separation Effects. ACS Sustainable Chemistry and Engineering, 2019, 7, 8597-8603.	3.2	7
108	Tailoring Porous Transition Metal Oxide for High-Performance Lithium Storage. Journal of Physical Chemistry C, 2021, 125, 22435-22445.	1.5	7

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109	Singleâ€Atom Tailored Hierarchical Transition Metal Oxide Nanocages for Efficient Lithium Storage. Small, 2022, 18, e2200367.	5.2	6
110	Developing a Double Protection Strategy for High-Performance Spinel LiNi_{0.5}Mn_{1.5}O₄ Cathodes. ACS Applied Energy Materials, 2022, 5, 6401-6409.	2.5	6
111	An armor-like artificial solid electrolyte interphase layer for high performance lithium-sulfur batteries. Applied Materials Today, 2021, 24, 101108.	2.3	4
112	Insight into the Electrochemical Behaviors of <scp>NCM811</scp>	<scp>SiOâ€Gr</scp> Pouch Battery through Thickness Variation. Energy and Environmental Materials, 2023, 6, .	7.3	4
113	Heterogeneous Nanostructure of Ternary PtRu-Au/C Nano-catalyst Towards Formic Acid Oxidation. Electrochemistry, 2017, 85, 133-135.	0.6	3
114	Electrochemical behaviors in the anode of LiCoO2/mesocarbon microbead battery and their impacts on the capacity degradation. Ionics, 2021, 27, 2353-2365.	1.2	2