Chao Lai

List of Publications by Year
in descending order

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76 papers	4,598 citations	101543 36 h-index	102487 66 g-index
77 all docs	77 docs citations	77 times ranked	5738 citing authors

#	Article	IF	Citations
1	Microporous bamboo biochar for lithium-sulfur batteries. Nano Research, 2015, 8, 129-139.	10.4	284
2	Conductive carbon nanofiber interpenetrated graphene architecture for ultra-stable sodium ion battery. Nature Communications, 2019, 10, 3917.	12.8	250
3	A porous nitrogen and phosphorous dual doped graphene blocking layer for high performance Liâ€“S batteries. Journal of Materials Chemistry A, 2015, 3, 16670-16678.	10.3	241
4	A Hierarchical Silverâ€Nanowireâ€“Graphene Host Enabling Ultrahigh Rates and Superior Longâ€Term Cycling of Lithiumâ€Metal Composite Anodes. Advanced Materials, 2018, 30, e1804165.	21.0	221
5	Cationic Surfactant-Based Electrolyte Additives for Uniform Lithium Deposition via Lithiophobic Repulsion Mechanisms. Journal of the American Chemical Society, 2018, 140, 17515-17521.	13.7	211
6	Nitrogen, sulfur-codoped graphene sponge as electroactive carbon interlayer for high-energy and -power lithiumâ€“sulfur batteries. Journal of Power Sources, 2016, 303, 22-28.	7.8	180
7	Enhanced Sulfur Transformation by Multifunctional FeS₂/FeS/S Composites for Highâ€Volumetric Capacity Cathodes in Lithiumâ€“Sulfur Batteries. Advanced Science, 2019, 6, 1800815.	11.2	178
8	Hydrogenation Synthesis of Blue TiO₂ for High-Performance Lithium-Ion Batteries. Journal of Physical Chemistry C, 2014, 118, 8824-8830.	3.1	167
9	Stabilizing lithium metal anode by octaphenyl polyoxyethylene-lithium complexation. Nature Communications, 2020, 11, 643.	12.8	161
10	A hybrid carbon aerogel with both aligned and interconnected pores as interlayer for high-performance lithiumâ€“sulfur batteries. Nano Research, 2016, 9, 3735-3746.	10.4	140
11	A conductive interwoven bamboo carbon fiber membrane for Liâ€“S batteries. Journal of Materials Chemistry A, 2015, 3, 9502-9509.	10.3	131
12	Hierarchical Co₃O₄@N-Doped Carbon Composite as an Advanced Anode Material for Ultrastable Potassium Storage. ACS Nano, 2020, 14, 5027-5035.	14.6	121
13	Resilient mesoporous TiO2/graphene nanocomposite for high rate performance lithium-ion batteries. Chemical Engineering Journal, 2014, 256, 247-254.	12.7	107
14	Ti₃C₂T_x MXene Interface Layer Driving Ultra-Stable Lithium-Iodine Batteries with Both High Iodine Content and Mass Loading. ACS Nano, 2020, 14, 1176-1184.	14.6	105
15	Housing Sulfur in Polymer Composite Frameworks for Liâ€“S Batteries. Nano-Micro Letters, 2019, 11, 17.	27.0	102
16	Superlithiophilic Amorphous SiO₂â€“TiO₂ Distributed into Porous Carbon Skeleton Enabling Uniform Lithium Deposition for Stable Lithium Metal Batteries. Advanced Science, 2019, 6, 1900943.	11.2	96
17	3D printing nanocomposite gel-based thick electrode enabling both high areal capacity and rate performance for lithium-ion battery. Chemical Engineering Journal, 2020, 381, 122641.	12.7	89
18	One dimensional nanostructures contribute better Liâ€“S and Liâ€“Se batteries: Progress, challenges and perspectives. Energy Storage Materials, 2019, 23, 190-224.	18.0	86

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19	Designing Li-protective layer via SOCl2 additive for stabilizing lithium-sulfur battery. Energy Storage Materials, 2019, 18, 222-228.	18.0	84
20	A type of sodium-ion full-cell with a layered NaNi_{0.5}Ti_{0.5}O₂ cathode and a pre-sodiated hard carbon anode. RSC Advances, 2015, 5, 106519-106522.	3.6	82
21	Ball-milling synthesis of ZnO@sulphur/carbon nanotubes and Ni(OH)2@sulphur/carbon nanotubes composites for high-performance lithium-sulphur batteries. Electrochimica Acta, 2016, 196, 369-376.	5.2	77
22	Carbon Nitride Nanofibres with Exceptional Lithium Storage Capacity: From Theoretical Prediction to Experimental Implementation. Advanced Functional Materials, 2018, 28, 1803972.	14.9	77
23	Ultra-small B₂O₃ nanocrystals grown in situ on highly porous carbon microtubes for lithiumâ€“iodine and lithiumâ€“sulfur batteries. Journal of Materials Chemistry A, 2016, 4, 8541-8547.	10.3	74
24	From double-helix structured seaweed to S-doped carbon aerogel with ultra-high surface area for energy storage. Energy Storage Materials, 2019, 17, 22-30.	18.0	72
25	Electrolyte Salts and Additives Regulation Enables High Performance Aqueous Zinc Ion Batteries: A Mini Review. Small, 2022, 18, e2104640.	10.0	69
26	Robust pseudo-capacitive Li-I2 battery enabled by catalytic, adsorptive N-doped graphene interlayer. Energy Storage Materials, 2018, 14, 129-135.	18.0	67
27	Cobaltâ€Phthalocyanineâ€Derived Molecular Isolation Layer for Highly Stable Lithium Anode. Angewandte Chemie - International Edition, 2021, 60, 19852-19859.	13.8	62
28	LiI embedded meso-micro porous carbon polyhedrons for lithium iodine battery with superior lithium storage properties. Energy Storage Materials, 2018, 10, 62-68.	18.0	59
29	Blue hydrogenated lithium titanate as a high-rate anode material for lithium-ion batteries. Journal of Materials Chemistry A, 2014, 2, 6353.	10.3	58
30	Polysiloxane Crossâ€Linked Mechanically Stable MXeneâ€Based Lithium Host for Ultrastable Lithium Metal Anodes with Ultrahigh Current Densities and Capacities. Advanced Functional Materials, 2021, 31, 2008044.	14.9	57
31	Grain refining mechanisms: Initial levelling stage during nucleation for high-stability lithium anodes. Nano Energy, 2019, 66, 104128.	16.0	55
32	Directional synthesis of tin oxide@graphene nanocomposites via a one-step up-scalable wet-mechanochemical route for lithium ion batteries. Journal of Materials Chemistry A, 2014, 2, 10211-10217.	10.3	54
33	Polyoxometalate driven dendrite-free zinc electrodes with synergistic effects of cation and anion cluster regulation. Journal of Materials Chemistry A, 2021, 9, 7025-7033.	10.3	42
34	Cyclohexanedodecol-Assisted Interfacial Engineering for Robust and High-Performance Zinc Metal Anode. Nano-Micro Letters, 2022, 14, 110.	27.0	42
35	Recent development of metal compound applications in lithiumâ€“sulphur batteries. Journal of Materials Research, 2018, 33, 16-31.	2.6	41
36	Functional lithiophilic polymer modified separator for dendrite-free and pulverization-free lithium metal batteries. Journal of Energy Chemistry, 2021, 52, 262-268.	12.9	41

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37	Grafting polymeric sulfur onto carbon nanotubes as highly-active cathode for lithiumâ€“sulfur batteries. Journal of Energy Chemistry, 2020, 42, 27-33.	12.9	38
38	Reinforced Conductive Confinement of Sulfur for Robust and High-Performance Lithiumâ€“Sulfur Batteries. ACS Applied Materials & Interfaces, 2015, 7, 23885-23892.	8.0	35
39	Tunable Graphene Oxide Nanofiltration Membrane for Effective Dye/Salt Separation and Desalination. ACS Applied Materials & Interfaces, 2021, 13, 55339-55348.	8.0	34
40	Designer uniform Li plating/stripping through lithiumâ€“cobalt alloying hierarchical scaffolds for scalable high-performance lithium-metal anodes. Journal of Energy Chemistry, 2021, 52, 385-392.	12.9	29
41	Self-assembly synthesis of SnNb2O6/amino-functionalized graphene nanocomposite as high-rate anode materials for sodium-ion batteries. Rare Metals, 2021, 40, 425-432.	7.1	26
42	Liâ€containing alloys beneficial for stabilizing lithium anode: A review. Engineering Reports, 2021, 3, e12339.	1.7	26
43	Honeycombâ€like carbon materials derived from coffee extract via a â€œsaltyâ€•thermal treatment for highâ€performance Liâ€‹₂ batteries. , 2020, 2, 265-275.		24
44	Amylopectin from Glutinous Rice as a Sustainable Binder for Highâ€Performance Silicon Anodes. Energy and Environmental Materials, 2021, 4, 263-268.	12.8	24
45	One-Dimensional<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" id="M1"><mml:mtext>T</mml:mtext><mml:mtext>i</mml:mtext><mml:msub><mml:mrow><mml:mtext>O</mml:mtext></mml:mrow as Photoanodes for Dye-Sensitized Solar Cells. Journal of Nanomaterials, 2013, 2013, 1-11.	2.7	23
46	Ionâ€Conductive Polytitanosiloxane Networks Enable a Robust Solidâ€Electrolyte Interface for Longâ€Cycling Lithium Metal Anodes. Advanced Functional Materials, 2022, 32, 2110347.	14.9	23
47	Enhanced Highâ€Rate Performance of Doubleâ€Walled TiO₂â€B Nanotubes as Anodes in Lithiumâ€Ion Batteries. Chemistry - an Asian Journal, 2012, 7, 2516-2518.	3.3	22
48	Substrate-induced assembly of PtAu alloy nanostructures at choline functionalized monolayer interface for nitrite sensing. Journal of Electroanalytical Chemistry, 2015, 750, 36-42.	3.8	22
49	Producing hierarchical porous carbon monoliths from hydrometallurgical recycling of spent lead acid battery for application in lithium ion batteries. Green Chemistry, 2015, 17, 4637-4646.	9.0	22
50	Tri-Functional Copper Sulfide as Sulfur Carrier for High-Performance Lithium-Sulfur Batteries. Journal of the Electrochemical Society, 2017, 164, A1499-A1502.	2.9	20
51	Uniform lithium deposition driven by vertical magnetic field for stable lithium anodes. Solid State Ionics, 2019, 341, 115033.	2.7	19
52	Sol Electrolyte: Pathway to Longâ€Term Stable Lithium Metal Anode. Advanced Functional Materials, 2021, 31, 2100594.	14.9	19
53	Ultralowâ€Expansion Lithium Metal Composite Anode via Gradient Framework Design. Advanced Functional Materials, 2022, 32, .	14.9	18
54	Polyoxometalate Ionic Sponge Enabled Dendriteâ€Free and Highly Stable Lithium Metal Anode. Small Methods, 2022, 6, e2101613.	8.6	17

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55	High-performance amorphous carbonâ€“graphene nanocomposite anode for lithium-ion batteries. RSC Advances, 2014, 4, 18899.	3.6	16
56	Online Digital Holographic Method for Interface Reaction Monitoring in Lithium-Ion Batteries. Journal of Physical Chemistry C, 2017, 121, 24733-24739.	3.1	13
57	Highly Aligned Ultraâ€Thick Gelâ€Based Cathodes Unlocking Ultraâ€High Energy Density Batteries. Energy and Environmental Materials, 2022, 5, 1332-1339.	12.8	13
58	Wet ball-milling synthesis of high performance sulfur-based composite cathodes: The influences of solvents and ball-milling speed. Electrochimica Acta, 2014, 149, 136-143.	5.2	12
59	Two nanoscale Nb containing polyoxometalates based on {P₂W₁₅Nb₃O₆₂} clusters and chromium cations. Dalton Transactions, 2017, 46, 13345-13348.	3.3	12
60	Facile fabrication of three-dimensional hierarchical CuO nanostructures with enhanced lithium storage capability. RSC Advances, 2015, 5, 68061-68066.	3.6	10
61	A new lithium-ion battery with LiNi0.80Co0.15Al0.05O2 cathode and lithium pre-doping hard carbon anode. Materials Letters, 2015, 160, 250-254.	2.6	10
62	Single crystal polyoxoniobate derived NbO/Cu nanocrystalline@N-doped carbon loaded onto reduced graphene oxide enabling high rate and high capacity Li/Na storage. Journal of Materials Chemistry A, 2019, 7, 26513-26523.	10.3	10
63	Communicationâ€”Trace Montmorillonite Electrolyte Additive Producing Stable Lithium-Sulfur Batteries. Journal of the Electrochemical Society, 2019, 166, A3886-A3888.	2.9	10
64	Cobaltâ€Phthalocyanineâ€Derived Molecular Isolation Layer for Highly Stable Lithium Anode. Angewandte Chemie, 2021, 133, 20005-20012.	2.0	10
65	Introduction of â€˜lattice-voidsâ€™ in high tap density TiO₂-B nanowires for enhanced high-rate and high volumetric capacity lithium storage. RSC Advances, 2014, 4, 22989-22994.	3.6	8
66	Water Reducer: A Highly Dispersing Binder for <scp>Highâ€Performance Lithiumâ€Sulfur</scp> Batteries^{â€}. Chinese Journal of Chemistry, 2021, 39, 1523-1530.	4.9	8
67	Communicationâ€”Direct Observation of the Shuttle Phenomenon in Lithium-Sulfur Batteries via the Digital Holographic Method. Journal of the Electrochemical Society, 2018, 165, A2866-A2868.	2.9	7
68	Enhancing the reversible capacity and cycle stability of lithium-ion batteries with Li-compensation material Li6CoO4. Science China Materials, 2022, 65, 620-628.	6.3	7
69	Titanium pyrophosphate hexagonal nanoplates for electrochemical lithium storage. RSC Advances, 2013, 3, 13137.	3.6	6
70	Crystalline TiO2@C nanosheet anode with enhanced rate capability for lithium-ion batteries. RSC Advances, 2015, 5, 98717-98720.	3.6	6
71	Graphene-wrapped sulfur-based composite cathodes: ball-milling synthesis and high discharge capacity. RSC Advances, 2014, 4, 48438-48442.	3.6	4
72	Enhanced cycling performance of the Li4Ti5O12anode in an ethers electrolyte induced by a solidâ€“electrolyte interphase film. RSC Advances, 2015, 5, 56908-56912.	3.6	4

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73	In Situâ€Derived Porous SiO 2 /Carbon Nanocomposite from Lichens for Lithiumâ€Ion Batteries. Energy Technology, 2019, 7, 1800840.	3.8	4
74	Oligomerized imide and thioimide organic cathode materials via a H-transfer mechanism for high capacity lithium ion batteries. Journal of Materials Chemistry A, 2021, 9, 18306-18312.	10.3	4
75	CuCl₂â€Modified Lithium Metal Anode via Dynamic Protection Mechanisms for Dendriteâ€Free Longâ€Life Charging/Discharge Processes (Adv. Energy Mater. 15/2022). Advanced Energy Materials, 2022, 12, .	19.5	0
76	Highly stable and scalable lithium metal anodes enabled by a lithiophilic SnO2@graphite fiber framework design. Batteries and Supercaps, 0, , .	4.7	0