Jian Liu

List of Publications by Year in Descending Order

120 papers	10,795 citations	47 h-index	103 g-index
138 ext. papers	12,480 ext. citations	10.7 avg, IF	6.43 L-index

#	Paper	IF	Citations
120	Polyacrylonitrile-Reinforced Composite Gel Polymer Electrolytes for Stable Potassium Metal Anodes.. *Small*, **2022**, e2107186	11	3
119	Atomic layer deposited aluminum oxynitride coating for high-performance Si anode in lithium-ion batteries. *Applied Surface Science*, **2022**, 578, 151982	6.7	2
118	Characteristics of interface between solid electrolyte and electrode in all-solid-state batteries prepared by spark plasma sintering. *Journal of Power Sources*, **2022**, 521, 230964	8.9	0
117	Lignin-derived hard carbon anode for potassium-ion batteries: Interplay among lignin molecular weight, material structures, and storage mechanisms. *Chemical Engineering Journal*, **2022**, 427, 131547	14.7	9
116	Quasi-solid-state lithium-tellurium batteries based on flexible gel polymer electrolytes. *Journal of Colloid and Interface Science*, **2022**, 605, 547-555	9.3	2
115	High-Performance Potassium-Tellurium Batteries Stabilized by Interface Engineering.. *Small*, **2022**, e2200085	11	0
114	Eutectic Electrolytes Chemistry for Rechargeable Zn Batteries.. *Small*, **2022**, e2200550	11	3
113	Improving the Stability of Lithium Aluminum Germanium Phosphate with Lithium Metal by Interface Engineering. *Nanomaterials*, **2022**, 12, 1912	5.4	
112	Low temperature induced highly stable Zn metal anodes for aqueous zinc-ion batteries. *Chemical Communications*, **2021**, 57, 11477-11480	5.8	3
111	3D Nano-heterostructure of ZnMnO@Graphene-Carbon Microtubes for High-Performance Li-Ion Capacitors. *ACS Applied Materials & Interfaces*, **2021**,	9.5	1
110	Enhanced Potassium Storage Performance for K-Te Batteries Electrode Design and Electrolyte Salt Chemistry. *ACS Applied Materials & Interfaces*, **2021**, 13, 16345-16354	9.5	8
109	Water/acetonitrile hybrid electrolyte enables using smaller ions for achieving superior energy density in carbon-based supercapacitors. *Journal of Power Sources*, **2021**, 498, 229905	8.9	1
108	The roles of electrolyte chemistry in hard carbon anode for potassium-ion batteries. *Chemical Engineering Journal*, **2021**, 427, 130972	14.7	7
107	Durable Lithium/Selenium Batteries Enabled by the Integration of MOF-Derived Porous Carbon and Alucone Coating. *Nanomaterials*, **2021**, 11,	5.4	1
106	Intercalation-pseudocapacitance hybrid anode for high rate and energy lithium-ion capacitors. *Journal of Energy Chemistry*, **2021**, 55, 459-467	12	15
105	Tuning Zn2+ coordination environment to suppress dendrite formation for high-performance Zn-ion batteries. *Nano Energy*, **2021**, 80, 105478	17.1	118
104	Potassium-ion battery cathodes: Past, present, and prospects. *Journal of Power Sources*, **2021**, 484, 229307	8.9	14

103	High-temperature treatment to engineer the single-atom Pt coordination environment towards highly efficient hydrogen evolution. *Journal of Energy Chemistry*, **2021**, 59, 212-219	12	14
102	Materials and Structure Design for Solid-State Zinc-Ion Batteries: A Mini-Review. *Frontiers in Energy Research*, **2021**, 8,	3.8	3
101	A durable lithium–tellurium battery: Effects of carbon pore structure and tellurium content. *Carbon* , **2021**, 173, 11-21	10.4	10
100	Atomic/molecular layer deposition for energy storage and conversion. *Chemical Society Reviews*, **2021**, 50, 3889-3956	58.5	39
99	Enhanced reversibility and electrochemical window of Zn-ion batteries with an acetonitrile/water-in-salt electrolyte. *Chemical Communications*, **2021**, 57, 1246-1249	5.8	22
98	A facile and low-cost AlO coating as an artificial solid electrolyte interphase layer on graphite/silicon composites for lithium-ion batteries. *Nanotechnology*, **2021**, 32, 144001	3.4	7
97	Waste to Value-Added Product: Developing Electrically Conductive Nanocomposites Using a Non-Recyclable Plastic Waste Containing Vulcanized Rubber. *Polymers*, **2021**, 13,	4.5	1
96	The role of carbon pore structure in tellurium/carbon cathodes for lithium-tellurium batteries. *Electrochimica Acta*, **2021**, 388, 138621	6.7	5
95	Materials design and fundamental understanding of tellurium-based electrochemistry for rechargeable batteries. *Energy Storage Materials*, **2021**, 40, 166-188	19.4	6
94	Engineering interfacial layers to enable Zn metal anodes for aqueous zinc-ion batteries. *Energy Storage Materials*, **2021**, 43, 317-336	19.4	29
93	Perspectives on the Active Sites and Catalyst Design for the Hydrogenation of Dimethyl Oxalate. *ACS Catalysis*, **2020**, 10, 4465-4490	13.1	20
92	Deciphering pitting behavior of lithium metal anodes in lithium sulfur batteries. *Journal of Energy Chemistry*, **2020**, 49, 257-261	12	9
91	Highly stable Zn metal anodes enabled by atomic layer deposited Al2O3 coating for aqueous zinc-ion batteries. *Journal of Materials Chemistry A*, **2020**, 8, 7836-7846	13	136
90	Improving LiNi0.9Co0.08Mn0.02O2 cyclic stability via abating mechanical damages. *Energy Storage Materials*, **2020**, 28, 1-9	19.4	25
89	High-performance sodium–selenium batteries enabled by microporous carbon/selenium cathode and fluoroethylene carbonate electrolyte additive. *Journal of Power Sources*, **2020**, 453, 227855	8.9	7
88	Structural and interface design of hierarchical porous carbon derived from soybeans as anode materials for potassium-ion batteries. *Journal of Power Sources*, **2020**, 463, 228172	8.9	32
87	Template-assisted molten-salt synthesis of hierarchical lithium-rich layered oxide nanowires as high-rate and long-cycling cathode materials. *Electrochimica Acta*, **2020**, 333, 135558	6.7	12
86	Nanoscale Al2O3 coating to stabilize selenium cathode for sodium–selenium batteries. *Journal of Materials Research*, **2020**, 35, 747-755	2.5	3

85	Microstructure and ionic conductivity of Li1.5Al0.5Ge1.5(PO4)3 solid electrolyte prepared by spark plasma sintering. *Ceramics International*, **2020**, 46, 7634-7641	5.1	4
84	Molecular-layer-deposited tincone: a new hybrid organic-inorganic anode material for three-dimensional microbatteries. *Chemical Communications*, **2020**, 56, 13221-13224	5.8	4
83	Pseudocapacitive Crystalline MnCoO and Amorphous MnCoS Core/Shell Heterostructure with Graphene for High-Performance K-Ion Hybrid Capacitors. *ACS Applied Materials & Interfaces*, **2020**, 12, 54773-54781	9.5	14
82	Suppressing Zn dendrite growth by molecular layer deposition to enable long-life and deeply rechargeable aqueous Zn anodes. *Journal of Materials Chemistry A*, **2020**, 8, 22100-22110	13	47
81	Transition-Metal Phosphides: Activity Origin, Energy-Related Electrocatalysis Applications, and Synthetic Strategies. *Advanced Functional Materials*, **2020**, 30, 2004009	15.6	122
80	Activation-free synthesis of microporous carbon from polyvinylidene fluoride as host materials for lithium-selenium batteries. *Journal of Power Sources*, **2019**, 438, 227059	8.9	18
79	Hierarchically porous carbon from waste coffee grounds for high-performance Li–Se batteries. *Electrochimica Acta*, **2019**, 325, 134931	6.7	20
78	Benchmarking Three Ruthenium Phosphide Phases for Electrocatalysis of the Hydrogen Evolution Reaction: Experimental and Theoretical Insights. *Chemistry - A European Journal*, **2019**, 25, 7826-7830	4.8	28
77	Visualizing the Oxidation Mechanism and Morphological Evolution of the Cubic-Shaped Superoxide Discharge Product in Na–Air Batteries. *Advanced Functional Materials*, **2019**, 29, 1808332	15.6	20
76	Spark Plasma Sintering of Lithium Aluminum Germanium Phosphate Solid Electrolyte and its Electrochemical Properties. *Nanomaterials*, **2019**, 9,	5.4	7
75	Pseudocapacitive Co9S8/graphene electrode for high-rate hybrid supercapacitors. *Carbon*, **2019**, 141, 134-142	10.4	85
74	Formation of size-dependent and conductive phase on lithium iron phosphate during carbon coating. *Nature Communications*, **2018**, 9, 929	17.4	35
73	Origin of phase inhomogeneity in lithium iron phosphate during carbon coating. *Nano Energy*, **2018**, 45, 52-60	17.1	12
72	Emerging applications of spark plasma sintering in all solid-state lithium-ion batteries and beyond. *Journal of Power Sources*, **2018**, 391, 10-25	8.9	19
71	Toward 3D Solid-State Batteries via Atomic Layer Deposition Approach. *Frontiers in Energy Research* , **2018**, 6,	3.8	17
70	Minimizing Polysulfide Shuttle Effect in Lithium-Ion Sulfur Batteries by Anode Surface Passivation. *ACS Applied Materials & Interfaces*, **2018**, 10, 21965-21972	9.5	16
69	Enabling High-Energy-Density Cathode for Lithium-Sulfur Batteries. *ACS Applied Materials & Interfaces*, **2018**, 10, 23094-23102	9.5	48
68	Ultrafine Pt Nanoparticle-Decorated Pyrite-Type CoS2 Nanosheet Arrays Coated on Carbon Cloth as a Bifunctional Electrode for Overall Water Splitting. *Advanced Energy Materials*, **2018**, 8, 1800935	21.8	217

67	Tailoring grain boundary structures and chemistry of Ni-rich layered cathodes for enhanced cycle stability of lithium-ion batteries. *Nature Energy*, **2018**, 3, 600-605	62.3	402
66	Highly stable Li 1.2 Mn 0.54 Co 0.13 Ni 0.13 O 2 enabled by novel atomic layer deposited AlPO 4 coating. *Nano Energy*, **2017**, 34, 120-130	17.1	137
65	Tracking the Effect of Sodium Insertion/Extraction in Amorphous and Anatase TiO2 Nanotubes. *Journal of Physical Chemistry C*, **2017**, 121, 11773-11782	3.8	19
64	Orientation and Ordering of Organic and Hybrid Inorganic□Organic Polyurea Films Using Molecular Layer Deposition. *Journal of Physical Chemistry C*, **2017**, 121, 11757-11764	3.8	13
63	Investigation of amorphous to crystalline phase transition of sodium titanate by X-ray absorption spectroscopy and scanning transmission X-ray microscopy. *Canadian Journal of Chemistry*, **2017**, 95, 1163-1169	0.9	2
62	Atomic Layer Deposited Non-Noble Metal Oxide Catalyst for Sodium□Air Batteries: Tuning the Morphologies and Compositions of Discharge Product. *Advanced Functional Materials*, **2017**, 27, 1606662	15.6	30
61	Nanoscale Manipulation of Spinel Lithium Nickel Manganese Oxide Surface by Multisite Ti Occupation as High-Performance Cathode. *Advanced Materials*, **2017**, 29, 1703764	24	91
60	Atomic Layer Deposited Lithium Silicates as Solid-State Electrolytes for All-Solid-State Batteries. *ACS Applied Materials & Interfaces*, **2017**, 9, 31786-31793	9.5	43
59	Role of graphene in enhancing the mechanical properties of TiO/graphene heterostructures. *Nanoscale*, **2017**, 9, 11678-11684	7.7	17
58	Enhanced Performance of P2-Na0.66(Mn0.54Co0.13Ni0.13)O2 Cathode for Sodium-Ion Batteries by Ultrathin Metal Oxide Coatings via Atomic Layer Deposition. *Advanced Functional Materials*, **2017**, 27, 1701870	15.6	92
57	Atomic Layer Deposition of Hierarchical CNTs@FePO4 Architecture as a 3D Electrode for Lithium-Ion and Sodium-Ion Batteries. *Advanced Materials Interfaces*, **2016**, 3, 1600468	4.6	16
56	Morphology- and lattice stability-dependent performance of nanostructured Li4Ti5O12 probed by in situ high-pressure Raman spectroscopy and synchrotron X-ray diffraction. *CrystEngComm*, **2016**, 18, 736-743	3.3	7
55	Tunable porous structure of metal organic framework derived carbon and the application in lithium□sulfur batteries. *Journal of Power Sources*, **2016**, 302, 174-179	8.9	81
54	Platinum single-atom and cluster catalysis of the hydrogen evolution reaction. *Nature Communications*, **2016**, 7, 13638	17.4	1085
53	Safe and Durable High-Temperature Lithium-Sulfur Batteries via Molecular Layer Deposited Coating. *Nano Letters*, **2016**, 16, 3545-9	11.5	126
52	Titanium Dioxide/Lithium Phosphate Nanocomposite Derived from Atomic Layer Deposition as a High-Performance Anode for Lithium Ion Batteries. *Advanced Materials Interfaces*, **2016**, 3, 1600369	4.6	24
51	Elegant design of electrode and electrode/electrolyte interface in lithium-ion batteries by atomic layer deposition. *Nanotechnology*, **2015**, 26, 024001	3.4	106
50	Toward a Sodium□Air□Battery: Revealing the Critical Role of Humidity. *Journal of Physical Chemistry C*, **2015**, 119, 13433-13441	3.8	58

49	Atomically precise growth of sodium titanates as anode materials for high-rate and ultralong cycle-life sodium-ion batteries. *Journal of Materials Chemistry A*, **2015**, 3, 24281-24288	13	29
48	Extremely stable platinum nanoparticles encapsulated in a zirconia nanocage by area-selective atomic layer deposition for the oxygen reduction reaction. *Advanced Materials*, **2015**, 27, 277-81	24	206
47	Unravelling the Role of Electrochemically Active FePO Coating by Atomic Layer Deposition for Increased High-Voltage Stability of LiNiMnO Cathode Material. *Advanced Science*, **2015**, 2, 1500022	13.6	89
46	Highly stable Na2/3 (Mn0.54 Ni0.13 Co0.13)O2 cathode modified by atomic layer deposition for sodium-ion batteries. *ChemSusChem*, **2015**, 8, 2537-43	8.3	80
45	A novel approach in controlling the conductivity of thin films using molecular layer deposition. *Applied Surface Science*, **2015**, 357, 1319-1324	6.7	14
44	Atomic layer deposition of amorphous iron phosphates on carbon nanotubes as cathode materials for lithium-ion batteries. *Electrochimica Acta*, **2015**, 162, 275-281	6.7	42
43	Self-stacked nitrogen-doped carbon nanotubes as long-life air electrode for sodium-air batteries: Elucidating the evolution of discharge product morphology. *Nano Energy*, **2015**, 12, 698-708	17.1	69
42	Atomic scale enhancement of metal–support interactions between Pt and ZrC for highly stable electrocatalysts. *Energy and Environmental Science*, **2015**, 8, 1450-1455	35.4	101
41	Size-dependent surface phase change of lithium iron phosphate during carbon coating. *Nature Communications*, **2014**, 5, 3415	17.4	62
40	Surface modification of nitrogen-doped carbon nanotubes by ozone via atomic layer deposition. *Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films*, **2014**, 32, 01A124	2.9	9
39	Atomic layer deposited coatings to significantly stabilize anodes for Li ion batteries: effects of coating thickness and the size of anode particles. *Journal of Materials Chemistry A*, **2014**, 2, 2306	13	63
38	Superior stable sulfur cathodes of Li-S batteries enabled by molecular layer deposition. *Chemical Communications*, **2014**, 50, 9757-60	5.8	51
37	Nanoscale stabilization of Li–sulfur batteries by atomic layer deposited Al2O3. *RSC Advances*, **2014**, 4, 27126	3.7	33
36	Chemical Structure of Nitrogen-Doped Graphene with Single Platinum Atoms and Atomic Clusters as a Platform for the PEMFC Electrode. *Journal of Physical Chemistry C*, **2014**, 118, 3890-3900	3.8	105
35	Atomic layer deposition of solid-state electrolyte coated cathode materials with superior high-voltage cycling behavior for lithium ion battery application. *Energy and Environmental Science*, **2014**, 7, 768-778	35.4	284
34	High stability and activity of Pt electrocatalyst on atomic layer deposited metal oxide/nitrogen-doped graphene hybrid support. *International Journal of Hydrogen Energy*, **2014**, 39, 15967-15974	6.7	43
33	Highly compact TiO2layer for efficient hole-blocking in perovskite solar cells. *Applied Physics Express*, **2014**, 7, 052301	2.4	181
32	Significant impact on cathode performance of lithium-ion batteries by precisely controlled metal oxide nanocoatings via atomic layer deposition. *Journal of Power Sources*, **2014**, 247, 57-69	8.9	178

31	Atomic layer deposition of lithium phosphates as solid-state electrolytes for all-solid-state microbatteries. *Nanotechnology*, **2014**, 25, 504007	3.4	67
30	Rational design of atomic-layer-deposited LiFePO4 as a high-performance cathode for lithium-ion batteries. *Advanced Materials*, **2014**, 26, 6472-7	24	138
29	Atomic layer deposited Li4Ti5O12 on nitrogen-doped carbon nanotubes. *RSC Advances*, **2013**, 3, 7285	3.7	47
28	Atomic Layer Deposition of Lithium Tantalate Solid-State Electrolytes. *Journal of Physical Chemistry C*, **2013**, 117, 20260-20267	3.8	106
27	Structurally tailored graphene nanosheets as lithium ion battery anodes: an insight to yield exceptionally high lithium storage performance. *Nanoscale*, **2013**, 5, 12607-15	7.7	96
26	Atomic layer deposited aluminium phosphate thin films on N-doped CNTs. *RSC Advances*, **2013**, 3, 4492	3.7	26
25	Ultrathin atomic layer deposited ZrO2 coating to enhance the electrochemical performance of Li4Ti5O12 as an anode material. *Electrochimica Acta*, **2013**, 93, 195-201	6.7	93
24	Controlled synthesis of Zirconium Oxide on graphene nanosheets by atomic layer deposition and its growth mechanism. *Carbon*, **2013**, 52, 74-82	10.4	42
23	A facile soft-template synthesis of mesoporous polymeric and carbonaceous nanospheres. *Nature Communications*, **2013**, 4,	17.4	475
22	Facile controlled synthesis and growth mechanisms of flower-like and tubular MnO2 nanostructures by microwave-assisted hydrothermal method. *Journal of Colloid and Interface Science*, **2012**, 369, 123-8	9.3	122
21	Microwave-assisted hydrothermal synthesis of nanostructured spinel Li4Ti5O12 as anode materials for lithium ion batteries. *Electrochimica Acta*, **2012**, 63, 100-104	6.7	54
20	High concentration nitrogen doped carbon nanotube anodes with superior Li+ storage performance for lithium rechargeable battery application. *Journal of Power Sources*, **2012**, 197, 238-245	8.9	138
19	Graphitic carbon nitride materials: controllable synthesis and applications in fuel cells and photocatalysis. *Energy and Environmental Science*, **2012**, 5, 6717	35.4	1385
18	Crystallinity-Controlled Synthesis of Zirconium Oxide Thin Films on Nitrogen-Doped Carbon Nanotubes by Atomic Layer Deposition. *Journal of Physical Chemistry C*, **2012**, 116, 14656-14664	3.8	32
17	Hierarchically porous LiFePO4/nitrogen-doped carbon nanotubes composite as a cathode for lithium ion batteries. *Journal of Materials Chemistry*, **2012**, 22, 7537		126
16	Tin Oxide with Controlled Morphology and Crystallinity by Atomic Layer Deposition onto Graphene Nanosheets for Enhanced Lithium Storage. *Advanced Functional Materials*, **2012**, 22, 1647-1654	15.6	359
15	Study on the hydrogen desorption mechanism of a MgV composite prepared by SPS. *International Journal of Hydrogen Energy*, **2012**, 37, 984-989	6.7	25
14	Controllable synthesis of graphene-based titanium dioxide nanocomposites by atomic layer deposition. *Nanotechnology*, **2011**, 22, 165602	3.4	82

13	Nitrogen-doped carbon nanotubes with tunable structure and high yield produced by ultrasonic spray pyrolysis. *Applied Surface Science*, **2011**, 257, 7837-7844	6.7	44
12	Synthesis and characterization of phosphorus–nitrogen doped multiwalled carbon nanotubes. *Carbon*, **2011**, 49, 5014-5021	10.4	40
11	Nanoporous graphitic-C3N4@carbon metal-free electrocatalysts for highly efficient oxygen reduction. *Journal of the American Chemical Society*, **2011**, 133, 20116-9	16.4	869
10	Nitrogen-doped carbon nanotubes as cathode for lithium–air batteries. *Electrochemistry Communications*, **2011**, 13, 668-672	5.1	237
9	Nitrogen doping effects on the structure of graphene. *Applied Surface Science*, **2011**, 257, 9193-9198	6.7	400
8	Non-Aqueous Approach to Synthesize Amorphous/Crystalline Metal Oxide-Graphene Nanosheet Hybrid Composites. *Journal of Physical Chemistry C*, **2010**, 114, 18330-18337	3.8	70
7	Mesoporous LiFePO4/C nanocomposite cathode materials for high power lithium ion batteries with superior performance. *Advanced Materials*, **2010**, 22, 4944-8	24	352
6	The role of spark plasma sintering on the improvement of hydrogen storage properties of Mg-based composites. *International Journal of Hydrogen Energy*, **2010**, 35, 8080-8087	6.7	6
5	Hydrogen storage properties of Mg–30vol.%V7.4Zr7.4Ti7.4Ni composite prepared by spark plasma sintering. *International Journal of Hydrogen Energy*, **2009**, 34, 4365-4370	6.7	4
4	The effect of rapid solidification on the microstructure and hydrogen storage properties of V35Ti25Cr40 hydrogen storage alloy. *International Journal of Hydrogen Energy*, **2009**, 34, 8094-8100	6.7	23
3	Improving hydrogen storage properties of Laves phase related BCC solid solution alloy by SPS preparation method. *International Journal of Hydrogen Energy*, **2009**, 34, 8597-8602	6.7	21
2	Hydrogen storage performance of Mg-based composites prepared by spark plasma sintering. *Journal of Alloys and Compounds*, **2009**, 486, 338-342	5.7	16
1	Platinum single-atom and cluster catalysis of the hydrogen evolution reaction		1