Lai-Sen Wang

List of Publications by Year
in descending order

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76 papers	3,581 citations	126907 33 h-index	144013 57 g-index
76 all docs	76 docs citations	76 times ranked	3631 citing authors

#	Article	IF	Citations
1	Challenges and Recent Advances in High Capacity Liâ€Rich Cathode Materials for High Energy Density Lithiumâ€Ion Batteries. Advanced Materials, 2021, 33, e2005937.	21.0	253
2	Double-shell Li-rich layered oxide hollow microspheres with sandwich-like carbon@spinel@layered@spinel@carbon shells as high-rate lithium ion battery cathode. Nano Energy, 2019, 59, 184-196.	16.0	194
3	Lithium Deficiencies Engineering in Li-Rich Layered Oxide Li_{1.098}Mn_{0.533}Ni_{0.113}Co_{0.138}O₂ for High-Stability Cathode. Journal of the American Chemical Society, 2019, 141, 10876-10882.	13.7	171
4	Recent Advances and Strategies toward Polysulfides Shuttle Inhibition for Highâ€Performance Liâ€“S Batteries. Advanced Science, 2022, 9, e2106004.	11.2	161
5	Enhanced Microwave Absorption Properties by Tuning Cation Deficiency of Perovskite Oxides of Two-Dimensional LaFeO₃/C Composite in X-Band. ACS Applied Materials & Interfaces, 2017, 9, 7601-7610.	8.0	123
6	A Universal Strategy toward the Precise Regulation of Initial Coulombic Efficiency of Liâ€Rich Mnâ€Based Cathode Materials. Advanced Materials, 2021, 33, e2103173.	21.0	116
7	Electrostatic Assembly of Sandwich-like Ag-C@ZnO-C@Ag-C Hybrid Hollow Microspheres with Excellent High-Rate Lithium Storage Properties. ACS Nano, 2016, 10, 1283-1291.	14.6	109
8	Enhanced electrochemical performances of layered-spinel heterostructured lithium-rich Li1.2Ni0.13Co0.13Mn0.54O2 cathode materials. Chemical Engineering Journal, 2019, 370, 499-507.	12.7	106
9	Facile synthesis and microwave absorption properties of yolk-shell ZnO-Ni-C/RGO composite materials. Chemical Engineering Journal, 2018, 333, 92-100.	12.7	102
10	Enhanced microwave absorption properties in GHz range of Fe3O4/C composite materials. Journal of Alloys and Compounds, 2015, 649, 537-543.	5.5	95
11	Anchoring Polysulfides and Accelerating Redox Reaction Enabled by Feâ€Based Compounds in Lithiumâ€“Sulfur Batteries. Advanced Functional Materials, 2021, 31, 2100970.	14.9	94
12	Multifunctional roles of carbonâ€based hosts for Liâ€metal anodes: A review. , 2021, 3, 303-329.		93
13	Dual Electrostatic Assembly of Graphene Encapsulated Nanosheetâ€Assembled ZnOâ€Mnâ€C Hollow Microspheres as a Lithium Ion Battery Anode. Advanced Functional Materials, 2018, 28, 1707433.	14.9	83
14	Copper-Nanoparticle-Induced Porous Si/Cu Composite Films as an Anode for Lithium Ion Batteries. ACS Nano, 2017, 11, 6893-6903.	14.6	82
15	Manipulating the Local Electronic Structure in Liâ€Rich Layered Cathode Towards Superior Electrochemical Performance. Advanced Functional Materials, 2021, 31, 2100783.	14.9	79
16	Uniform Na⁺ Dopingâ€Induced Defects in Liâ€and Mnâ€Rich Cathodes for Highâ€Performance Lithiumâ€Ion Batteries. Advanced Science, 2019, 6, 1802114.	11.2	78
17	3D lithiophilicâ€“lithiophobicâ€“lithiophilic dual-gradient porous skeleton for highly stable lithium metal anode. Journal of Materials Chemistry A, 2020, 8, 313-322.	10.3	76
18	Influence of substrate temperature on mechanical, optical and electrical properties of ZnO:Al films. Journal of Alloys and Compounds, 2010, 508, 370-374.	5.5	72

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19	One-pot synthesis of hexagonal and triangular nickelâ€“copper alloy nanoplates and their magnetic and catalytic properties. Journal of Materials Chemistry, 2012, 22, 8336.	6.7	66
20	Facile synthesis of Fe 3 O 4 /C composites for broadband microwave absorption properties. Applied Surface Science, 2018, 445, 82-88.	6.1	65
21	Self-assembly synthesis of 3D graphene-encapsulated hierarchical Fe 3 O 4 nano-flower architecture with high lithium storage capacity and excellent rate capability. Journal of Power Sources, 2017, 365, 98-108.	7.8	61
22	3D Graphene Encapsulated Hollow CoSnO₃ Nanoboxes as a High Initial Coulombic Efficiency and Lithium Storage Capacity Anode. Small, 2018, 14, 1703513.	10.0	60
23	Engineering oxygen vacancies in hierarchically Li-rich layered oxide porous microspheres for high-rate lithium ion battery cathode. Science China Materials, 2019, 62, 1374-1384.	6.3	58
24	Facile preparation and microwave absorption properties of porous Co/CoO microrods. Journal of Alloys and Compounds, 2017, 721, 411-418.	5.5	52
25	One-pot fabrication of graphene sheets decorated Co2P-Co hollow nanospheres for advanced lithium ion battery anodes. Electrochimica Acta, 2017, 232, 465-473.	5.2	49
26	SnS homojunction nanowire-based solar cells. Journal of Materials Chemistry, 2012, 22, 16437.	6.7	48
27	Electrochemically induced highly ion conductive porous scaffolds to stabilize lithium deposition for lithium metal anodes. Journal of Materials Chemistry A, 2019, 7, 11683-11689.	10.3	47
28	Surface Ni-rich engineering towards highly stable Li1.2Mn0.54Ni0.13Co0.13O2 cathode materials. Energy Storage Materials, 2020, 25, 76-85.	18.0	47
29	MOFs-derived Co-C@C hollow composites with high-performance electromagnetic wave absorption. Journal of Alloys and Compounds, 2021, 856, 158183.	5.5	47
30	Facile fabrication of various zinc-nickel citrate microspheres and their transformation to ZnO-NiO hybrid microspheres with excellent lithium storage properties. Scientific Reports, 2015, 5, 8351.	3.3	46
31	Conductive polyaniline doped with phytic acid as a binder and conductive additive for a commercial silicon anode with enhanced lithium storage properties. Journal of Materials Chemistry A, 2020, 8, 16323-16331.	10.3	46
32	Mechanisms and applications of layer/spinel phase transition in Li- and Mn-rich cathodes for lithium-ion batteries. Rare Metals, 2022, 41, 1456-1476.	7.1	41
33	Lithium-rich layered oxide nanowires bearing porous structures and spinel domains as cathode materials for lithium-ion batteries. Journal of Power Sources, 2019, 418, 122-129.	7.8	40
34	Dendriteâ€Free Reverse Lithium Deposition Induced by Ion Rectification Layer toward Superior Lithium Metal Batteries. Advanced Functional Materials, 2021, 31, 2104081.	14.9	39
35	Recent developments and challenges of Li-rich Mn-based cathode materials for high-energy lithium-ion batteries. Materials Today Energy, 2020, 18, 100518.	4.7	36
36	Shape-dependent magnetic and microwave absorption properties of iron oxide nanocrystals. Materials Chemistry and Physics, 2017, 192, 339-348.	4.0	35

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37	Multi-strategy synergistic Li-rich layered oxides with fluorine-doping and surface coating of oxygen vacancy bearing CeO2 to achieve excellent cycling stability. Chemical Engineering Journal, 2022, 431, 133799.	12.7	35
38	High-Performance Naâ€“O₂ Batteries Enabled by Oriented NaO₂ Nanowires as Discharge Products. Nano Letters, 2018, 18, 3934-3942.	9.1	33
39	Challenge and Strategies in Room Temperature Sodiumâ€“Sulfur Batteries: A Comparison with Lithiumâ€“Sulfur Batteries. Small, 2022, 18, e2107368.	10.0	32
40	Disproportionation route to monodispersed copper nanoparticles for the catalytic synthesis of propargylamines. RSC Advances, 2013, 3, 19812.	3.6	31
41	Synthesis of ZnO-Cu-C yolk-shell hybrid microspheres with enhanced electrochemical properties for lithium ion battery anodes. Electrochimica Acta, 2017, 226, 79-88.	5.2	31
42	Bottom-top channeling Li nucleation and growth by a gradient lithiophilic 3D conductive host for highly stable Li-metal anodes. Journal of Materials Chemistry A, 2020, 8, 1678-1686.	10.3	31
43	Controllable synthesis of Cuâ€“Ni coreâ€“shell nanoparticles and nanowires with tunable magnetic properties. Chemical Communications, 2016, 52, 6918-6921.	4.1	30
44	Effect of Component Distribution and Nanoporosity in CuPt Nanotubes on Electrocatalysis of the Oxygen Reduction Reaction. ChemSusChem, 2015, 8, 486-494.	6.8	28
45	Boosting the Electrochemical Performance of Li- and Mn-Rich Cathodes by a Three-in-One Strategy. Nano-Micro Letters, 2021, 13, 205.	27.0	28
46	Electron transport properties of magnetic granular films. Science China: Physics, Mechanics and Astronomy, 2013, 56, 15-28.	5.1	25
47	Promising Electrode and Electrolyte Materials for Highâ€Energyâ€Density Thinâ€Film Lithium Batteries. Energy and Environmental Materials, 2022, 5, 133-156.	12.8	25
48	Morphology Control and Na⁺ Doping toward High-Performance Li-Rich Layered Cathode Materials for Lithium-Ion Batteries. ACS Sustainable Chemistry and Engineering, 2021, 9, 197-206.	6.7	25
49	Multiscale Deficiency Integration by Na-Rich Engineering for High-Stability Li-Rich Layered Oxide Cathodes. ACS Applied Materials & Interfaces, 2021, 13, 8239-8248.	8.0	23
50	Utilizing the different distribution habit of La and Zr in Li-rich Mn-based cathode to achieve fast lithium-ion diffusion kinetics. Journal of Power Sources, 2021, 499, 229915.	7.8	21
51	MoSe2-Ni3Se4 Hybrid Nanoelectrocatalysts and Their Enhanced Electrocatalytic Activity for Hydrogen Evolution Reaction. Nanoscale Research Letters, 2020, 15, 132.	5.7	19
52	Multistage Li_{1.2}Ni_{0.2}Mn_{0.6}O₂ Microâ€architecture towards Highâ€Performance Cathode Materials for Lithiumâ€Ion Batteries. ChemElectroChem, 2017, 4, 3250-3256.	3.4	17
53	Ionâ€and Electronâ€Conductive Buffering Layerâ€Modified Si Film for Use as a Highâ€Rate Longâ€Term Lithiumâ€Ion Battery Anode. ChemSusChem, 2019, 12, 252-260.	6.8	17
54	Enhancing cycling stability in Li-rich Mn-based cathode materials by solid-liquid-gas integrated interface engineering. Nano Energy, 2022, 97, 107201.	16.0	17

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55	Function and Application of Defect Chemistry in Highâ€Capacity Electrode Materials for Liâ€Based Batteries. Chemistry - an Asian Journal, 2020, 15, 3620-3636.	3.3	12
56	Preparation and high-frequency soft magnetic property of FeCo-based thin films. Rare Metals, 2016, 35, 742-746.	7.1	11
57	Blue-luminescent hafnia nanoclusters synthesized by plasma gas-phase method. Materials Chemistry and Physics, 2011, 130, 823-826.	4.0	10
58	A novel morphology-controlled synthesis of Na+-doped Li- and Mn-rich cathodes by the self-assembly of amphiphilic spherical micelles. Sustainable Materials and Technologies, 2020, 25, e00171.	3.3	10
59	Manipulating External Electric Field and Tensile Strain toward High Energy Density Stability in Fast-Charging Li-Rich Cathode Materials. Journal of Physical Chemistry Letters, 2020, 11, 2322-2329.	4.6	10
60	Intrinsic performance regulation in hierarchically porous Co3O4 microrods towards high-rate lithium ion battery anode. Materials Today Energy, 2020, 16, 100383.	4.7	10
61	In Situ Induced Latticeâ€Matched Interfacial Oxygenâ€Passivationâ€Layer Endowing Liâ€Rich and Mnâ€Based Cathodes with Ultralong Life. Small, 2022, 18, .	10.0	10
62	Facile fabrication of ZnOâ€“CuO porous hybrid microspheres as lithium ion battery anodes with enhanced cyclability. Rare Metals, 2017, 36, 403-410.	7.1	9
63	Electrochemically induced high ion and electron conductive interlayer in porous multilayer Si film anode with enhanced lithium storage properties. Journal of Power Sources, 2021, 481, 228833.	7.8	9
64	Integrated On-Chip Solenoid Inductors With Nanogranular Magnetic Cores. IEEE Transactions on Magnetics, 2016, 52, 1-4.	2.1	8
65	Transition from paramagnetism to ferromagnetism in HfO2 nanorods. Journal of Applied Physics, 2013, 113, 076102.	2.5	7
66	Electrical transport properties in Co nanocluster-assembled granular film. Journal of Applied Physics, 2017, 121, .	2.5	6
67	A Guideline for Tailoring Lattice Oxygen Activity in Lithium-Rich Layered Cathodes by Strain. Journal of Physical Chemistry Letters, 2019, 10, 2202-2207.	4.6	6
68	Nickel Colloidal Superparticles: Microemulsion-Based Self-Assembly Preparation and Their Transition from Room-Temperature Superparamagnetism to Ferromagnetism. Journal of Physical Chemistry C, 2021, 125, 5880-5889.	3.1	6
69	High Frequency Characteristics of Fe65Co35 Alloy Cluster-Assembled Films Prepared by Energetic Cluster Deposition. Journal of Nanoscience and Nanotechnology, 2011, 11, 11119-11123.	0.9	4
70	Sputtering Coating of Lithium Fluoride Film on Lithium Cobalt Oxide Electrodes for Reducing the Polarization of Lithium-Ion Batteries. Nanomaterials, 2021, 11, 3393.	4.1	4
71	Challenges and Recent Advances in High Capacity Liâ€Rich Cathode Materials for High Energy Density Lithiumâ€Ion Batteries (Adv. Mater. 50/2021). Advanced Materials, 2021, 33, .	21.0	3
72	Preparation of LiNi0.5Mn1.5O4 cathode materials by using different-sized Mn3O4 nanocrystals as precursors. Journal of Solid State Electrochemistry, 2022, 26, 1359-1368.	2.5	3

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73	Gas-phase synthesis and magnetism of HfO2 nanoclusters. European Physical Journal D, 2013, 67, 1.	1.3	2
74	Electrical transport properties in Fe-Cr nanocluster-assembled granular films. Journal of Magnetism and Magnetic Materials, 2017, 438, 185-192.	2.3	2
75	Influence of surface and interface modification on the electrical transport behaviors in Co@Cu nanocomposite films. Journal of Magnetism and Magnetic Materials, 2018, 460, 34-40.	2.3	1
76	High frequency characteristics of Fe<inf>65</inf>Co<inf>35</inf> alloy cluster-assembled films prepared by energetic cluster deposition. , 2010, , .		0