Yonggao Xia

List of Publications by Year
in descending order

114 papers	5,771 citations	70961 41 h-index	82410 72 g-index
119 all docs	119 docs citations	119 times ranked	6358 citing authors

#	Article	IF	Citations
1	PEDOT:PSS for Flexible and Stretchable Electronics: Modifications, Strategies, and Applications. Advanced Science, 2019, 6, 1900813.	5.6	563
2	Gasâ€“solid interfacial modification of oxygen activity in layered oxide cathodes for lithium-ion batteries. Nature Communications, 2016, 7, 12108.	5.8	531
3	Nucleation of dislocations and their dynamics in layered oxide cathode materials during battery charging. Nature Energy, 2018, 3, 641-647.	19.8	281
4	Morphological Evolution of High-Voltage Spinel LiNi_{0.5}Mn_{1.5}O₄ Cathode Materials for Lithium-Ion Batteries: The Critical Effects of Surface Orientations and Particle Size. ACS Applied Materials & Interfaces, 2016, 8, 4661-4675.	4.0	212
5	Abundant nanoscale defects to eliminate voltage decay in Li-rich cathode materials. Energy Storage Materials, 2019, 16, 220-227.	9.5	144
6	A high-capacity P2 Na2/3Ni1/3Mn2/3O2 cathode material for sodium ion batteries with oxygen activity. Journal of Power Sources, 2018, 395, 16-24.	4.0	133
7	Durable high-rate capability Na0.44MnO2 cathode material for sodium-ion batteries. Nano Energy, 2016, 27, 602-610.	8.2	126
8	Self-Templating Construction of 3D Hierarchical Macro-/Mesoporous Silicon from 0D Silica Nanoparticles. ACS Nano, 2017, 11, 889-899.	7.3	100
9	Thermally boosted upconversion and downshifting luminescence in Sc2(MoO4)3:Yb/Er with two-dimensional negative thermal expansion. Nature Communications, 2022, 13, 2090.	5.8	99
10	Enhanced Electrochemical Performance with Surface Coating by Reactive Magnetron Sputtering on Lithium-Rich Layered Oxide Electrodes. ACS Applied Materials & Interfaces, 2014, 6, 9185-9193.	4.0	98
11	Understanding and Controlling Anionic Electrochemical Activity in High-Capacity Oxides for Next Generation Li-Ion Batteries. Chemistry of Materials, 2017, 29, 908-915.	3.2	97
12	Electrochemical properties of 0.6Li[Li1/3Mn2/3]O2â€“0.4LiNixMnyCo1âˆ’xâˆ’yO2 cathode materials for lithium-ion batteries. Journal of Power Sources, 2012, 218, 128-133.	4.0	93
13	Improving the cyclability performance of lithium-ion batteries by introducing lithium difluorophosphate (LiPO₂F₂) additive. RSC Advances, 2017, 7, 26052-26059.	1.7	93
14	Structure and electrochemistry of B doped Li(Li0.2Ni0.13Co0.13Mn0.54)1-B O2 as cathode materials for lithium-ion batteries. Journal of Power Sources, 2016, 327, 273-280.	4.0	91
15	Morphology controlled synthesis and modification of high-performance LiMnPO4 cathode materials for Li-ion batteries. Journal of Materials Chemistry, 2012, 22, 21144.	6.7	90
16	Synthesis process and luminescence properties of Tm3+ in AWO4 (A=Ca, Sr, Ba) blue phosphors. Journal of Alloys and Compounds, 2009, 487, 758-762.	2.8	89
17	Synthesis and luminescence properties of Tb3+:NaGd(WO4)2 novel green phosphors. Journal of Luminescence, 2009, 129, 668-671.	1.5	87
18	Polyimide matrix-enhanced cross-linked gel separator with three-dimensional heat-resistance skeleton for high-safety and high-power lithium ion batteries. Journal of Materials Chemistry A, 2014, 2, 9134.	5.2	86

#	Article	IF	Citations
19	Porous membrane with high curvature, three-dimensional heat-resistance skeleton: a new and practical separator candidate for high safety lithium ion battery. Scientific Reports, 2015, 5, 8255.	1.6	80
20	Silicon/carbon lithium-ion battery anode with 3D hierarchical macro-/mesoporous silicon network: Self-templating synthesis via magnesiothermic reduction of silica/carbon composite. Journal of Power Sources, 2019, 412, 93-104.	4.0	77
21	Surface structural conversion and electrochemical enhancement by heat treatment of chemical pre-delithiation processed lithium-rich layered cathode material. Journal of Power Sources, 2014, 268, 683-691.	4.0	74
22	Solvothermal synthesis of Fe-doping LiMnPO4 nanomaterials for Li-ion batteries. Journal of Power Sources, 2014, 248, 246-252.	4.0	72
23	Si/Ag/C Nanohybrids with <i>in Situ</i> Incorporation of Super-Small Silver Nanoparticles: Tiny Amount, Huge Impact. ACS Nano, 2018, 12, 861-875.	7.3	67
24	The structure, morphology, and electrochemical properties of Li1+xNi1/6Co1/6Mn4/6O2.25+x/2 (0.1â‰xâ‰0.7) cathode materials. Electrochimica Acta, 2012, 66, 61-66.	2.6	61
25	One-step hydrothermal method synthesis of coreâ€"shell LiNi0.5Mn1.5O4 spinel cathodes for Li-ion batteries. Journal of Power Sources, 2014, 256, 66-71.	4.0	61
26	A comparative study on the oxidation state of lattice oxygen among Li_{1.14}Ni_{0.136}Co_{0.136}Mn_{0.544}O₂, Li₂MnO₃, LiNi_{0.5}Co_{0.2}Mn_{0.3}O₂ and LiCoO₂ for the initial chargeâ€"discharge. Journal of Materials Chemistry A, 2015, 3, 11930-11939.	5.2	61
27	Structural insights into composition design of Li-rich layered cathode materials for high-energy rechargeable battery. Materials Today, 2021, 51, 15-26.	8.3	60
28	First observation of mutual energy transfer of Mn⁴⁺â€"Er³⁺via different excitation in Gd₂ZnTiO₆:Mn⁴⁺/Er³⁺phosphors. Journal of Materials Chemistry C, 2017, 5, 9098-9105.	2.7	57
29	Fluorinated Electrolytes for Li-Ion Batteries: The Lithium Difluoro(oxalato)borate Additive for Stabilizing the Solid Electrolyte Interphase. ACS Omega, 2017, 2, 8741-8750.	1.6	55
30	Photoluminescence green in microspheres of CaWO4:Tb3+ processed in conventional hydrothermal. Optical Materials, 2009, 31, 1513-1516.	1.7	53
31	Cocktail therapy towards high temperature/high voltage lithium metal battery via solvation sheath structure tuning. Energy Storage Materials, 2021, 38, 599-608.	9.5	53
32	Effects of Na+ contents on electrochemical properties of Li1.2Ni0.13Co0.13Mn0.54O2 cathode materials. Journal of Power Sources, 2013, 240, 530-535.	4.0	52
33	New perspective to understand the effect of electrochemical prelithiation behaviors on silicon monoxide. RSC Advances, 2018, 8, 14473-14478.	1.7	52
34	Hydrothermal synthesis and photoluminescence of SrWO4:Tb3+ novel green phosphor. Materials Research Bulletin, 2009, 44, 1863-1866.	2.7	50
35	Synthesis of Three-Dimensional Nanoporous Li-Rich Layered Cathode Oxides for High Volumetric and Power Energy Density Lithium-Ion Batteries. ACS Applied Materials & Interfaces, 2017, 9, 3661-3666.	4.0	50
36	Localized concentration reversal of lithium during intercalation into nanoparticles. Science Advances, 2018, 4, eaao2608.	4.7	50

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37	Identifying the chemical and structural irreversibility in LiNi_{0.8}Co_{0.15}Al_{0.05}O₂ â€“ a model compound for classical layered intercalation. Journal of Materials Chemistry A, 2018, 6, 4189-4198.	5.2	48
38	Scalable in Situ Synthesis of Li₄Ti₅O₁₂/Carbon Nanohybrid with Supersmall Li₄Ti₅O₁₂Nanoparticles Homogeneously Embedded in Carbon Matrix. ACS Applied Materials & Interfaces, 2018, 10, 2591-2602.	4.0	47
39	A 3D porous Li-rich cathode material with an in situ modified surface for high performance lithium ion batteries with reduced voltage decay. Journal of Materials Chemistry A, 2016, 4, 7230-7237.	5.2	46
40	Photoluminescence properties of NaGd(MoO4)2:Eu3+ nanophosphors prepared by solâ€“gel method. Materials Research Bulletin, 2010, 45, 1145-1149.	2.7	44
41	Silicon lithium-ion battery anode with enhanced performance: Multiple effects of silver nanoparticles. Journal of Materials Science and Technology, 2018, 34, 1902-1911.	5.6	44
42	Boosting energy efficiency of Li-rich layered oxide cathodes by tuning oxygen redox kinetics and reversibility. Energy Storage Materials, 2021, 35, 388-399.	9.5	42
43	5â€…Vâ€Class Electrolytes Based on Fluorinated Solvents for Liâ€Ion Batteries with Excellent Cyclability. ChemElectroChem, 2015, 2, 1707-1712.	1.7	41
44	Concentration-gradient LiMn0.8Fe0.2PO4 cathode material for high performance lithium ion battery. Journal of Power Sources, 2016, 304, 293-300.	4.0	41
45	Microwave synthesis of spherical spinel LiNi0.5Mn1.5O4 as cathode material for lithium-ion batteries. Journal of Alloys and Compounds, 2012, 518, 68-73.	2.8	40
46	From â^’20 Â°C to 150 Â°C: a lithium secondary battery with a wide temperature window obtained <i>via</i> manipulated competitive decomposition in electrolyte solution. Journal of Materials Chemistry A, 2021, 9, 9307-9318.	5.2	40
47	Constructing durable carbon layer on LiMn0.8Fe0.2PO4 with superior long-term cycling performance for lithium-ion battery. Electrochimica Acta, 2016, 191, 200-206.	2.6	39
48	Green Facile Scalable Synthesis of Titania/Carbon Nanocomposites: New Use of Old Dental Resins. ACS Applied Materials & Interfaces, 2014, 6, 18461-18468.	4.0	38
49	Luminescence properties of monodispersed spherical BaWO4:Eu3+ microphosphors for white light-emitting diodes. Journal of Materials Science, 2011, 46, 1184-1189.	1.7	37
50	Metastability and Reversibility of Anionic Redox-Based Cathode for High-Energy Rechargeable Batteries. Cell Reports Physical Science, 2020, 1, 100028.	2.8	37
51	Eliminating Voltage Decay of Lithiumâ€Rich Li_{1.14}Mn_{0.54}Ni_{0.14}Co_{0.14}O₂ Cathodes by Controlling the Electrochemical Process. Chemistry - A European Journal, 2015, 21, 7503-7510.	1.7	36
52	Facile Scalable Synthesis of TiO₂/Carbon Nanohybrids with Ultrasmall TiO₂ Nanoparticles Homogeneously Embedded in Carbon Matrix. ACS Applied Materials & Interfaces, 2015, 7, 24247-24255.	4.0	36
53	Silicon Oxycarbide/Carbon Nanohybrids with Tiny Silicon Oxycarbide Particles Embedded in Free Carbon Matrix Based on Photoactive Dental Methacrylates. ACS Applied Materials & Interfaces, 2016, 8, 13982-13992.	4.0	36
54	Oxidation Decomposition Mechanism of Fluoroethylene Carbonateâ€Based Electrolytes for Highâ€Voltage Lithium Ion Batteries: A DFT Calculation and Experimental Study. ChemistrySelect, 2017, 2, 7353-7361.	0.7	36

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55	Photoluminescence properties of NaGd(WO4)2:Eu3+ nanocrystalline prepared by hydrothermal method. Current Applied Physics, 2011, 11, 503-507.	1.1	35
56	Temperature dependence of the initial coulombic efficiency in Li-rich layered Li[Li0.144Ni0.136Co0.136Mn0.544]O2 oxide for lithium-ions batteries. Journal of Power Sources, 2014, 268, 517-521.	4.0	35
57	A LiPO2F2/LiFSI dual-salt electrolyte enabled stable cycling of lithium metal batteries. Journal of Power Sources, 2018, 400, 449-456.	4.0	33
58	Double-helix-superstructure aqueous binder to boost excellent electrochemical performance in Li-rich layered oxide cathode. Journal of Power Sources, 2019, 420, 29-37.	4.0	32
59	Understanding the Discrepancy of Defect Kinetics on Anionic Redox in Lithium-Rich Cathode Oxides. ACS Applied Materials & Interfaces, 2019, 11, 14023-14034.	4.0	30
60	All annealing-free solution-processed highly flexible organic solar cells. Journal of Materials Chemistry A, 2021, 9, 5425-5433.	5.2	30
61	Synthesis and optimum luminescence of monodispersed spheres for BaWO4-based green phosphors with doping of Tb3+. Journal of Luminescence, 2010, 130, 762-766.	1.5	29
62	A fast and efficient method for selective extraction of lithium from spent lithium iron phosphate battery. Environmental Technology and Innovation, 2021, 23, 101569.	3.0	29
63	Synthesis and electrochemical performances of (1âˆ’x)LiMnPO4Â·xLi3V2(PO4)3/C composite cathode materials for lithium ion batteries. Journal of Power Sources, 2013, 239, 144-150.	4.0	28
64	Simplified co-precipitation synthesis of spinel LiNi0.5Mn1.5O4 with improved physical and electrochemical performance. Journal of Alloys and Compounds, 2014, 598, 73-78.	2.8	28
65	Regeneration of degraded Li-rich layered oxide materials through heat treatment-induced transition metal reordering. Energy Storage Materials, 2021, 35, 99-107.	9.5	27
66	Flexible poly(vinylidene fluoride-<i>co</i>-hexafluoropropylene)-based gel polymer electrolyte for high-performance lithium-ion batteries. RSC Advances, 2021, 11, 11943-11951.	1.7	27
67	Microwave-irradiation synthesis of Li1.3NixCoyMn1âˆ’xâˆ’yO2.4 cathode materials for lithium ion batteries. Electrochimica Acta, 2012, 80, 15-21.	2.6	26
68	Dental Resin Monomer Enables Unique NbO₂/Carbon Lithiumâ€Ion Battery Negative Electrode with Exceptional Performance. Advanced Functional Materials, 2019, 29, 1904961.	7.8	26
69	Stabilization effects of Al doping for enhanced cycling performances of Li-rich layered oxides. Ceramics International, 2017, 43, 13845-13852.	2.3	25
70	Rational Design and Mechanical Understanding of Three-Dimensional Macro-/Mesoporous Silicon Lithium-Ion Battery Anodes with a Tunable Pore Size and Wall Thickness. ACS Applied Materials & Interfaces, 2020, 12, 43785-43797.	4.0	24
71	Structure-preserved 3D porous silicon/reduced graphene oxide materials as anodes for Li-ion batteries. RSC Advances, 2017, 7, 24305-24311.	1.7	23
72	Stable Electrode/Electrolyte Interface for High-Voltage NCM 523 Cathode Constructed by Synergistic Positive and Passive Approaches. ACS Applied Materials & Interfaces, 2021, 13, 57107-57117.	4.0	23

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73	Microporous Binder for the Silicon-Based Lithium-Ion Battery Anode with Exceptional Rate Capability and Improved Cyclic Performance. Langmuir, 2020, 36, 2003-2011.	1.6	22
74	CO₂ treatment enables non-hazardous, reliable, and efficacious recovery of spent Li(Ni_{0.5}Co_{0.2}Mn_{0.3})O₂ cathodes. Green Chemistry, 2022, 24, 779-789.	4.6	22
75	Lithium Bis(fluorosulfony)imideâ€Lithium Hexafluorophosphate Binaryâ€Salt Electrolytes for Lithiumâ€Ion Batteries: Aluminum Corrosion Behaviors and Electrochemical Properties. ChemistrySelect, 2018, 3, 1954-1960.	0.7	21
76	Correlation between transition metal ion migration and the voltage ranges of electrochemical process for lithium-rich manganese-based material. Journal of Power Sources, 2015, 281, 7-10.	4.0	20
77	Surface reinforcement doping to suppress oxygen release of Li-rich layered oxides. Journal of Power Sources, 2021, 503, 230048.	4.0	20
78	Vacuumâ€Free, Allâ€Solution, and Allâ€Air Processed Organic Photovoltaics with over 11% Efficiency and Promoted Stability Using Layerâ€byâ€Layer Codoped Polymeric Electrodes. Solar Rrl, 2020, 4, 1900543.	3.1	19
79	Superior cycling performance of a sandwich structure Si/C anode for lithium ion batteries. RSC Advances, 2016, 6, 12107-12113.	1.7	18
80	Synthesis and luminescence properties of BaWO4:Pr3+ microcrystal. Journal of Rare Earths, 2011, 29, 623-627.	2.5	17
81	Synergistic effects from super-small sized TiO2 and SiOx nanoparticles within TiO2/SiOx/carbon nanohybrid lithium-ion battery anode. Ceramics International, 2019, 45, 14327-14337.	2.3	17
82	A composite surface configuration towards improving cycling stability of Li-rich layered oxide materials. Journal of Materials Chemistry A, 2021, 9, 24426-24437.	5.2	17
83	Electrochemical investigation of Li-excess layered oxide cathode materials/mesocarbon microbead in 18650 batteries. Electrochimica Acta, 2014, 123, 317-324.	2.6	15
84	Ultrafast Heterogeneous Nucleation Enables a Hierarchical Surface Configuration of Lithiumâ€Rich Layered Oxide Cathode Material for Enhanced Electrochemical Performances. Advanced Materials Interfaces, 2018, 5, 1701465.	1.9	15
85	Scalable Synthesis of Hierarchical Antimony/Carbon Micro-/Nanohybrid Lithium/Sodium-Ion Battery Anodes Based on Dimethacrylate Monomer. Acta Metallurgica Sinica (English Letters), 2018, 31, 910-922.	1.5	15
86	High Pressure Effect on Structural and Electrochemical Properties of Anionic Redox-Based Lithium Transition Metal Oxides. Matter, 2021, 4, 164-181.	5.0	15
87	MnO/Metal/Carbon Nanohybrid Lithiumâ€Ion Battery Anode With Enhanced Electrochemical Performance: Universal Facile Scalable Synthesis and Fundamental Understanding. Advanced Materials Interfaces, 2019, 6, 1900335.	1.9	14
88	Controls of oxygen-partial pressure to accelerate the electrochemical activation in Co-free Li-rich layered oxide cathodes. Journal of Power Sources, 2022, 523, 231022.	4.0	14
89	Role of Nickel Nanoparticles in Highâ€Performance TiO₂/Ni/Carbon Nanohybrid Lithium/Sodiumâ€Ion Battery Anodes. Chemistry - an Asian Journal, 2019, 14, 1557-1569.	1.7	13
90	Photoluminescence properties of La2âˆ’xEux(WO4)3 red phosphor prepared by hydrothermal method. Physica B: Condensed Matter, 2010, 405, 3507-3511.	1.3	12

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91	Composite membrane with ultra-thin ion exchangeable functional layer: a new separator choice for manganese-based cathode material in lithium ion batteries. Journal of Materials Chemistry A, 2015, 3, 7006-7013.	5.2	12
92	Sufficient Oxygen Redox Activation against Voltage Decay in Li-Rich Layered Oxide Cathode Materials. , 2021, 3, 433-441.		11
93	Synthesis and electrochemical performance of LiMnxFey(Vâ–¯)1-x-yPO4 cathode materials for lithium-ion batteries. Electrochimica Acta, 2016, 222, 1660-1667.	2.6	10
94	SnO₂/Sn/Carbon nanohybrid lithiumâ€ion battery anode with high reversible capacity and excellent cyclic stability. Nano Select, 2021, 2, 642-653.	1.9	10
95	Impact of CO₂ activation on the structure, composition, and performance of Sb/C nanohybrid lithium/sodium-ion battery anodes. Nanoscale Advances, 2021, 3, 1942-1953.	2.2	9
96	Template-free synthesis of titania architectures with controlled morphology evolution. Journal of Materials Science, 2016, 51, 3941-3956.	1.7	8
97	Characterization of Li-rich layered oxides by using transmission electron microscope. Green Energy and Environment, 2017, 2, 174-185.	4.7	7
98	Carbon-emcoating architecture boosts lithium storage of Nb2O5. Science China Materials, 2021, 64, 1071-1086.	3.5	7
99	Synergistic Effects of Ni²⁺ and Mn³⁺ on the Electrochemical Activation of Li₂MnO₃ in Co-Free and Ni-Poor Li-Rich Layered Cathodes. ACS Applied Energy Materials, 2022, 5, 9079-9089.	2.5	7
100	Confining Alâ€“Li alloys between pre-constructed conductive buffers for advanced aluminum anodes. Chemical Communications, 2019, 55, 2352-2355.	2.2	6
101	Boosted efficiency of conductive metal oxide-free pervoskite solar cells using poly(3-(4-methylamincarboxylbutyl)thiophene) buffer layers. Journal Physics D: Applied Physics, 2020, 53, 284001.	1.3	6
102	Porous titania/carbon hybrid microspheres templated by in situ formed polystyrene colloids. Journal of Colloid and Interface Science, 2016, 469, 242-256.	5.0	5
103	Si/Cu/C Nanohybrid Lithium-Ion Battery Anode with <i>in Situ</i> Incorporation of Nonagglomerated Super-Small Copper Nanoparticles Based on Epoxy Resin. Energy & Fuels, 2021, 35, 6250-6264.	2.5	5
104	Less is more: tiny amounts of insoluble multi-functional nanoporous additives play a big role in lithium secondary batteries. Journal of Materials Chemistry A, 2022, 10, 8047-8058.	5.2	5
105	In Situ Incorporation of Superâ€Small Metallic High Capacity Nanoparticles and Mesoporous Structures for Highâ€Performance TiO₂/SnO₂/Sn/Carbon Nanohybrid Lithiumâ€ion Battery Anodes. Energy Technology, 2020, 8, 2000034.	1.8	4
106	<i>In Situ</i> Synthesis and Dual Functionalization of Nano Silicon Enabled by a Semisolid Lithium Rechargeable Flow Battery. ACS Applied Materials & Interfaces, 2022, 14, 28748-28759.	4.0	3
107	Usefulness of uselessness: Teamwork of wide temperature electrolyte enables LFP/Li cells from -40 Â°C to 140 Â°C. Electrochimica Acta, 2022, 425, 140698.	2.6	3
108	Ultrafine SnO₂/Sn Nanoparticles Embedded into an <i>In Situ</i> Generated Meso-/Macroporous Carbon Matrix with a Tunable Pore Size. Langmuir, 2022, 38, 1689-1697.	1.6	2

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109	Enhanced rate performance of lithium-ion battery anodes using a cobalt-incorporated carbon conductive agent. Inorganic Chemistry Frontiers, 2022, 9, 3484-3493.	3.0	2
110	Continuous fast pyrolysis synthesis of TiO₂/C nanohybrid lithiumâ€ion battery anode. Nano Select, 2021, 2, 1770-1778.	1.9	1
111	Si/SiOC/Carbon Lithiumâ€Ion Battery Negative Electrode with Multiple Buffer Media Derived from Crossâ€Linked Dimethacrylate and Poly (dimethyl siloxane). ChemistrySelect, 2021, 6, 10348-10354.	0.7	1
112	Advanced Materials for Lithium-Ion Batteries. Electrochemical Energy Storage and Conversion, 2015, , 79-142.	0.0	0
113	Porous silicon derived from 130Ânm StÃ¶ber silica as lithiumâ€ion battery anode. Nano Select, 2021, 2, 1554-1565.	1.9	0
114	Nano Structured LiMnPO4 cathode Materials with High Rate Capability. ECS Meeting Abstracts, 2014, , .	0.0	0