Yongming Sun

List of Publications by Year
in descending order

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		20817	43889
92	18,544	60	91
papers	citations	h-index	g-index

93	93	93	17051
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Designing high-energy lithiumâ€“sulfur batteries. Chemical Society Reviews, 2016, 45, 5605-5634.	38.1	2,008
2	Promises and challenges of nanomaterials for lithium-based rechargeable batteries. Nature Energy, 2016, 1, .	39.5	1,388
3	A phosphoreneâ€“graphene hybrid material as a high-capacity anode for sodium-ion batteries. Nature Nanotechnology, 2015, 10, 980-985.	31.5	1,287
4	Atomic structure of sensitive battery materials and interfaces revealed by cryoâ€“electron microscopy. Science, 2017, 358, 506-510.	12.6	1,039
5	Reconstruction of Conformal Nanoscale MnO on Graphene as a Highâ€Capacity and Longâ€Life Anode Material for Lithium Ion Batteries. Advanced Functional Materials, 2013, 23, 2436-2444.	14.9	770
6	A Highly Reversible Room-Temperature Sodium Metal Anode. ACS Central Science, 2015, 1, 449-455.	11.3	733
7	Self-Assembled Hierarchical MoO₂/Graphene Nanoarchitectures and Their Application as a High-Performance Anode Material for Lithium-Ion Batteries. ACS Nano, 2011, 5, 7100-7107.	14.6	611
8	Two-dimensional layered transition metal disulphides for effective encapsulation of high-capacity lithium sulphide cathodes. Nature Communications, 2014, 5, 5017.	12.8	530
9	Flexible Asymmetric Microâ€Supercapacitors Based on Bi₂O₃ and MnO₂ Nanoflowers: Larger Areal Mass Promises Higher Energy Density. Advanced Energy Materials, 2015, 5, 1401882.	19.5	479
10	Entrapment of Polysulfides by a Blackâ€Phosphorusâ€Modified Separator for Lithiumâ€“Sulfur Batteries. Advanced Materials, 2016, 28, 9797-9803.	21.0	453
11	Self-healing SEI enables full-cell cycling of a silicon-majority anode with a coulombic efficiency exceeding 99.9%. Energy and Environmental Science, 2017, 10, 580-592.	30.8	421
12	Insight into the Electrode Mechanism in Lithiumâ€Sulfur Batteries with Ordered Microporous Carbon Confined Sulfur as the Cathode. Advanced Energy Materials, 2014, 4, 1301473.	19.5	418
13	High-performance sodiumâ€“organic battery by realizing four-sodium storage in disodium rhodizonate. Nature Energy, 2017, 2, 861-868.	39.5	372
14	Electrospun porous ZnCo2O4 nanotubes as a high-performance anode material for lithium-ion batteries. Journal of Materials Chemistry, 2012, 22, 8916.	6.7	328
15	Chemically resistant Cuâ€“Zn/Zn composite anode for long cycling aqueous batteries. Energy Storage Materials, 2020, 27, 205-211.	18.0	307
16	High-capacity battery cathode prelithiation to offset initial lithium loss. Nature Energy, 2016, 1, .	39.5	265
17	Fast conversion and controlled deposition of lithium (poly)sulfides in lithium-sulfur batteries using high-loading cobalt single atoms. Energy Storage Materials, 2020, 30, 250-259.	18.0	264
18	3D Porous Spongeâ€Inspired Electrode for Stretchable Lithiumâ€Ion Batteries. Advanced Materials, 2016, 28, 3578-3583.	21.0	247

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19	Mechanical rolling formation of interpenetrated lithium metal/lithium tin alloy foil for ultrahigh-rate battery anode. Nature Communications, 2020, 11, 829.	12.8	246
20	Morphosynthesis of a hierarchical MoO2 nanoarchitecture as a binder-free anode for lithium-ion batteries. Energy and Environmental Science, 2011, 4, 2870.	30.8	245
21	Electrospun core-shell microfiber separator with thermal-triggered flame-retardant properties for lithium-ion batteries. Science Advances, 2017, 3, e1601978.	10.3	245
22	A Stretchable Graphitic Carbon/Si Anode Enabled by Conformal Coating of a Selfâ€Healing Elastic Polymer. Advanced Materials, 2016, 28, 2455-2461.	21.0	197
23	Robust Pinhole-free Li₃N Solid Electrolyte Grown from Molten Lithium. ACS Central Science, 2018, 4, 97-104.	11.3	197
24	Flexible and stable high-energy lithium-sulfur full batteries with only 100% oversized lithium. Nature Communications, 2018, 9, 4480.	12.8	193
25	Flexible fiber-shaped supercapacitors based on hierarchically nanostructured composite electrodes. Nano Research, 2015, 8, 1148-1158.	10.4	188
26	Ultrafine MoO₂nanoparticles embedded in a carbon matrix as a high-capacity and long-life anode for lithium-ion batteries. Journal of Materials Chemistry, 2012, 22, 425-431.	6.7	175
27	Design of Red Phosphorus Nanostructured Electrode for Fast-Charging Lithium-Ion Batteries with High Energy Density. Joule, 2019, 3, 1080-1093.	24.0	168
28	Carbothermic reduction synthesis of red phosphorus-filled 3D carbon material as a high-capacity anode for sodium ion batteries. Energy Storage Materials, 2016, 4, 130-136.	18.0	167
29	Highly porous Li 4 Ti 5 O 12 /C nanofibers for ultrafast electrochemical energy storage. Nano Energy, 2014, 10, 163-171.	16.0	165
30	Controlled Synthesis of Mesoporous MnO/C Networks by Microwave Irradiation and Their Enhanced Lithium-Storage Properties. ACS Applied Materials & Interfaces, 2013, 5, 1997-2003.	8.0	162
31	Stretchable Lithiumâ€Ion Batteries Enabled by Deviceâ€Scaled Wavy Structure and Elasticâ€Sticky Separator. Advanced Energy Materials, 2017, 7, 1701076.	19.5	158
32	Ultrathin CoO/Graphene Hybrid Nanosheets: A Highly Stable Anode Material for Lithium-Ion Batteries. Journal of Physical Chemistry C, 2012, 116, 20794-20799.	3.1	154
33	Porous carbon-modified MnO disks prepared by a microwave-polyol process and their superior lithium-ion storage properties. Journal of Materials Chemistry, 2012, 22, 19190.	6.7	150
34	Engineering stable electrode-separator interfaces with ultrathin conductive polymer layer for high-energy-density Li-S batteries. Energy Storage Materials, 2019, 23, 261-268.	18.0	149
35	Manipulating Redox Kinetics of Sulfur Species Using Mottâ€“Schottky Electrocatalysts for Advanced Lithiumâ€“Sulfur Batteries. Nano Letters, 2021, 21, 6656-6663.	9.1	145
36	Stabilized Li3N for efficient battery cathode prelithiation. Energy Storage Materials, 2017, 6, 119-124.	18.0	143

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37	Stretchable Lithium Metal Anode with Improved Mechanical and Electrochemical Cycling Stability. Joule, 2018, 2, 1857-1865.	24.0	132
38	A Replacement Reaction Enabled Interdigitated Metal/Solid Electrolyte Architecture for Battery Cycling at 20 mA cm^{â€“2} and 20 mAh cm^{â€“2}. Journal of the American Chemical Society, 2021, 143, 3143-3152.	13.7	132
39	Encapsulation of MnO Nanocrystals in Electrospun Carbon Nanofibers as High-Performance Anode Materials for Lithium-Ion Batteries. Scientific Reports, 2014, 4, 4229.	3.3	131
40	A Dualâ€Crosslinking Design for Resilient Lithiumâ€Ion Conductors. Advanced Materials, 2018, 30, e1804142.	21.0	128
41	Layer-by-layer assembled MoO2â€“graphene thin film as a high-capacity and binder-free anode for lithium-ion batteries. Nanoscale, 2012, 4, 4707.	5.6	127
42	Enhanced Chemical Immobilization and Catalytic Conversion of Polysulfide Intermediates Using Metallic Mo Nanoclusters for High-Performance Liâ€“S Batteries. ACS Nano, 2020, 14, 1148-1157.	14.6	125
43	Self-assembled mesoporous CoO nanodisks as a long-life anode material for lithium-ion batteries. Journal of Materials Chemistry, 2012, 22, 13826.	6.7	119
44	Reversible and selective ion intercalation through the top surface of few-layer MoS2. Nature Communications, 2018, 9, 5289.	12.8	119
45	Roomâ€Temperature Sodiumâ€“Sulfur Batteries and Beyond: Realizing Practical High Energy Systems through Anode, Cathode, and Electrolyte Engineering. Advanced Energy Materials, 2021, 11, 2003493.	19.5	114
46	Electrospinning of carbon-coated MoO2 nanofibers with enhanced lithium-storage properties. Physical Chemistry Chemical Physics, 2011, 13, 16735.	2.8	113
47	In Situ Chemical Synthesis of Lithium Fluoride/Metal Nanocomposite for High Capacity Prelithiation of Cathodes. Nano Letters, 2016, 16, 1497-1501.	9.1	112
48	Promises and Challenges of the Practical Implementation of Prelithiation in Lithiumâ€Ion Batteries. Advanced Energy Materials, 2021, 11, 2101565.	19.5	112
49	Conformal Prelithiation Nanoshell on LiCoO₂ Enabling High-Energy Lithium-Ion Batteries. Nano Letters, 2020, 20, 4558-4565.	9.1	92
50	Revealing Nanoscale Passivation and Corrosion Mechanisms of Reactive Battery Materials in Gas Environments. Nano Letters, 2017, 17, 5171-5178.	9.1	88
51	Lithium Sulfide/Metal Nanocomposite as a Highâ€Capacity Cathode Prelithiation Material. Advanced Energy Materials, 2016, 6, 1600154.	19.5	87
52	A Simple Electrodeâ€Level Chemical Presodiation Route by Solution Spraying to Improve the Energy Density of Sodiumâ€Ion Batteries. Advanced Functional Materials, 2019, 29, 1903795.	14.9	85
53	In-operando optical imaging of temporal and spatial distribution of polysulfides in lithium-sulfur batteries. Nano Energy, 2015, 11, 579-586.	16.0	84
54	Microwaveâ€Induced Inâ€…Situ Synthesis of Zn₂GeO₄/Nâ€Doped Graphene Nanocomposites and Their Lithiumâ€Storage Properties. Chemistry - A European Journal, 2013, 19, 6027-6033.	3.3	83

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55	Ultrafast Metal Electrodeposition Revealed by In Situ Optical Imaging and Theoretical Modeling towards Fastâ€Charging Zn Battery Chemistry. Angewandte Chemie - International Edition, 2022, 61, .	13.8	82
56	Stable interphase chemistry of textured Zn anode for rechargeable aqueous batteries. Science Bulletin, 2022, 67, 716-724.	9.0	80
57	Composite lithium electrode with mesoscale skeleton via simple mechanical deformation. Science Advances, 2019, 5, eaau5655.	10.3	79
58	Metal/LiF/Li₂O Nanocomposite for Battery Cathode Prelithiation: Trade-off between Capacity and Stability. Nano Letters, 2020, 20, 546-552.	9.1	72
59	A Saltâ€inâ€Metal Anode: Stabilizing the Solid Electrolyte Interphase to Enable Prolonged Battery Cycling. Advanced Functional Materials, 2021, 31, 2010602.	14.9	69
60	A Chemically Polished Zinc Metal Electrode with a Ridge-like Structure for Cycle-Stable Aqueous Batteries. ACS Applied Materials & Interfaces, 2020, 12, 23028-23034.	8.0	65
61	Surface modification of electrospun TiO2 nanofibers via layer-by-layer self-assembly for high-performance lithium-ion batteries. Journal of Materials Chemistry, 2012, 22, 4910.	6.7	60
62	Localizing concentrated electrolyte in pore geometry for highly reversible aqueous Zn metal batteries. Chemical Engineering Journal, 2021, 420, 129642.	12.7	56
63	Synthesis of Amorphous FeOOH/Reduced Graphene Oxide Composite by Infrared Irradiation and Its Superior Lithium Storage Performance. ACS Applied Materials & Interfaces, 2013, 5, 10145-10150.	8.0	52
64	Hierarchical self-assembly of Mn2Mo3O8â€“graphene nanostructures and their enhanced lithium-storage properties. Journal of Materials Chemistry, 2011, 21, 17229.	6.7	50
65	Prelithiated Li-Enriched Gradient Interphase toward Practical High-Energy NMCâ€“Silicon Full Cell. ACS Energy Letters, 2021, 6, 320-328.	17.4	50
66	Recycling of Lignin and Si Waste for Advanced Si/C Battery Anodes. ACS Applied Materials & Interfaces, 2020, 12, 57055-57063.	8.0	49
67	A reversible and stable flake-like LiCoO2 cathode for lithium ion batteries. Chemical Communications, 2014, 50, 1962.	4.1	47
68	Electrospun Conformal Li₄Ti₅O₁₂/C Fibers for Highâ€Rate Lithiumâ€Ion Batteries. ChemElectroChem, 2014, 1, 611-616.	3.4	43
69	Self-assembly of hybrid Fe2Mo3O8â€“reduced graphene oxide nanosheets with enhanced lithium storage properties. Journal of Materials Chemistry A, 2013, 1, 4468.	10.3	40
70	Doctorâ€Blade Casting Fabrication of Ultrathin Li Metal Electrode for Highâ€Energyâ€Density Batteries. Advanced Energy Materials, 2021, 11, 2102259.	19.5	40
71	Electrospun porous LiNb3O8 nanofibers with enhanced lithium-storage properties. Journal of Materials Chemistry A, 2013, 1, 15053.	10.3	39
72	Direct electrochemical generation of supercooled sulfur microdroplets well below their melting temperature. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 765-770.	7.1	39

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73	Manipulating Oxidation of Silicon with Fresh Surface Enabling Stable Battery Anode. Nano Letters, 2021, 21, 3127-3133.	9.1	33
74	In situ formation of ionically conductive nanointerphase on Si particles for stable battery anode. Science China Chemistry, 2021, 64, 1417-1425.	8.2	28
75	Stabilized Li metal anode with robust C-Li3N interphase for high energy density batteries. Energy Storage Materials, 2022, 46, 563-569.	18.0	28
76	Enhanced processability and electrochemical cyclability of metallic sodium at elevated temperature using sodium alloy composite. Energy Storage Materials, 2021, 35, 310-316.	18.0	26
77	Implications of Na-ion solvation on Na anodeâ€“electrolyte interphase. Trends in Chemistry, 2022, 4, 48-59.	8.5	26
78	Electrolyte-Phobic Surface for the Next-Generation Nanostructured Battery Electrodes. Nano Letters, 2020, 20, 7455-7462.	9.1	25
79	Addressing the Low Solubility of a Solid Electrolyte Interphase Stabilizer in an Electrolyte by Composite Battery Anode Design. ACS Applied Materials & Interfaces, 2021, 13, 13354-13361.	8.0	23
80	Reversible aqueous Zn battery anode enabled by a stable complexation adsorbent interface. EcoMat, 2022, 4, .	11.9	23
81	Li plating on alloy with superior electro-mechanical stability for high energy density anode-free batteries. Energy Storage Materials, 2022, 49, 135-143.	18.0	23
82	Insights on â€œnitrate saltâ€•in lithium anode for stabilized solid electrolyte interphase. , 2022, 4, 12-20.		22
83	Confining ultrafine Li3P nanoclusters in porous carbon for high-performance lithium-ion battery anode. Nano Research, 2020, 13, 1122-1126.	10.4	19
84	Circumventing chemo-mechanical failure of Sn foil battery anode by grain refinement and elaborate porosity design. Journal of Energy Chemistry, 2021, 62, 477-484.	12.9	19
85	Ultrafine Sodium Sulfide Clusters Confined in Carbon Nano-polyhedrons as High-Efficiency Presodiation Reagents for Sodium-Ion Batteries. ACS Applied Materials & Interfaces, 2021, 13, 27057-27065.	8.0	17
86	Large-scale synthesis of Ag1.8Mn8O16 nanorods and their electrochemical lithium-storage properties. Journal of Nanoparticle Research, 2011, 13, 3139-3148.	1.9	14
87	Realizing High Utilization of High-Mass-Loading Sulfur Cathode via Electrode Nanopore Regulation. Nano Letters, 2022, 22, 5982-5989.	9.1	14
88	A novel battery scheme: Coupling nanostructured phosphorus anodes with lithium sulfide cathodes. Nano Research, 2020, 13, 1383-1388.	10.4	13
89	Ultrafast Metal Electrodeposition Revealed by In Situ Optical Imaging and Theoretical Modeling towards Fastâ€Charging Zn Battery Chemistry. Angewandte Chemie, 2022, 134, .	2.0	13
90	Stressâ€Regulation Design of Lithium Alloy Electrode toward Stable Battery Cycling. Energy and Environmental Materials, 2023, 6, .	12.8	11

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91	Closely Compacted TiNb₂O₇-C Assembly for Fast-Charging Battery Anodes. ACS Applied Energy Materials, 2021, 4, 12319-12325.	5.1	3
92	Embedment of red phosphorus in anthracite matrix for stable battery anode. Rare Metals, 2022, 41, 2819-2825.	7.1	2