

Mengyu Yan

List of Publications by Year in descending order

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papers

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20817

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#	ARTICLE	IF	CITATIONS
1	Water-Lubricated Intercalation in $V_2O_5 \cdot nH_2O$ for High-Capacity and High-Rate Aqueous Rechargeable Zinc Batteries. <i>Advanced Materials</i> , 2018, 30, 1703725.	21.0	1,084
2	Na^+ intercalation pseudocapacitance in graphene-coupled titanium oxide enabling ultra-fast sodium storage and long-term cycling. <i>Nature Communications</i> , 2015, 6, 6929.	12.8	969
3	Layered VS_2 Nanosheet-Based Aqueous Zn Ion Battery Cathode. <i>Advanced Energy Materials</i> , 2017, 7, 1601920.	19.5	961
4	Manipulating Adsorption-Insertion Mechanisms in Nanostructured Carbon Materials for High-Efficiency Sodium Ion Storage. <i>Advanced Energy Materials</i> , 2017, 7, 1700403.	19.5	662
5	Sodium Ion Stabilized Vanadium Oxide Nanowire Cathode for High-Performance Zinc-Ion Batteries. <i>Advanced Energy Materials</i> , 2018, 8, 1702463.	19.5	650
6	Highly Durable $Na_2V_6O_{16} \cdot 1.63H_2O$ Nanowire Cathode for Aqueous Zinc-Ion Battery. <i>Nano Letters</i> , 2018, 18, 1758-1763.	9.1	568
7	Graphene Scroll-Coated $\pm MnO_2$ Nanowires as High-Performance Cathode Materials for Aqueous Zn-Ion Battery. <i>Small</i> , 2018, 14, e1703850.	10.0	563
8	Expanded hydrated vanadate for high-performance aqueous zinc-ion batteries. <i>Energy and Environmental Science</i> , 2019, 12, 2273-2285.	30.8	512
9	Ultrathin Surface Coating Enables Stabilized Zinc Metal Anode. <i>Advanced Materials Interfaces</i> , 2018, 5, 1800848.	3.7	476
10	High-Performance Aqueous Zinc-Ion Battery Based on Layered $H_2V_3O_8$ Nanowire Cathode. <i>Small</i> , 2017, 13, 1702551.	10.0	455
11	Zn/V_2O_5 Aqueous Hybrid-Ion Battery with High Voltage Platform and Long Cycle Life. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 42717-42722.	8.0	401
12	General synthesis of complex nanotubes by gradient electrospinning and controlled pyrolysis. <i>Nature Communications</i> , 2015, 6, 7402.	12.8	370
13	Manganese Oxide/Carbon Yolk-Shell Nanorod Anodes for High Capacity Lithium Batteries. <i>Nano Letters</i> , 2015, 15, 738-744.	9.1	345
14	SnO_2 Quantum Dots@Graphene Oxide as a High-Rate and Long-Life Anode Material for Lithium-Ion Batteries. <i>Small</i> , 2016, 12, 588-594.	10.0	338
15	Amorphous Vanadium Oxide Matrixes Supporting Hierarchical Porous Fe_3O_4 /Graphene Nanowires as a High-Rate Lithium Storage Anode. <i>Nano Letters</i> , 2014, 14, 6250-6256.	9.1	257
16	VO_2 Nanowires Assembled into Hollow Microspheres for High-Rate and Long-Life Lithium Batteries. <i>Nano Letters</i> , 2014, 14, 2873-2878.	9.1	244
17	Self-sacrificed synthesis of three-dimensional $Na_3V_2(PO_4)_3$ nanofiber network for high-rate sodium-ion full batteries. <i>Nano Energy</i> , 2016, 25, 145-153.	16.0	230
18	Ultrastable and High-Performance Zn/VO_2 Battery Based on a Reversible Single-Phase Reaction. <i>Chemistry of Materials</i> , 2019, 31, 699-706.	6.7	227

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19	Activation of Sodium Storage Sites in Prussian Blue Analogues via Surface Etching. <i>Nano Letters</i> , 2017, 17, 4713-4718.	9.1	225
20	Nanowire Templated Semihollow Bicontinuous Graphene Scrolls: Designed Construction, Mechanism, and Enhanced Energy Storage Performance. <i>Journal of the American Chemical Society</i> , 2013, 135, 18176-18182.	13.7	187
21	Nanowires in Energy Storage Devices: Structures, Synthesis, and Applications. <i>Advanced Energy Materials</i> , 2018, 8, 1802369.	19.5	169
22	Building better zinc-ion batteries: A materials perspective. <i>EnergyChem</i> , 2019, 1, 100022.	19.1	153
23	Novel $K_3V_2(PO_4)_3/C$ Bundled Nanowires as Superior Sodium-ion Battery Electrode with Ultrahigh Cycling Stability. <i>Advanced Energy Materials</i> , 2015, 5, 1500716.	19.5	150
24	Field Effect Enhanced Hydrogen Evolution Reaction of MoS_2 Nanosheets. <i>Advanced Materials</i> , 2017, 29, 1604464.	21.0	148
25	Integrated Intercalation-Based and Interfacial Sodium Storage in Graphene-Wrapped Porous $Li_4Ti_5O_{12}$ Nanofibers Composite Aerogel. <i>Advanced Energy Materials</i> , 2016, 6, 1600322.	19.5	141
26	Heterogeneous branched core-shell $SnO_2@PANI$ nanorod arrays with mechanical integrity and three dimensional electron transport for lithium batteries. <i>Nano Energy</i> , 2014, 8, 196-204.	16.0	140
27	Self-adaptive strain-relaxation optimization for high-energy lithium storage material through crumpling of graphene. <i>Nature Communications</i> , 2014, 5, 4565.	12.8	139
28	Interwoven Three-Dimensional Architecture of Cobalt Oxide Nanobrush-Graphene@ $Ni_xCo_{2-x}(OH)_6$ for High-Performance Supercapacitors. <i>Nano Letters</i> , 2015, 15, 2037-2044.	9.1	134
29	Field-Effect Tuned Adsorption Dynamics of VSe_2 Nanosheets for Enhanced Hydrogen Evolution Reaction. <i>Nano Letters</i> , 2017, 17, 4109-4115.	9.1	134
30	\pm - MoO_3 - by plasma etching with improved capacity and stabilized structure for lithium storage. <i>Nano Energy</i> , 2018, 49, 555-563.	16.0	133
31	Carbon-MEMS-Based Alternating Stacked $MoS_2@rGO@CNT$ Micro-Supercapacitor with High Capacitance and Energy Density. <i>Small</i> , 2017, 13, 1700639.	10.0	132
32	Graphene Oxide Wrapped Amorphous Copper Vanadium Oxide with Enhanced Capacitive Behavior for High-Rate and Long-Life Lithium-ion Battery Anodes. <i>Advanced Science</i> , 2015, 2, 1500154.	11.2	114
33	Separating electronic and ionic conductivity in mix-conducting layered lithium transition-metal oxides. <i>Journal of Power Sources</i> , 2018, 393, 75-82.	7.8	104
34	Mesoporous Li_3VO_4/C Submicron-Ellipsoids Supported on Reduced Graphene Oxide as Practical Anode for High-Power Lithium-ion Batteries. <i>Advanced Science</i> , 2015, 2, 1500284.	11.2	99
35	Track batteries degrading in real time. <i>Nature</i> , 2017, 546, 469-470.	27.8	98
36	In situ characterization of electrochemical processes in one dimensional nanomaterials for energy storages devices. <i>Nano Energy</i> , 2016, 24, 165-188.	16.0	97

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37	Cathodic polarization suppressed sodium-ion full cell with a 3.3 V high-voltage. Nano Energy, 2016, 28, 216-223.	16.0	97
38	Capacitance and voltage matching between MnO ₂ nanoflake cathode and Fe ₂ O ₃ nanoparticle anode for high-performance asymmetric micro-supercapacitors. Nano Research, 2017, 10, 2471-2481.	10.4	97
39	Lattice Breathing Inhibited Layered Vanadium Oxide Ultrathin Nanobelts for Enhanced Sodium Storage. ACS Applied Materials & Interfaces, 2015, 7, 18211-18217.	8.0	94
40	FeSe ₂ clusters with excellent cyclability and rate capability for sodium-ion batteries. Nano Research, 2017, 10, 3202-3211.	10.4	91
41	Nanoflakes Assembled Three-Dimensional Hollow Porous V ₂ O ₅ as Lithium Storage Cathodes with High-Rate Capacity. Small, 2014, 10, 3032-3037.	10.0	90
42	Phosphorus Enhanced Intermolecular Interactions of SnO ₂ and Graphene as an Ultrastable Lithium Battery Anode. Small, 2017, 13, 1603973.	10.0	87
43	Pseudocapacitive layered iron vanadate nanosheets cathode for ultrahigh-rate lithium ion storage. Nano Energy, 2018, 47, 294-300.	16.0	87
44	Reversible V ³⁺ /V ⁵⁺ double redox in lithium vanadium oxide cathode for zinc storage. Energy Storage Materials, 2020, 29, 113-120.	18.0	85
45	Catalyzing zinc-ion intercalation in hydrated vanadates for aqueous zinc-ion batteries. Journal of Materials Chemistry A, 2020, 8, 7713-7723.	10.3	84
46	Copper Silicate Hydrate Hollow Spheres Constructed by Nanotubes Encapsulated in Reduced Graphene Oxide as Long-Life Lithium-Ion Battery Anode. ACS Applied Materials & Interfaces, 2015, 7, 26572-26578.	8.0	82
47	Acetylene Black Induced Heterogeneous Growth of Macroporous CoV ₂ O ₆ Nanosheet for High-Rate Pseudocapacitive Lithium-Ion Battery Anode. ACS Applied Materials & Interfaces, 2016, 8, 7139-7146.	8.0	81
48	Flexible additive free H ₂ V ₃ O ₈ nanowire membrane as cathode for sodium ion batteries. Physical Chemistry Chemical Physics, 2016, 18, 12074-12079.	2.8	79
49	Ultrathin pre-lithiated V ₆ O ₁₃ nanosheet cathodes with enhanced electrical transport and cyclability. Journal of Power Sources, 2014, 255, 235-241.	7.8	78
50	V ₂ O ₅ quantum dots/graphene hybrid nanocomposite with stable cyclability for advanced lithium batteries. Nano Energy, 2013, 2, 916-922.	16.0	76
51	Supercritically exfoliated ultrathin vanadium pentoxide nanosheets with high rate capability for lithium batteries. Physical Chemistry Chemical Physics, 2013, 15, 16828.	2.8	74
52	Integrated SnO ₂ nanorod array with polypyrrole coverage for high-rate and long-life lithium batteries. Physical Chemistry Chemical Physics, 2015, 17, 7619-7623.	2.8	74
53	Graphene Oxide Templated Growth and Superior Lithium Storage Performance of Novel Hierarchical Co ₂ V ₂ O ₇ Nanosheets. ACS Applied Materials & Interfaces, 2016, 8, 2812-2818.	8.0	74
54	Improved conductivity and capacitance of interdigital carbon microelectrodes through integration with carbon nanotubes for micro-supercapacitors. Nano Research, 2016, 9, 2510-2519.	10.4	73

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55	Thermal Induced Strain Relaxation of 1D Iron Oxide for Solid Electrolyte Interphase Control and Lithium Storage Improvement. <i>Advanced Energy Materials</i> , 2017, 7, 1601582.	19.5	73
56	Single-Nanowire Electrochemical Probe Detection for Internally Optimized Mechanism of Porous Graphene in Electrochemical Devices. <i>Nano Letters</i> , 2016, 16, 1523-1529.	9.1	72
57	Arbitrary Shape Engineerable Spiral Micropseudocapacitors with Ultrahigh Energy and Power Densities. <i>Advanced Materials</i> , 2015, 27, 7476-7482.	21.0	70
58	Wrinkled-graphene enriched MoO ₃ nanobelts with increased conductivity and reduced stress for enhanced electrochemical performance. <i>Physical Chemistry Chemical Physics</i> , 2013, 15, 17165.	2.8	69
59	Facile synthesis of a Co ₃ V ₂ O ₈ interconnected hollow microsphere anode with superior high-rate capability for Li-ion batteries. <i>Journal of Materials Chemistry A</i> , 2016, 4, 5075-5080.	10.3	66
60	In Situ Investigation of Li and Na Ion Transport with Single Nanowire Electrochemical Devices. <i>Nano Letters</i> , 2015, 15, 3879-3884.	9.1	61
61	An electrospun hierarchical LiV ₃ O ₈ nanowire-in-network for high-rate and long-life lithium batteries. <i>Journal of Materials Chemistry A</i> , 2015, 3, 19850-19856.	10.3	61
62	Three dimensional V ₂ O ₅ /NaV ₆ O ₁₅ hierarchical heterostructures: Controlled synthesis and synergistic effect investigated by in situ X-ray diffraction. <i>Nano Energy</i> , 2016, 27, 147-156.	16.0	61
63	Self-assembly synthesis of 3D graphene-encapsulated hierarchical Fe ₃ O ₄ nano-flower architecture with high lithium storage capacity and excellent rate capability. <i>Journal of Power Sources</i> , 2017, 365, 98-108.	7.8	61
64	Superior Hydrogen Evolution Reaction Performance in 2H-MoS ₂ to that of 1T Phase. <i>Small</i> , 2019, 15, e1900964.	10.0	59
65	Novel Polygonal Vanadium Oxide Nanoscrolls as Stable Cathode for Lithium Storage. <i>Advanced Functional Materials</i> , 2015, 25, 1773-1779.	14.9	54
66	Oxygen evolution reaction dynamics monitored by an individual nanosheet-based electronic circuit. <i>Nature Communications</i> , 2017, 8, 645.	12.8	49
67	Binding TiO ₂ -B nanosheets with N-doped carbon enables highly durable anodes for lithium-ion batteries. <i>Journal of Materials Chemistry A</i> , 2016, 4, 8172-8179.	10.3	47
68	MoS ₂ /MnO ₂ heterostructured nanodevices for electrochemical energy storage. <i>Nano Research</i> , 2018, 11, 2083-2092.	10.4	47
69	Unveiling the role of surface P=O group in P-doped Co ₃ O ₄ for electrocatalytic oxygen evolution by On-chip micro-device. <i>Nano Energy</i> , 2021, 83, 105748.	16.0	46
70	The Young's modulus of high-aspect-ratio carbon/carbon nanotube composite microcantilevers by experimental and modeling validation. <i>Applied Physics Letters</i> , 2015, 106, .	3.3	45
71	Novel Charging-Optimized Cathode for a Fast and High-Capacity Zinc-Ion Battery. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 10420-10427.	8.0	43
72	Interconnected Nanorods@Nanoflakes Li ₂ Co ₂ (MoO ₄) ₃ Framework Structure with Enhanced Electrochemical Properties for Supercapacitors. <i>Advanced Energy Materials</i> , 2015, 5, 1500060.	19.5	42

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73	Vertically stacked holey graphene/polyaniline heterostructures with enhanced energy storage for on-chip micro-supercapacitors. <i>Nano Research</i> , 2016, 9, 1012-1021.	10.4	39
74	Insight into pre-sodiation in Na ₃ V ₂ (PO ₄) ₂ F ₃ /C @ hard carbon full cells for promoting the development of sodium-ion battery. <i>Chemical Engineering Journal</i> , 2021, 413, 127565.	12.7	38
75	Pyrolyzed carbon with embedded NiO/Ni nanospheres for applications in microelectrodes. <i>RSC Advances</i> , 2016, 6, 43436-43441.	3.6	37
76	Electrochemical in situ X-ray probing in lithium-ion and sodium-ion batteries. <i>Journal of Materials Science</i> , 2017, 52, 3697-3718.	3.7	36
77	On-chip micro/nano devices for energy conversion and storage. <i>Nano Today</i> , 2019, 28, 100764.	11.9	33
78	<i>In situ</i> monitoring of the electrochemically induced phase transition of thermodynamically metastable 1T-MoS ₂ at nanoscale. <i>Nanoscale</i> , 2020, 12, 9246-9254.	5.6	33
79	In operando observation of temperature-dependent phase evolution in lithium-incorporation olivine cathode. <i>Nano Energy</i> , 2016, 22, 406-413.	16.0	31
80	Rapid, all dry microfabrication of three-dimensional Co ₃ O ₄ /Pt nanonetworks for high-performance microsupercapacitors. <i>Nanoscale</i> , 2017, 9, 11765-11772.	5.6	30
81	Electrochemically Exfoliating MoS ₂ into Atomically Thin Planar Stacking Through a Selective Lateral Reaction Pathway. <i>Advanced Functional Materials</i> , 2021, 31, 2007840.	14.9	23
82	Three-Dimensional LiMnPO ₄ ·Li ₃ V ₂ (PO ₄) ₃ /C Nanocomposite as a Bicontinuous Cathode for High-Rate and Long-Life Lithium-Ion Batteries. <i>ACS Applied Materials & Interfaces</i> , 2015, 7, 17527-17534.	8.0	21
83	The Capturing of Ionized Oxygen in Sodium Vanadium Oxide Nanorods Cathodes under Operando Conditions. <i>Advanced Functional Materials</i> , 2016, 26, 6555-6562.	14.9	18
84	In Operando Probing of Sodium-Incorporation in NASICON Nanomaterial: Asymmetric Reaction and Electrochemical Phase Diagram. <i>Chemistry of Materials</i> , 2017, 29, 8057-8064.	6.7	18
85	Novel Li ₂ MnO ₃ nanowire anode with internal Li-enrichment for use in a Li-ion battery. <i>Nanoscale</i> , 2014, 6, 8124-8129.	5.6	17
86	A Bowknot-like RuO ₂ quantum dots@V ₂ O ₅ cathode with largely improved electrochemical performance. <i>Physical Chemistry Chemical Physics</i> , 2014, 16, 18680-18685.	2.8	17
87	Electric field and photoelectrical effect bi-enhanced hydrogen evolution reaction. <i>Nano Research</i> , 2018, 11, 3205-3212.	10.4	17
88	Illuminating phase transformation dynamics of vanadium oxide cathode by multimodal techniques under operando conditions. <i>Nano Research</i> , 2019, 12, 905-910.	10.4	12
89	P-doped germanium nanowires with Fano-broadening in Raman spectrum. <i>Journal Wuhan University of Technology, Materials Science Edition</i> , 2016, 31, 52-57.	1.0	4
90	Quadrupling the stored charge by extending the accessible density of states. <i>CheM</i> , 2022, 8, 2410-2418.	11.7	4

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91	Operando Observation of Structural Evolution and Kinetics of Li[Ni _{0.6} Co _{0.2} Mn _{0.2}]O ₂ at Elevated Temperature. <i>Chemical Research in Chinese Universities</i> , 2020, 36, 690-693.	2.6	3
92	CNTs/LiV ₃ O ₈ /Y ₂ O ₃ Composites with Enhanced Electrochemical Performances as Cathode Materials for Rechargeable Solid-State Lithium Metal Batteries. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 8219-8228.	8.0	1
93	In Situ Observation and Mechanism Investigation of Lattice Breathing in Vanadium Oxide Cathode. <i>Acta Chimica Sinica</i> , 2016, 74, 582.	1.4	1
94	Micro/Nanofabrication and Characterization of Advanced Materials and Devices. <i>Journal of Nanotechnology</i> , 2019, 2019, 1-1.	3.4	0