

# Carbon Anodes for Nonaqueous Alkali Metal-Ion Batteries

Advanced Energy Materials

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Citation Report

#	ARTICLE	IF	CITATIONS
1	An Urgent Call to Spent LIB Recycling: Whys and Wherefores for Graphite Recovery. <i>Advanced Energy Materials</i> , 2020, 10, 2002238.	10.2	167
2	Multiscale Hierarchically Engineered Carbon Nanosheets Derived from Covalent Organic Framework for Potassium-ion Batteries. <i>Small Methods</i> , 2020, 4, 2000159.	4.6	36
3	Advances in materials for all-climate sodium-ion batteries. <i>EcoMat</i> , 2020, 2, e12043.	6.8	32
4	Advanced Post-Potassium-ion Batteries as Emerging Potassium-based Alternatives for Energy Storage. <i>Advanced Functional Materials</i> , 2020, 30, 2005209.	7.8	62
5	Bi-based Electrode Materials for Alkali Metal-ion Batteries. <i>Small</i> , 2020, 16, e2004022.	5.2	71
6	Fast Rate and Long Life Potassium-ion Based Dual-ion Battery through 3D Porous Organic Negative Electrode. <i>Advanced Functional Materials</i> , 2020, 30, 2001440.	7.8	155
7	Self-assembly of block copolymers towards mesoporous materials for energy storage and conversion systems. <i>Chemical Society Reviews</i> , 2020, 49, 4681-4736.	18.7	311
8	Potassium-sulfur batteries: Status and perspectives. <i>EcoMat</i> , 2020, 2, e12038.	6.8	41
9	Failure analysis with a focus on thermal aspect towards developing safer Na-ion batteries*. <i>Chinese Physics B</i> , 2020, 29, 048201.	0.7	26
10	High Capacity Adsorption-dominated Potassium and Sodium Ion Storage in Activated Crumpled Graphene. <i>Advanced Energy Materials</i> , 2020, 10, 1903280.	10.2	72
11	Tellurium: A High-volumetric-capacity Potassium-ion Battery Electrode Material. <i>Advanced Materials</i> , 2020, 32, e1908027.	11.1	83
12	A general strategy for metal compound encapsulated into network-structured carbon as fast-charging alkali-metal ion battery anode. <i>Energy Storage Materials</i> , 2020, 29, 300-309.	9.5	19
13	A promising 3D crystalline red P/reduced graphene oxide aerogel architecture anode for sodium-ion batteries. <i>Chemical Engineering Journal</i> , 2020, 393, 124788.	6.6	23
14	Structural stability of Na-inserted spinel-type sodium titanium oxide. <i>Journal of Alloys and Compounds</i> , 2021, 853, 157211.	2.8	9
15	Rational design of carbon materials as anodes for potassium-ion batteries. <i>Energy Storage Materials</i> , 2021, 34, 483-507.	9.5	130
16	Hard Carbon Anodes: Fundamental Understanding and Commercial Perspectives for Na-ion Batteries beyond Li-ion and K-ion Counterparts. <i>Advanced Energy Materials</i> , 2021, 11, .	10.2	282
17	Nitrogen-doped hollow carbon spheres synthesized from solid precursor and its application in lithium ions batteries. <i>Journal of Alloys and Compounds</i> , 2021, 858, 157720.	2.8	7
18	Tuning microstructures of hard carbon for high capacity and rate sodium storage. <i>Chemical Engineering Journal</i> , 2021, 417, 128104.	6.6	30

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19	Controllable assembling of highly-doped linked carbon bubbles on graphene microfolds. <i>Journal of Energy Chemistry</i> , 2021, 58, 500-507.	7.1	3
20	Advanced Anode Materials of Potassium Ion Batteries: from Zero Dimension to Three Dimensions. <i>Nano-Micro Letters</i> , 2021, 13, 12.	14.4	121
21	Recent developments in carbon-based materials as high-rate anode for sodium ion batteries. <i>Materials Chemistry Frontiers</i> , 2021, 5, 4089-4106.	3.2	25
22	Challenges and Strategies toward Cathode Materials for Rechargeable Potassium Ion Batteries. <i>Advanced Materials</i> , 2021, 33, e2004689.	11.1	188
23	The use of in-situ Raman spectroscopy in investigating carbon materials as anodes of alkali metal-ion batteries. <i>New Carbon Materials</i> , 2021, 36, 93-105.	2.9	29
24	A perspective on sustainable energy materials for lithium batteries. <i>SusMat</i> , 2021, 1, 38-50.	7.8	208
25	Hierarchically porous SiO <sub>x</sub> /C and carbon materials from one biomass waste precursor toward high-performance lithium/sodium storage. <i>Journal of Power Sources</i> , 2021, 489, 229459.	4.0	49
26	Defects in Hard Carbon: Where Are They Located and How Does the Location Affect Alkaline Metal Storage?. <i>Small</i> , 2021, 17, e2007652.	5.2	28
27	High-Mass-Loading Electrodes for Advanced Secondary Batteries and Supercapacitors. <i>Electrochemical Energy Reviews</i> , 2021, 4, 382-446.	13.1	181
28	Ultralong cycle life and high rate potassium ion batteries enabled by multi-level porous carbon. <i>Journal of Power Sources</i> , 2021, 492, 229614.	4.0	27
29	Rational design of microstructure and interphase enables high-capacity and long-life carbon anodes for potassium ion batteries. <i>Carbon</i> , 2021, 176, 383-389.	5.4	30
30	Direct synthesis of carbon nanomaterials via surface activation of bulk copper. <i>Carbon</i> , 2021, 177, 1-10.	5.4	18
31	Solid-state fabrication of CNT-threaded Fe <sub>1</sub> -S@N-doped carbon composite as high-rate anodes for sodium-ion batteries and hybrid capacitors. <i>Journal of Alloys and Compounds</i> , 2021, 869, 159303.	2.8	8
32	Design principles and direct applications of cobalt-based metal-organic frameworks for electrochemical energy storage. <i>Coordination Chemistry Reviews</i> , 2021, 438, 213872.	9.5	51
33	Exploration in materials, electrolytes and performance towards metal ion (Li, Na, K, Zn and Mg)-based hybrid capacitors: A review. <i>Nano Energy</i> , 2021, 86, 106070.	8.2	85
34	Hard Carbon Anodes for Next-Generation Li Ion Batteries: Review and Perspective. <i>Advanced Energy Materials</i> , 2021, 11, 2101650.	10.2	213
35	Understanding potassium ion storage mechanism in pitch-derived soft carbon and the consequence on cyclic stability. <i>Journal of Power Sources</i> , 2021, 506, 230179.	4.0	39
36	Layered Na <sub>x</sub> CoO <sub>2</sub> -based cathodes for advanced Na-ion batteries: review on challenges and advancements. <i>Ionics</i> , 2021, 27, 4549-4572.	1.2	11

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37	Fast energy storage performance of CoFe <sub>2</sub> O <sub>4</sub> /CNTs hybrid aerogels for potassium ion battery. <i>Journal of Colloid and Interface Science</i> , 2021, 600, 820-827.	5.0	15
38	Recent advances in potassium-ion hybrid capacitors: Electrode materials, storage mechanisms and performance evaluation. <i>Energy Storage Materials</i> , 2021, 41, 108-132.	9.5	66
39	New insights into carbon-based and MXene anodes for Na and K-ion storage: A review. <i>Journal of Energy Chemistry</i> , 2021, 62, 660-691.	7.1	56
40	Electrochemical performance of Fe <sub>2</sub> (SO <sub>4</sub> ) <sub>3</sub> as a novel anode material for lithium-ion batteries. <i>Journal of Alloys and Compounds</i> , 2021, 886, 161238.	2.8	23
41	Status and challenges facing representative anode materials for rechargeable lithium batteries. <i>Journal of Energy Chemistry</i> , 2022, 66, 260-294.	7.1	149
42	Synthesis of presodiated B, N Co-doped carbon materials and application in sodium ions batteries with enhanced initial coulombic efficiency. <i>Chemical Engineering Journal</i> , 2022, 427, 131951.	6.6	26
43	Recent Advances in Stability of Carbon-Based Anodes for Potassium-Ion Batteries. <i>Batteries and Supercaps</i> , 2021, 4, 554-570.	2.4	25
44	Carbon-Based Fibers for Advanced Electrochemical Energy Storage Devices. <i>Chemical Reviews</i> , 2020, 120, 2811-2878.	23.0	334
45	Spent asphalt-derived mesoporous carbon for high-performance Li/Na/K-ion storage. <i>Journal of Power Sources</i> , 2021, 514, 230593.	4.0	12
46	Role of the Solvation Shell Structure and Dynamics on K <sup>+</sup> and Li <sup>+</sup> Ion Transport in Mixed Carbonate Electrolytes. <i>Batteries and Supercaps</i> , 0, , .	2.4	3
47	Multifunctional Separator Allows Stable Cycling of Potassium Metal Anodes and of Potassium Metal Batteries. <i>Advanced Materials</i> , 2022, 34, e2105855.	11.1	45
48	Surface modification and in situ carbon intercalation of two-dimensional niobium carbide as promising electrode materials for potassium-ion batteries. <i>Chemical Engineering Journal</i> , 2022, 431, 133838.	6.6	19
49	High-performance solid-solution potassium-ion intercalation mechanism of multilayered turbostratic graphene nanosheets. <i>Journal of Energy Chemistry</i> , 2022, 67, 814-823.	7.1	13
50	A comparative overview of carbon anodes for nonaqueous alkali metal-ion batteries. <i>Journal of Materials Chemistry A</i> , 2021, 9, 27140-27169.	5.2	25
51	Intercalation pseudocapacitance of hollow carbon bubbles with multilayered shells for boosting K-ion storage. <i>Journal of Materials Chemistry A</i> , 2022, 10, 2075-2084.	5.2	6
52	High-Energy Aqueous Ammonium-Ion Hybrid Supercapacitors. <i>Advanced Materials</i> , 2022, 34, e2107992.	11.1	73
53	Toward Practical High-Energy and High-Power Lithium Battery Anodes: Present and Future. <i>Advanced Science</i> , 2022, 9, e2105213.	5.6	84
54	Separation, purification, regeneration and utilization of graphite recovered from spent lithium-ion batteries - A review. <i>Journal of Environmental Chemical Engineering</i> , 2022, 10, 107312.	3.3	29

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55	Comparison between hard carbon and natural graphite using the thermal safety diagrams of lithium-ion batteries. <i>Journal of Energy Storage</i> , 2022, 48, 104010.	3.9	1
56	The impact of electrode with carbon materials on safety performance of lithium-ion batteries: A review. <i>Carbon</i> , 2022, 191, 448-470.	5.4	164
57	Environmentally Benign Humic Acid for Potassium-Ion Hybrid Capacitors. <i>SSRN Electronic Journal</i> , 0, , .	0.4	0
58	Laser-Modified Graphited Onion-Like Carbon as Anode for Lithium/Potassium-Ion Batteries. <i>SSRN Electronic Journal</i> , 0, , .	0.4	0
59	Laser-Modified Graphited Onion-Like Carbon as Anode for Lithium/Potassium-Ion Batteries. <i>SSRN Electronic Journal</i> , 0, , .	0.4	0
60	Mechanistic Elucidation of Electronically Conductive PEDOT:PSS Tailored Binder for a Potassium-Ion Battery Graphite Anode: Electrochemical, Mechanical, and Thermal Safety Aspects. <i>Advanced Energy Materials</i> , 2022, 12, .	10.2	19
61	Interlayer and doping engineering in partially graphitic hollow carbon nanospheres for fast sodium and potassium storage. <i>Chinese Chemical Letters</i> , 2023, 34, 107339.	4.8	1
62	Phosphorus/Phosphide-Based Materials for Alkali Metal-Ion Batteries. <i>Advanced Science</i> , 2022, 9, e2200740.	5.6	14
63	One-step reconstruction of acid treated spent graphite for high capacity and fast charging lithium-ion batteries. <i>Electrochimica Acta</i> , 2022, 415, 140198.	2.6	23
64	Laser-modified graphitic onion-like carbon as anode for lithium/potassium-ion batteries. <i>Carbon</i> , 2022, 192, 347-355.	5.4	18
65	Hard Carbon Microsphere with Expanded Graphitic Interlayers Derived from a Highly Branched Polymer Network as Ultrahigh Performance Anode for Practical Sodium-Ion Batteries. <i>ACS Applied Materials &amp; Interfaces</i> , 2021, 13, 61180-61188.	4.0	11
66	Phosphorus/sulfur co-doped hard carbon with a well-designed porous bowl-like structure and enhanced initial coulombic efficiency for high-performance sodium storage. <i>Journal of Alloys and Compounds</i> , 2022, 911, 164979.	2.8	9
67	Self-assembled titanium-deficient undoped anatase TiO <sub>2</sub> nanoflowers for ultralong-life and high-rate Li <sup>+</sup> /Na <sup>+</sup> storage. <i>Chemical Engineering Journal</i> , 2022, 445, 136638.	6.6	12
68	General overview of sodium, potassium, and zinc-ion capacitors. <i>Journal of Alloys and Compounds</i> , 2022, 913, 165216.	2.8	17
69	Advances in Carbon Materials for Sodium and Potassium Storage. <i>Advanced Functional Materials</i> , 2022, 32, .	7.8	54
70	First-principle study of highly controllable boron-doped graphene (BC <sub>20</sub> ) as a high-capacity anode for potassium-ion batteries. <i>Materials Research Express</i> , 2022, 9, 065604.	0.8	2
71	Rational design of a hollow porous structure for enhancing diffusion kinetics of K ions in edge-nitrogen doped carbon nanorods. <i>Nano Research</i> , 2022, 15, 8109-8117.	5.8	24
72	Recent Progress of Carbon-Based Anode Materials for Potassium Ion Batteries. <i>Chemical Record</i> , 2022, 22, .	2.9	6

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73	Recent advances and promise of zinc-ion energy storage devices based on MXenes. <i>Journal of Materials Science</i> , 2022, 57, 13817-13844.	1.7	5
74	Research progress in anode materials based on multiple potassium storage mechanisms. <i>Sustainable Materials and Technologies</i> , 2022, 33, e00480.	1.7	0
75	Facile synthesis of surface fluorinated-Li <sub>4</sub> Ti <sub>5</sub> O <sub>12</sub> /carbon nanotube nanocomposites for a high-rate capability anode of lithium-ion batteries. <i>Applied Surface Science</i> , 2022, 605, 154710.	3.1	11
76	Emerging carbon-based flexible anodes for potassium-ion batteries: Progress and opportunities. <i>Frontiers in Chemistry</i> , 0, 10, .	1.8	1
77	Environmentally Benign Humic Acid for Potassium-Ion Hybrid Capacitors. <i>Energy &amp; Fuels</i> , 2022, 36, 12807-12815.	2.5	1
78	Facile fabrication of a series of Cu-doped Co <sub>3</sub> O <sub>4</sub> with controlled morphology for alkali metal-ion batteries. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2023, 656, 130459.	2.3	1
79	Lithium storage behavior and mechanism of hexagonal FePO <sub>4</sub> /C composite as a novel anode material for lithium-ion batteries. <i>Journal of Alloys and Compounds</i> , 2023, 933, 167766.	2.8	10
80	Recent Advances in Electrolytes for Potassium-Ion Batteries. <i>Advanced Functional Materials</i> , 2023, 33, .	7.8	44
81	An ultra-stable sodium half/full battery based on a unique micro-channel pine-derived carbon/SnS <sub>2</sub> @reduced graphene oxide film. , 2023, 2, .		8
83	Production of Hard Carbon from <i>Saccharum spontaneum</i> , known as "Paja Canalera", 2022, , .		0
84	Sucrose-derived hard carbon wrapped with reduced graphene oxide as a high-performance anode for sodium-ion batteries. <i>Journal of Materials Chemistry A</i> , 2023, 11, 9816-9823.	5.2	11
85	Simultaneous reactions of sulfonation and condensation for high-yield conversion of polystyrene into carbonaceous material. <i>Journal of Industrial and Engineering Chemistry</i> , 2023, 122, 426-436.	2.9	7
86	A novel double-coated anode material SiO <sub>x</sub> /C/Cu <sub>2</sub> O for lithium ion batteries. <i>Solid State Ionics</i> , 2023, 394, 116211.	1.3	3
87	Reconfiguring Hard Carbons with Emerging Sodium-Ion Batteries: A Perspective. <i>Advanced Materials</i> , 2023, 35, .	11.1	58
88	High-Entropy Perovskites for Energy Conversion and Storage: Design, Synthesis, and Potential Applications. <i>Small Methods</i> , 2023, 7, .	4.6	14
89	Application of Thermally Fluorinated Multi-Wall Carbon Nanotubes as an Additive to an Li <sub>4</sub> Ti <sub>5</sub> O <sub>12</sub> Lithium Ion Battery. <i>Nanomaterials</i> , 2023, 13, 995.	1.9	1
90	Enhanced hazard characterization of lithium-ion batteries subject to destructive overcharge conditions. <i>Journal of Thermal Analysis and Calorimetry</i> , 0, , .	2.0	0
91	Single atom-based electrodes for alkali metal-ion batteries: Current progress and future perspectives. <i>Functional Materials Letters</i> , 0, , .	0.7	0

#	ARTICLE	IF	CITATIONS
92	Critical review on the degradation mechanisms and recent progress of Ni-rich layered oxide cathodes for lithium-ion batteries. <i>EnergyChem</i> , 2023, 5, 100103.	10.1	10
104	Reappraisal of hard carbon anodes for practical lithium/sodium-ion batteries from the perspective of full-cell matters. <i>Energy and Environmental Science</i> , 2023, 16, 5688-5720.	15.6	6
106	Hierarchical V <sub>3</sub> S <sub>4</sub> /C nanofibers with fast kinetics for superior alkali metal batteries. <i>Rare Metals</i> , 2024, 43, 1836-1844.	3.6	0
108	A comprehensive review of various carbonaceous materials for anodes in lithium-ion batteries. <i>Dalton Transactions</i> , 2024, 53, 4900-4921.	1.6	0