Nitrogen-phosphorus co-doped capacitor

What is a porous nitrogen-and-phosphorus co-doped carbon material?
Herein, the porous nitrogen-and-phosphorus co-doped carbon material are prepared using the O 2 3 -1 -1 at 20 A g -1). Under the guidance of theoretical simulation, the enhancement of potassium storage capacity and kinetics is explored by combining spectral characterization and electrochemical research.

Can nitrogen-and-phosphorus co-doped hard carbon materials improve potassium storage performance?
Porous nitrogen-and-phosphorus co-doped hard carbon materials are prepared using the reactive pyrolysis of cellulose. The nitrogen-and-phosphorus co-doped carbon demonstrates high capacity and rate performances. The nitrogen-and-phosphorus co-doping is proposed to improve the potassium storage performanceof hard carbon materials.

Is mesoporous carbon a supercapacitor electrode?
Nitrogen and phosphorus co-doped cubic ordered mesoporous carbon as a supercapacitor electrodematerial with extraordinary cyclic stability. J Mater Chem A,2015,3: 18001-18009

What is the energy density of carbon nanosphere anode & activated carbon cathode?
An LIC fabricated with the carbon nanosphere anode and an activated carbon cathode yields a high energy density of 103 W h kg -1,an extremely high power density of 44,630 W kg -1,and long-term cyclability of over 10,000 cycles.

Is graphene a universal anode for lithium ion capacitors?
Electrochim Acta, 2020, 359: 136898 Luan Y, Hu R, Fang Y, et al. Nitrogen and phosphorus dual-doped multilayer graphene as universal anode for full carbon-based lithium and potassium ion capacitors.

Are lithium and sodium ion capacitors based on recycled olive pits?
New Carbon Mater, 2021, 36: 253-277 Ajuria J, Redondo E, Arnaiz M, et al. Lithium and sodium ion capacitors with high energy and power densities based on carbons from recycled olive pits.

Abstract Potassium-ion hybrid capacitors (PIHCs) rec-oncile the advantages of batteries and supercapacitors, exhibiting both good energy density and high-power den-sity. However, the ...

As a proof of concept, a potassium-ion capacitor assembled using this carbon anode yields a high energy density of 107 Wh kg-1, a maximum power density of 18.3 kW kg-1, and ultra-long ...

mers with an alternation of phosphorous and nitrogen atoms9,10 with different chemical structures and functionalities and can be used as precursors to prepare carbon ...

Luan Y, Hu R, Fang Y, et al. Nitrogen and phosphorus dual-doped multilayer graphene as universal anode for

full carbon-based lithium and potassium ion capacitors. Nano ...

The organic xerogel was synthesized from the polymerization reaction of a kind of amino acid, tyrosine, and pyrrole-2-carbaldehyde using phosphoric acid as the catalyst and phosphorus source. Nitrogen (N) and ...

Herein, a novel N, P co-doped eave-like hierarchical porous carbon (NP-EHPC) for CDI is reported. To prepare the NP-EHPC, the core-shell ZIF-8@AF particles are first prepared ...

Herein, a phosphorus and nitrogen co-doped carbon material (PNC) with a wide layer spacing (0.381 nm) and high content of phosphorus (1.27 at%) and nitrogen (6.37 at%) was synthesized with non-toxic pyrrole and phytic acid as the ...

In particular, nitrogen-phosphorus co-doped porous carbon (N/P-C) has received much attention in the past few years. ... (SCs), metal-ion hybrid capacitors (HC), metal-ion ...

Herein, polypyrrole-coated nitrogen and phosphorus co-doped hollow carbon nanospheres (NPHCS@PPy) were synthesized by a facile method and employed as anode ...

We developed a CaCO3-assistant technique for the fabrication of nitrogen/phosphorus codoped hierarchical porous carbons.

Nitrogen and phosphorus co-doped carbon hollow spheres derived from polypyrrole for high-performance supercapacitor electrodes. Author links open overlay panel ...

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