

A novel molecular model of carbonyl-substituted phthalocyanine compounds used as the cathode in a lithium-ion battery is demonstrated. Multiple carbonyl groups with high electrochemical activity are substituted onto a ...

Lithium-ion batteries for long-range electric automobiles require anode materials with a higher specific capacity than traditional graphite (G). 1 Next-generation materials should have both a high gravimetric capacity and capacity retention upon cycling. 1 Silicon (Si) is a promising material for the anode as it has a theoretical capacity nearly 10 times greater than ...

Request PDF | On Jan 1, 2022, Jia Hou and others published Highly Oriented Fluorinated Carbon Nanotube Arrays for High Specific Capacity Lithium Primary Battery | Find, read and cite all the ...

Enhancing the cathode capacity of lithium ion batteries (LIBs) has been one strategy to improve the energy density of batteries for electric ...

1. Introduction Lithium ion secondary batteries are attractive energy storage devices with high gravimetric and volumetric capacity and the ability to deliver high rates of power. 1-9 ...

High-specific-capacity molybdate anode materials for lithium-ion batteries with good low-temperature performance. Author links open overlay panel Xiuli Ge a, ... MoS<sub>2</sub> nanoplates consisting of disordered graphene-like layers for high rate lithium battery anode materials. Nano Lett., 11 (2011), pp. 4826-4830. Crossref View in Scopus Google ...

It can combine the lithium-ion battery with the capacitor to ensure that it has a high specific capacity and excellent large-current discharge performance. In this paper, a novel Li + -doped Ni<sub>0.64</sub> Mn<sub>0.64</sub> Al<sub>0.56</sub> O<sub>2</sub> is synthesized by coprecipitation method and as a capacitor active material with commercialized LiNi<sub>1/3</sub> Co<sub>1/3</sub> Mn<sub>1/3</sub> O<sub>2</sub> in different proportions forms ...

2 ???&#0183; (a) Electric vehicle (EV) market values from 2023 to 2032 and (b) global battery demand by applications (consumer electronics, energy storage, and EV) from 2018 to 2030. ...

The combination of high thickness and specific capacity leads to areal capacities of up to 45 and 30 mAh cm<sup>-2</sup> for anodes and cathodes, respectively. ... A. et al. High area capacity lithium ...

Lithium (Li) metal is an ideal anode material for rechargeable batteries due to its extremely high theoretical specific capacity (3860 mA h g<sup>-1</sup>), low density (0.59 g cm<sup>-3</sup>) and the lowest negative electrochemical potential (-3.040 V vs. the standard hydrogen electrode). Unfortunately, uncontrollable dendritic Li growth

and limited Coulombic efficiency during Li ...

The assembled Mg@BP || nano-CuS battery delivered a high specific capacity of 398 mAh g<sup>-1</sup> at 560 mA g<sup>-1</sup> with a low decay rate of 0.016% per cycle, as well as an initial specific energy of ...

Web: <https://www.systemy-medyczne.pl>