

Title: Lithium nanomaterials

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Herein, we focus on recent advancements of nanofiber materials with carefully designed structures and enhanced electrochemical properties for use in Li-ion batteries. The synthesis, ...

This chapter starts with an introduction to various materials (anode and cathode) used in lithium-ion batteries (LIBs) with more emphasis on lithium titanate (LTO)-based anode materials.

Nanoparticles or nanopowder electrode materials, i.e., ultrafine versions of the conventional micron-sized electrode powders, are the earliest implementation of nanomaterials science in the Lithium-ion ...

Nanocomposite materials with a foundation in silicon exhibit a wide spectrum of compositions, incorporating various nanomaterials with the goal of improving the efficiency of anodes ...

In summary, this Special Issue compiles a series of original research articles and one review paper, providing new insights and advances in materials and components for post-lithium systems and high ...

Abstract With revolutionary gains in energy density, stability, and lifetime, nanomaterials are driving the development of lithium-ion batteries (LIBs).

Thirty years later, the exceptional development of lithium-ion battery technology has been rewarded with the 2019 Nobel Prize in Chemistry. As the research effort continues, this Special Issue ...

As earlier mentioned, the application of nanomaterials in lithium-ion batteries is an important topic that has garnered significant research attention, however, most existing review ...

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