

静电纺丝在锂硫电池正极材料中的应用

**Application of Electrostatic Spinning in the
Cathode Material of Lithium Sulfur Battery**

摘要

锂硫电池是一种前景广阔的新型电池,但其正极材料存在着导电性不佳和体积膨胀等问题,而具有特定结构的纳米纤维材料运用于锂硫电池正极可以同时解决这其中的多个问题。纳米纤维材料在作为活性材料载体、支撑结构、导电体系具有优势,且多孔纳米纤维材料拥有吸附可溶性多硫化物,为活性硫提供反应位点,以此抑制穿梭效应的功能,因此如何高效的制备可用的纳米纤维材料就成为重要的研究课题。静电纺丝技术作为一种制造装置简单、纺丝成本低廉、可纺物质种类繁多、工艺可控的方法备受研究者的青睐,本文将对一些典型静电纺丝纳米纤维材料用于正极材料的案例进行简单的介绍,从制备过程、基本机构、作用机理的方面阐述,并对比性能参数,做出有价值的评估。

关键词 静电纺丝 锂硫电池 纳米纤维 电化学性能

Abstract

Lithium-sulfur battery is a new type of battery with broad prospects, but its positive electrode material has problems such as poor conductivity and volume expansion, and the application of nano-fiber materials with a specific structure to the positive electrode of lithium-sulfur battery can simultaneously solve many problem. Nanofiber material has advantages as an active material carrier, support structure, and conductive system, and porous nanofiber material has the function of adsorbing soluble polysulfide, providing a reaction site for active sulfur, so as to suppress the shuttle effect, so how to efficiently prepare The available nanofiber materials have become an important research topic. Electrospinning technology is favored by researchers as a method with simple manufacturing device, low

以上内容仅为本文档的试下载部分，为可阅读页数的一半内容。如要下载或阅读全文，请访问：<https://d.book118.com/108136117033006137>