泡沫碳的制备和应用研究

摘　　要

本文综述了泡沫碳的五类制备工艺，即碳前体吹制、碳前体模板碳化、膨胀石墨压缩、石墨烯纳米片组装和其他方法等。通过这些方法，成功的控制了泡沫碳的体积密度、孔径和比表面积的大小以及物理性能（如导热性、电导率、取向性、抗压强度等）。不同方法制备的泡沫碳作为添加剂与相应的热存储材料、电极材料和吸附材料复合制备的复合材料有望取得这些领域重大应用新进展。

关键词：泡沫碳，制备，性能，应用

Abstract

In this paper, five kinds of preparation methods of Carbon Foams, such as blowing of carbon precursor, carbonization of carbon precursor template, expansion, graphite compression, assembly of graphene nanosheets and other methods, are reviewed. By these methods, the volume density, Pore size, specific surface area and physical properties (such as thermal conductivity, electrical conductivity, orientation, compressive strength, etc. Foamed carbon prepared by different methods as additives and corresponding thermal storage materials, electrode materials and adsorption materials composite materials are expected to make significant progress in these fields.

Keywords： Carbon foam，Preparation，Performance，Application

目　　录

1 引　　言.....1

2 泡沫碳的制备.....3

2.1 碳前体的吹制.....3

2.2 模板碳化.....8

2.3 膨胀石墨的压缩.....12

2.4 石墨烯纳米片的组装.....14

2.5 其他方法.....16

3 泡沫碳应用.....19

参考文献.....21

致　　谢.....25

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/828130111115006111