

<<自组织纳米材料>>

图书基本信息

书名：<<自组织纳米材料>>

13位ISBN编号：9787030187925

10位ISBN编号：703018792X

出版时间：2007-4

出版时间：科学

作者：MotonariAdachi ,

页数：317

版权说明：本站所提供下载的PDF图书仅提供预览和简介，请支持正版图书。

更多资源请访问：<http://www.tushu007.com>

<<自组织纳米材料>>

内容概要

过去的几十年里，纳米结构新颖的系统性能在自然科学的各个领域中得到广泛认可，新技术的不断发展吸引了各个领域的科学家投入到与之相关的研究中。

要全面实现纳米科学与技术的巨大应用前景，面临的重要挑战就是寻找在原子尺度上调制排列结构的方法以及构造原子、介观、宏观各尺度层次的材料。

本书包含了大量通过化学、仿生学途径并运用自组织机制合成纳米材料并产生不同尺度的组件的方法。

本书介绍了纳米结构自组装领域从基础理论到相关应用的大量令人鼓舞的最新进展，可供物理学、化学、生物学、工程和材料科学领域中科研人员和研究生参考。

<<自组织纳米材料>>

书籍目录

Preface1 Self-Assembled Si_{1-x}Ge_x Dots and Islands Jean-Marc Baribeau , Nelson L.Rowell , and David J.Lockwood 1.1 Introduction 1.2 Si_{1-x}Ge_x Island Growth 1.3 Stacked Si_{1-x} Islands 1.4 Engineering of Si_{1-x}Ge_x Islands 1.5 Applications of Si_{1-x}Ge_x Islands and Dots 1.6 Summary and Future Prospects References2 Synthesis of Titania Nanocrystals : Application for Dye-Sensitized Solar Cells Motonari Adachi , Yusuke Murata , Fumin Wang , and Jinting Jiu 2.1 Formation of Titania Nanocrystals by Surfactant-Assisted Methods 2.2 Application of TiO₂ Network of Single-Crystalline Nanowires for Dye-Sensitized Solar Cells 2.3 Summary References3 Soft Synthesis of Inorganic Nanorods , Nanowires , and Nanotubes Shu-Hong Yu and Yi-Tai Qian 3.1 Introduction 3.2 An Overview : Emerging Synthetic Routes for the Synthesis of Low-Dimensional Nanocrystals 3.3 Soft Synthesis of Low-Dimensional Nanocrystals 3.4 Summary and Outlook References4 Assembly of Zeolites and Crystalline Molecular Sieves Jennifer L.Anthony and Mark E.Davis 4.1 Introduction 4.2 Thermodynamics of Synthesis Processes 4.3 Kinetics of Synthesis Processes 4.4 Assembly Processes 4.5 Components of Synthesis 4.6 Chirality : Can a "Designer"Zeolite Be Synthesized? 4.7 Summary References5 Molecular Imprinting by the Surface Sol-Gel Process : Templated Nanoporous Metal Oxide Thin Films for Molecular Recognition Seung-Woo Lee and Toyoki Kunitake 5.1 Introduction 5.2 Surface Sol-Gel Process 5.3 Molecular Imprinting in Amorphous Metal Oxide Films 5.4 Practical Potentials 5.5 Unsolved Problems and Future Prospects References6 Fabrication , Characterization , and Applications of Template-Synthesized Nanotubes and Nanotube Membranes7 Synthesis and Characterization of Core-Shell Structured Metals8 Cobalt Nanocrystals Organized in Mesoscopic Scale9 Synthesis and Applications of Highly Ordered Anodic Index

<<自组织纳米材料>>

版权说明

本站所提供下载的PDF图书仅提供预览和简介，请支持正版图书。

更多资源请访问:<http://www.tushu007.com>