《纳米科学与技术大全1》

图书基本信息

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内容概要

《纳米科学与技术大全1:纳米材料(导读版)》内容简介：近年，纳米技术及其基础科学以前所未有的速度增长与发展。基于此，纳米科学与技术大全1：纳米材料（导读版）旨在为读者们呈现一本动态的、权威的和真正能获取有效信息的参考著作，力求反映此学科领域全面而广阔的发展状况。 此书共有5卷，由国际专家组写作而成，内容涉及材料科学、物理学，生命科学、化学等领域；每篇文章的写作都兼具学术性、批判性与可读性，内容深入浅出，前后呼应，是一本跨学科领域研究者们不可或缺的有价值的参考资料。
《纳米科学与技术大全1:纳米材料(导读版)》适合化学、物理学、材料科学、生物学．工程学等领域的研究生及科研人员参考，对于纳米研究实验室、学术机构，涉及纳米和生物材料、材料科学等方面的专业组织、公司、企业等也是不可多得的参考资料。

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章节摘录

版权页： 插图： The molecular design approaches described above can be a powerful guiding principle for the development of molecular E-O glasses using supramolecular self-assembly of chromophores as long as the r33 value continues to increase linearly with increasing net concentration of chromophores,and the materials do not electrochemically break down during the electric field poling process.This very general material design strategy will be extended to other supramolecular glasses based on other noncovalent interactions other than the Ar-ArFinteractions between dendrons and fluorinated dendrons in the future.It is expected that such materials may show significant cooperative improvement in poling efficiencies since the host matrices and guest can both respond to the poling field.The cooperative improvement in poling efficiencies of materials with field-responsive host matrices can be described as matrix-assisted poling [60]. Molecular glasses based on dendrimers of multiple chromophores can also be used as a host matrix for structurally compatible guest chromophores.It should be noted that the dendrimer or hyperbranched oligomers of multiple chromophores could be used as guests or hosts with conventional polymer to improve material properties for device applications.Examples of molecular glass composites based on binary chromophores,composites of chromophore with amorphous dendrimer of multiplechromophores,composites of crosslinkable dendrimer of multiple chromophores,and guest-host polymers based on dendrimer of multiple chromophores in inert host polymers have been reported recently [61 a-g]. 1.06.4.6 Structured Third-Order Organic NLO Materials The structure-property relationship of third-order organic NLO molecules is harder to find than that of second-order molecules in terms of molecular design rules or generally accepted guiding principles for molecular engineering.Since the magnitude of susceptibilities (microscopic and macroscopic) of third-order NLO process (four-wave mixing) is significantly smaller statistically than that of secondorder process (three-wave mixing),the availability of molecules with strong-enough third-order NLO properties for device application has been very limited traditionally.Studies on the structure-property correlation of solid-state assembly of molecules with third-order properties are even harder to explore.Ironically,this may be due to the fact that thirdorder materials do not have specific symmetry requirements to satisfy to be active.

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编辑推荐

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精彩短评

1、英文版的书
2、跟其他网站比有点小贵，而且书看着不是正版的。

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