

<<高分子物理>>

图书基本信息

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内容概要

《高分子物理：“结构与性能”背后的概念(英文版·原书第3版)》对高分子物理的多个领域作了生动而详细的介绍，内容涵盖链构象，高分子溶液，共混物和嵌段共聚物，半晶态聚合物，聚合物网络，聚合物流体等多种体系。

作者还使用了大量的数学处理与实验结果，对提出的机理与数学模型进行示例与验证，勾勒出一幅浓墨重彩的高分子物理画卷。

《高分子物理：“结构与性能”背后的概念(英文版·原书第3版)》可作为化学化工、材料科学和物理学等专业的本科生和研究生教材，也可供有关领域的专家、学者阅读参考。

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章节摘录

版权页： 插图： Polymers , also known as macromolecules , are built up of a large number of molecular units that are linked together by covalent bonds . Usually they represent organic compounds , containing carbon atoms together with hydrogen , oxygen , nitrogen , and halogens , etc . In this first chapter , we briefly survey the main characteristics of their chemical constitution and molecular architecture and introduce the notions employed for their description . using examples for the explanation . All these polymers are electrically neutral . If chains are built up of monomers that contain an ionizable group , i . e . , a group that can dissociate into a chain—fixed cation or anion and a mobile counter—ion bearing the opposite charge , a polyelectrolyte is obtained . Table 1 . 2 collects a few typical examples . The first three compounds are synthetic polymers , the other two samples are biopolymers ; cellulose and starch in the form of derivatives which include ionizable substitutes . Charges on a chain can also be created by doping processes . For conjugated polymers , i . e . , chains with conjugated C—C double bonds , this is particularly easy . Even more importantly , the produced charges are mobileand thus provide electrical conductivity . Table 1 . 3 compiles some of these special materials .

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