

<<高分子物理>>

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## <<高分子物理>>

### 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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## &lt;&lt;高分子物理&gt;&gt;

## 书籍目录

出版说明

推荐序

preface ( 前言 )

preface to the first edition/第1版前言

1 constitution and architecture of chains/链的组成与构造1

2 single chain conformations /单链构象 15

2.1 rotational isomeric states /旋转异构态15

2.2 helices/螺旋19

2.3 coils /线团22

2.3.1 the ideal chain/理想链26

2.3.2 the expanded chain/膨胀链45

2.4 the persistent chain/持续链55

2.5 the ising chain/ 伊辛链59

3 polymer solutions /聚合物溶液69

3.1 dilute and semidilute solutions/稀溶液与半稀溶液70

3.1.1 osmotic pressure/渗透压71

3.2 screening of excluded volume forces/排除体积力的屏蔽82

3.3 polyelectrolyte solutions/聚电解质溶液89

3.3.1 condensation and screening of charges /电荷的团聚与屏蔽89

3.3.2 chain stretching, salt effects and interchain  
ordering/链伸展、盐效应与链间序95

3.3.3 osmotic pressure/渗透压100

4 polymer blends and block copolymers/共混物与嵌段共聚物105

4.1 the flory-huggins treatment of polymer  
mixtures/聚合物混合物的flory-huggins处理方法1064.1.1 phase diagrams: upper and lower miscibility  
gap/相图：上临界与下临界混溶间隙117

4.2 phase separation mechanisms/相分离机理122

4.3 critical fluctuations and spinodal  
decomposition/临界涨落与旋节线分解129

4.3.1 critical scattering/临界散射132

4.3.2 decomposition kinetics/分解动力学143

4.4 block copolymer phases/嵌段共聚物的相结构151

4.4.1 layered structures/层状结构155

4.4.2 pretransitional phenomena/前转变现象157

5 the semicrystalline state/半结晶态165

5.1 structure characteristics/结构特征167

5.1.1 morphological elements /基本形态167

5.1.2 structure parameters/结构参数173

5.2 kinetics of crystallization and melting/结晶与熔融动力学181

5.3 laws for the structure development/结构变化规律190

5.3.1 the multistage model/多阶段模型199

5.4 mechanisms of secondary crystallization/二级结晶机理205

5.4.1 the insertion mode/插层模式208

5.4.2 surface crystallization and melting/表面结晶与熔融212

## &lt;&lt;高分子物理&gt;&gt;

- 5.5 crystallization from oriented melts/取向熔体结晶216
- 6 mechanical and dielectric response/力学与介电响应223
- 6.1 response functions/响应函数224
- 6.1.1 viscoelasticity/粘弹性224
- 6.1.2 orientational polarization/取向极化228
- 6.1.3 general relationships/通用公式229
- contents 6.2 relaxatory modes/松弛模式236
- 6.2.1 single-time relaxation process/单时间松弛过程237
- 6.2.2 retardation and relaxation time spectra/推迟与松弛时间242
- 6.3 specific relaxation processes and flow behavior/具体松弛过程与流动行为245
- 6.3.1 local processes/局部过程246
- 6.3.2 glass-rubber transition and melt flow/玻璃-橡胶转变与熔体流动250
- 6.3.3 the glass transition temperature/玻璃化转变温度269
- 6.3.4 relaxation in partially crystalline systems/半晶体系中的松弛277
- 7 conjugated polymers/共轭聚合物287
- 7.1 electrooptic activity/光电活性289
- 7.1.1 excitons and free charges/激发与自由电荷289
- 7.1.2 electroluminescence/电发光297
- 7.2 effects of doping/掺杂效应302
- 7.2.1 electrical conductivity/电导率302
- 7.2.2 magnetism and reflectivity/磁性与反射率306
- 8 microscopic dynamics/微观运动学313
- 8.1 the fluctuation-dissipation theorem/涨落-耗散原理313
- 8.2 the rouse model/rouse模型317
- 8.2.1 stress relaxation/应力松弛325
- 8.2.2 the dielectric normal mode /介电基准模式330
- 8.3 entanglement effects in polymer melts/聚合物熔体中的缠结效应333
- 8.3.1 the reptation model/爬行模型338
- 8.4 solution viscosities/溶液粘度 343
- 8.4.1 neutral polymers: hydrodynamic interaction/中性聚合物：流体力学作用344
- 8.4.2 polyelectrolytes: coulomb interaction/聚电解质：静电作用 352
- 9 non-linear mechanics /非线性力学357
- 9.1 rubber elasticity/橡胶弹性361
- 9.1.1 the fixed junction model of ideal rubbers/理想橡胶的固定结点模型364
- 9.1.2 the cauchy strain tensor/ cauchy应变张量371
- 9.1.3 finger's constitutive equation/ finger本构方程376
- 9.2 swelling of neutral and electrolytic gels/中性与电解质凝胶的溶胀384
- 9.3 non-newtonian melt flow/非牛顿熔体的流动390
- 9.3.1 rheological material functions /流变材料函数391
- 9.3.2 the lodge liquid/ lodge液体398
- 9.3.3 the stress-optical rule/应力-光学规则404
- 10 deformation, yielding and fracture/形变、屈服与断裂415
- 10.1 shear deformation in semicrystalline polymers/半晶聚合物中的剪切形变418
- 10.1.1 critical strains/临界应变418

## &lt;&lt;高分子物理&gt;&gt;

- 10.1.2constituents of the drawing stress/拉伸应力的成分426
- 10.1.3the mechanics of neck formation/细颈形成机理429
- 10.1.4fibrillar state of order/纤维化有序态435
- 10.2crazing/银纹 444
- 10.3brittle fracture/脆性断裂450
  - 10.3.1linear fracture mechanics /线性断裂力学453
  - 10.3.2the slow mode of crack growth/裂缝生长的缓慢模式455
- asattering experiments/散射实验463
  - a.1fundamentals/基本概念463
    - a.1.1basic equations/基本方程464
    - a.1.2time-resolved scattering experiments/时间分解的散射实验468
  - a.2absolute intensities/绝对强度471
  - a.3low angle scattering properties/小角散射性质474
    - a.3.1guinier's law/ guinier公式474
    - a.3.2forward scattering/前散射476
  - a.4special polymer systems/特种聚合物体系477
    - a.4.1binary mixtures and block copolymers/二元混合物与嵌段共聚物477
    - a.4.2two-phase layer systems/两相层状体系484
- bglossary of symbols/术语与符号493
- cbibliography/参考书目501
- references/参考文献505
- index/索引

## 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 kation 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 substituents. 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 mobile and thus provide electrical conductivity. Table 1.3 compiles some of these special materials.

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