

<<平衡统计物理学>>

图书基本信息

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内容概要

这是针对从事物理、化学和材料科学的研究生和高年级本科生的专业需求编写的统计物理教材。早在1980年，作者们发现由K.G.Wilson率先将重整化群方法引入临界现象并取得成功之后，凝聚态物理的研究进入了飞速发展的黄金时代，因此认为研究生的早期教学工作应当反映这方面的动态。为此于1989年率先由Prentice-Hall出版公司出版了反映这方面特色的《平衡统计物理学》，1994年经过修订，转到World Scientific出版了本书第一版，1999年出版了第二版，现在呈现在读者面前的是2003年的版本。

全书共分11章，前两章分别复习热力学和统计系统理论，这部分内容既是读者学习后面各章的基础，也是为了本科期间没有接触过热力学和统计物理的学生设计的。

两章都有大量习题，可以帮助读者加深理解。

后面各章分别讲述平均场和朗道理论、致密气体和液体、临界现象的二维伊辛模型、级数展开、标度律、重整化群方法等。

第七章介绍动力学模拟方法。

八、九、十、十一各章介绍统计物理最活跃的应用领域:聚合物和薄膜、量子流体、线性响应理论、无序系统等。

由于本书的后半部分涉及二次量子化的概念，因此在附录中补充了占有数表象的内容。

本书每章都有不少的习题，越到后面各章，习题的难度越来越有挑战性。

作者们还专门编写了《习题解答》，有需要的教师或读者可通过互联网

(<http://www.worldscibooks.com/physics/4485.html>) 查找。

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Equilibrium Statistical Physics和Physics and Chemistry of Disordered S

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