

<<化学与应用化学专业英语>>

图书基本信息

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前言

随着中国改革开放、加入世贸以及市场经济的发展,不管是企业中的业务推广、谈判还是科研机构中的技术研发,同国外的科技交流与合作日趋增多,因此对既懂专业知识又懂英语的人才需求量日益提高。

为了适应这种形势的发展需要,有必要加强化学专业英语的教育,提高在校本科生、研究生以及相关人员的英语水平。

因而,化学专业英语成为国内各高等院校化学、应用化学及相关专业的一门专业必修课。

本书共分为9个单元,内容涵盖综合化学、无机化学、有机化学、物理化学、分析化学、生物化学、材料科学、单元操作、科技文献,除综合化学和科技文献两单元外,每单元均由数量不等、选自国外原版英文书籍的相关文章组成,每课由以下8个部分组成: Paper、New Words and Expressions、Words to Know、Notes、Further Reading、Solved Problems、Supplementary Reading、Practical Reading

其中,综合化学单元作为基础介绍篇,其目的在于为读者提供对化学学科的基础认识,包括两篇文章,分别描述了化学学科的基础以及化学学科的展望;科技文献单元作为提高篇,主要针对有意进入研究生阶段学习的本科生,目的在于为读者提供科技文献阅读和写作相关的基础知识,教师在讲授过程中可将此单元作为自学篇。

其他单元课文选材广泛,对化学及其相关交叉学科进行了基础而全面的介绍,内容由浅入深。

本书每单元组成部分的内容安排有如下特色: (1) Words to Know, 扩充词汇。

进一步提供与正文相关的专业词汇,使读者可以凭借这些词汇阅读更广泛的科技文献。

(2) Notes, 注重对化学问题的注释。

减少对英语语法本身的注释,突出科技英语的特点。

(3) Further Reading, 深入阅读。

对正文某个具体问题或某个概念进行深入介绍,使读者能够以英语的思维方式对正文所涉及的化学知识有进一步的认识。

(4) Solved Problems, 课后习题。

习题大多数来自英文原版教材。

此部分让读者结合专业课程的学习,用英文作解答问题练习(如概念问答、解释题型需采用英文作答)。

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内容概要

本书是根据大学英语教学大纲的专业阅读部分的要求而编写的,旨在为化学、应用化学专业提供一本比较系统的专业英语教学用书。

《化学与应用化学专业英语》共分为9个单元,内容涵盖综合化学、无机化学、有机化学、物理化学、分析化学、生物化学、材料科学、单元操作和科技文献,每课由Paper、New Words and Expressions、Words to Know、Notes、Further Reading、Solved Problems、Supplementary Reading和Practical Reading 8个部分组成,形式安排新颖、内容覆盖面广。

书后还附录如下实用内容:(1)化学元素名称中英文对照表;(2)化学专业英语词汇常用前后缀;(3)化学常见缩略语;(4)化学实验室常用仪器名称;(5)常用英文化学分子式、方程式及数学式的读法。

另外,为了便于读者的查阅,《化学与应用化学专业英语》还附有课文生词表。

本书可供化学、应用化学专业本科生的专业英语教学或双语教学,也可以作为相关专业的研究生、教师以及科技人员的参考用书。

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章节摘录

These early "chemists" made such discoveries by accident, and for a long time accident was the principal means of discovery. Accident still remains important to discovery, but with our increasing chemical understanding we now usually create new chemical substances by design. After the early period of random discovery, humans began heating substances together intentionally to see what occurs. When a material that we now call iron ore was heated with charcoal, it produced iron metal, a new substance (we now use coke, produced from coal, instead of charcoal). Iron ore contains a chemical in which iron atoms are chemically bound to oxygen atoms. Heating it with charcoal lets the carbon atoms of charcoal bind to the oxygen atoms and carries them off as the gas carbon monoxide, leaving iron behind. Only gold and some metals related to platinum occur naturally as metals; all others are made from their ores by such chemical processes. Modern chemistry is devoted to understanding the chemical structures and properties of natural chemicals and of chemicals created by building on what nature has supplied. Why do chemists call their discipline the "central science"?

Chemistry touches many other scientific fields. It makes major contributions to agriculture, electronics, biology, medicine, environmental science, computer science, engineering, geology, physics, metallurgy, and mineralogy, among many others. It does not ask the physicist's question: What is the ultimate nature of all matter?

Instead it asks the chemist's questions: Why do the substances of the world differ in their properties? How can we control and most effectively utilize these properties?

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