

<<有机化学>>

图书基本信息

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## 前言

为了推动全国高校的双语教学工作，教育部、财政部在《关于实施高等学校本科教学质量与教学改革工程的意见》（教高[2007]1号）中强调教学质量工程要重视双语教学。

在《关于启动2007年度双语教学示范课程建设项目的通知》中，提出要在2007年至2010年建设500门国家双语教学示范课程，并且在2007年正式启动高等学校双语教学示范课程建设项目，审定了全国首批百门双语教学示范课程建设项目。

这为规范全国高等学校双语教学，提高双语教学水平提供了很好的契机。

大连理工大学“有机化学及实验双语教学示范课程建设”项目是教育部首批百门双语教学示范课程建设项目之一。

有机化学双语教学课程建设亟待进行的工作之一就是出版对国内教师和学生切实适用的有机化学双语教材。

有机化学双语教学十余年的实践表明，改编英文原版有机化学教材是建设有机化学双语教学教材的有效途径，既可保持英文版教材的“原汁原味”，亦能适合中国国情。

在教育部项目的支持下，我们将L G. Wade编著的Organic Chemistry（第六版）改编为有机化学双语教材，适合普通高等学校化学、化工专业70~100学时的有机化学双语教学课程使用。

改编的有机化学双语教材具有以下特点：1. 对英文原版教材只做章节顺序的调整和内容的删减，未增加新的英文内容，目的是使改编的双语教材保持英文版教材的“原汁原味”。

2. 本书突出双语教材特色，对部分有机化学专业词汇、术语及化合物名称给出中文注释，书后增加专业词汇中英文对照表（Vocabulary），方便学生自学和查阅。

3. 每章末增加中文概要（Summary in Chinese），有利于学生对教学重点的理解和掌握。

4. 为了使改编教材的章节编排遵循有机化学双语教学的特点，将有机化合物的命名部分从各章中抽出来，合并为新的一章，作为第3章“Brief Introduction and Nomenclature of Organic Compounds”。

在双语教学中，有机化合物命名部分放在较前面的章节集中讲授，有利于学生自学和课堂理解教师英文授课内容。

5. 适当调整章节顺序，例如，将原版教材中第15章“Conjugated Systems, Orbital Symmetry, and Ultraviolet Spectroscopy”调换为第11章的内容，紧随烯烃（第9章）和炔烃（第10章）的章节之后，并将第15章中紫外光谱的内容抽出来与红外光谱合并作为第12章；将质谱与核磁共振谱合并作为第13章。

调整后的双语教材的内容相对规整，符合国内的教学特点，方便教师双语教学使用。

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## 内容概要

《有机化学》(第6版)是L. G. Wade编写的Organic Chemistry (Sixth Edition)的改编版,是根据教育部关于高等学校本科教学质量工程要重视双语教学的文件精神,选择国外优秀英文原版有机化学教材,结合双语教学的实践经验改编而成的双语教材。

全书共26章,涵盖内容与国内高等学校化学、化工类有机化学教材基本一致,包括有机化学概论、有机化合物命名、立体化学、结构表征、烃及卤代烃、含氧化合物、含氮化合物、天然有机化合物等内容。

每章后有中文概要,书后附有索引和专业词汇中英文对照表。

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## 书籍目录

Chapter 1 Introduction and Renew1-1 The Origins of Organic Chemistry1-2 Principles of Atomic Structure1-3 Bond Formation : The Octet Rule1-4 Lewis Structures1-5 Multiple Bonding1-6 Electronegativity and Bond Polarity1-7 Formal Charges1-8 Ionic Structures1-9 Resonance1-10 Structural Formulas1-11 Molecular Formulas and Empirical Formulas1-12 Arrhenius Acids and Bases1-13 Brønsted-Lowry Acids and Bases1-14 Lewis Acids and BasesSummary in ChineseStudy ProblemsChapter 2 Structure and Properties of Organic Molecules2-1 Wave Properties of Electrons in Orbitals2-2 Molecular Orbitals2-3 Pi Bonding2-4 Hybridization and Molecular Shapes2-5 Drawing Three-Dimensional Molecules2-6 General Rules of Hybridization and Geometry2-7 Bond Rotation2-8 Isomerism2-9 Polarity of Bonds and Molecules2-10 Intermolecular Forces2-11 Polarity Effects on SolubilitiesSummary in ChineseStudy ProblemsChapter 3 Brief Introduction and Nomenclature of Organic Compounds3-1 Hydrocarbons3-2 Organic Compounds Containing Oxygen3-3 Organic Compounds Containing Nitrogen3-4 Nomenclature of Alkanes3-5 Nomenclature of Alkenes3-6 Nomenclature of Alkynes3-7 Nomenclature of Cycloalkanes3-8 Nomenclature of Benzene Derivatives3-9 Nomenclature of Alkyl Halides3-10 Nomenclature of Alcohols and Thiols3-11 Nomenclature of Ethers and Sulfides3-12 Nomenclature of Amines3-13 Nomenclature of Ketones and Aldehydes3-14 Nomenclature of Carboxylic Acids3-15 Structure and Nomenclature of Acid DerivativesSummary in ChineseStudy ProblemsChapter 4 Structure and Stereochemistry of Alkanes4-1 Physical Properties of Alkanes4-2 Uses and Sources of Alkanes4-3 Reactions of Alkanes4-4 Structure and Conformations of Alkanes4-5 Cycloalkanes4-6 Cyclohexane Conformations4-7 Conformations of Monosubstituted Cyclohexanes4-8 Conformations of Disubstituted CyclohexanesSummary in ChineseStudy ProblemsChapter 5 The Study of Chemical Reactions5-1 Introduction5-2 Chlorination of Methane5-3 The Free-Radical Chain Reaction5-4 Equilibrium Constants and Free Energy5-5 Enthalpy and Entropy5-6 Bond-Dissociation Enthalpies5-7 Enthalpy Changes in Chlorination5-8 Kinetics and the Rate Equation5-9 Activation Energy and the Temperature Dependence of Rates5-10 Transition States5-11 Rates of Multistep Reactions5-12 Temperature Dependence of Halogenation5-13 Selectivity in Halogenation5-14 The Hammond Postulate5-15 Radical Inhibitors5-16 Reactive IntermediatesSummary in ChineseStudy ProblemsChapter 6 Stereochemistry6-1 Introduction6-2 Chirality6-3 (R) and (S) Nomenclature of Asymmetric Carbon Atoms6-4 Optical Activity6-5 Racemic Mixtures6-6 Enantiomeric Excess and Optical Purity6-7 Chirality of Conformationally Mobile Systems6-8 Chiral Compounds without Asymmetric Atoms6-9 Fischer Projections6-10 Diastereomers6-11 Stereochemistry of Molecules with Two or More Asymmetric Carbons6-12 Meso Compounds6-13 Absolute and Relative Configuration6-14 Physical Properties of Diastereomers6-15 Resolution of EnantiomersSummary in ChineseStudy ProblemsChapter 7 Alkyl Halides : Nucleophilic Substitution and Elimination7-1 Introduction7-2 Common Uses of Alkyl Halides7-3 Structure of Alkyl Halides7-4 Physical Properties of Alkyl Halides7-5 Preparation of Alkyl Halides7-6 Reactions of Alkyl Halides : Substitution and Elimination7-7 Second-Order Nucleophilic Substitution : The SN2 Reaction7-8 Generality of the SN2 Reaction7-9 Factors Affecting SN2 Reactions : Strength of the Nucleophile7-10 Reactivity of the Substrate in SN2 Reactions7-11 Stereochemistry of the SN2 Reaction7-12 First-Order Nucleophilic Substitution : The SN1 Reaction7-13 Stereochemistry of the SN1 Reaction7-14 Rearrangements in SN1 Reactions7-15 Comparison of SN1 and SN2 Reactions7-16 First-Order Elimination : The E1 Reaction7-17 Positional Orientation of Elimination : Zaitsev's Rule7-18 Second-Order Elimination : The E2 Reaction7-19 Stereochemistry of the E2 Reaction7-20 Comparison of E1 and E2 Elimination MechanismsSummary in ChineseStudy ProblemsChapter 8 Structure and Synthesis of Alkenes8-1 Introduction8-2 The Orbital Description of the Alkene Double Bond8-3 Elements of Unsaturation8-4 Commercial Importance of Alkenes8-5 Stability of Alkenes8-6 Physical Properties of Alkenes8-7 Alkene Synthesis by Elimination of Alkyl Halides8-8 Alkene Synthesis by Dehydration of Alcohols8-9 Alkene Synthesis by High-Temperature Industrial MethodsSummary in ChineseStudy ProblemsChapter 9 Reactions of Alkenes9-1 Reactivity of the Carbon-Carbon Double Bond9-2 Electrophilic Addition to Alkenes9-3 Addition of Hydrogen Halides to Alkenes9-4 Addition of Water : Hydration of Alkenes9-5 Hydration by

Oxymercuration-Demercuration9-6 Alkoxymercuration-Demercuration9-7 Hydroboration of Alkenes9-8 Addition of Halogens to Alkenes9-9 Formation of Halohydrins9-10 Catalytic Hydrogenation of Alkenes9-11 Addition of Carbenes to Alkenes9-12 Epoxidation of Alkenes9-13 Acid-Catalyzed Opening of Epoxides9-14 Syn Hydroxylation of Alkenes9-15 Oxidative Cleavage of Alkenes9-16 Polymerization of AlkenesSummary in ChineseStudy ProblemsChapter 10 Alkynes10-1 Introduction10-2 Physical Properties of Alkynes10-3 Commercial Importance of Alkynes10-4 Electronic Structure of Alkynes10-5 Acidity of Alkynes : Formation of Acetylide Ions10-6 Synthesis of Alkynes from Acetylides10-7 Synthesis of Alkynes by Elimination Reactions10-8 Addition Reactions of Alkynes10-9 Oxidation of AlkynesSummary in ChineseStudy ProblemsChapter 11 Conjugated Systems and Orbital Symmetry11-1 Introduction11-2 Stabilities of Dienes11-3 Molecular Orbitals of a Conjugated System11-4 Allylic Cations11-5 1, 2-and 1, 4-Addition to Conjugated Dienes11-6 Kinetic versus Thermodynamic Control in the Addition of HBr to 1, 3-Butadiene11-7 Allylic Radicals11-8 Molecular Orbitals of the Allylic System11-9 Electronic Configurations of the Allyl Radical, Cation, and Anion11-10 SN2 Displacement Reactions of Allylic Halides and Tosylates11-11 The Diels-Alder Reaction11-12 The Diels-Alder as an Example of a Pericyclic ReactionSummary in ChineseStudy ProblemsChapter 12 Infrared and Ultraviolet Spectroscopy12-1 Introduction12-2 The Electromagnetic Spectrum12-3 The Infrared Region12-4 Molecular Vibrations12-5 IR-Active and IR-Inactive Vibrations12-6 Measurement of the IR Spectrum12-7 Infrared Spectroscopy of Hydrocarbons12-8 Characteristic Absorptions of Alcohols and Amines12-9 Characteristic Absorptions of Carbonyl Compounds12-10 Characteristic Absorptions of C-N Bonds12-11 Simplified Summary of IR Stretching Frequencies12-12 Reading and Interpreting IR Spectra12-13 Ultraviolet Absorption Spectroscopy12-14 Ultraviolet Light and Electronic Transition12-15 Measurement of the UV-Visible Spectrum12-16 Interpreting UV-Visible SpectraSummary in ChineseStudy ProblemsChapter 13 Nuclear Magnetic Resonance Spectroscopy and Mass Spectrometry13-1 Introduction to Nuclear Magnetic Resonance Spectroscopy13-2 Theory of Nuclear Magnetic Resonance13-3 Magnetic Shielding by Electrons13-4 The NMR Spectrometer13-5 The Chemical Shift13-6 The Number of Signals13-7 Areas of the Peaks13-8 Spin-Spin Splitting13-9 Carbon-13 NMR Spectroscopy13-10 Interpreting Carbon NMR Spectra13-11 Introduction to Mass Spectrometry13-12 Determination of the Molecular Formula by Mass Spectrometry13-13 Fragmentation Patterns in Mass SpectrometrySummary in ChineseStudy ProblemsChapter 14 Structure and Synthesis of Alcohols14-1 Introduction14-2 Structure and Classification of Alcohols14-3 Physical Properties of Alcohols14-4 Commercially Important Alcohols14-5 Acidity of Alcohols and Phenols14-6 Organometallic Reagents for Alcohol Synthesis14-7 Synthesis of Alcohols : Addition of Organometallic Reagents to Carbonyl Compounds14-8 Side Reactions of Organometallic Reagents : Reduction of Alkyl Halides14-9 Synthesis of 1° and 2° Alcohols : Reduction of the Carbonyl Group14-10 Thiols ( Mercaptans ) Summary in ChineseStudy ProblemsChapter 15 Reactions of Alcohols15-1 Oxidation States of Alcohols and Related Functional Groups15-2 Oxidation of Alcohols15-3 Additional Methods for Oxidizing Alcohols15-4 Alcohols as Nucleophiles and Electro-philic : Formation of Tosylates15-5 Reduction of Alcohols15-6 Reactions of Alcohols with Hydrohalic Acids15-7 Reactions of Alcohols with Phosphorus Halides15-8 Reactions of Alcohols with Thionyl Chloride15-9 Dehydration Reactions of Alcohols15-10 Unique Reactions of Diols15-11 Esterification of Alcohols15-12 Reactions of AlkoxidesSummary in ChineseStudy ProblemsChapter 16 Ethers, Epoxides, and SulfidesChapter 17 Aromatic Compounds Chapter 18 Reactions of Aromatic CompoundsChapter 19 Ketones and Aldehydes Chapter 20 AminesChapter 21 Carboxylic AcidsChapter 22 Carboxylic Acid DerivativesChapter 23 Condensations and Alpha Substitutions of Carbonyl Compounds Chapter 24 Carbohydrates and Nucleic Acids Chapter 25 Amino Acids, Peptides, and Proteins Chapter 26 LipidsAnswers to Selected ProblemsIndexVocabulary

## 章节摘录

插图：Atomic orbitals are grouped into different “ shells ” at different distances from the nucleus . Each shell is identified by a principal quantum number  $n$ , with  $n=1$  for the lowest . energy shell closest to the nucleus . As  $n$  increases , the shells are farther from the nucleus , higher in energy , and can hold more electrons . Most of the common elements in organic compounds are found in the first two rows of the periodic table , indicating that their electrons are found in the first two electron shells . The first shell (  $n=1$  ) can hold two electrons . and the second shell (  $n=2$  ) can hold eight . The first electron shell contains just the  $1s$  orbital . All  $s$  orbitals are spherically symmetrical , meaning that they are nondirectional . The electron density is only a function of the distance from the nucleus . The electron density of the  $1s$  orbital is graphed in Figure 1-2 . Notice how the electron density is highest at the nucleus and falls off exponentially with increasing distance from the nucleus . The second electron shell consists of the  $2s$  and  $2p$  orbitals . The  $2s$  orbital is spherically symmetrical like the  $1s$  orbital , but its electron density is not a simple exponential function . The  $2s$  orbital has a smaller amount of electron density close to the nucleus . Most of the electron density is farther away , beyond a region of zero electron density called a node . Because most of the  $2s$  electron density is farther from the nucleus than that of the  $1s$  , the  $2s$  orbital is higher in energy . Figure 1-3 shows a graph of the  $2s$  orbital .

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### 编辑推荐

《有机化学》(第6版)可作为化学、化工专业的有机化学双语教材,亦可作为其他相关专业的教学参考书,可使学生在学习有机化学基础知识的同时提高专业英语水平。



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