

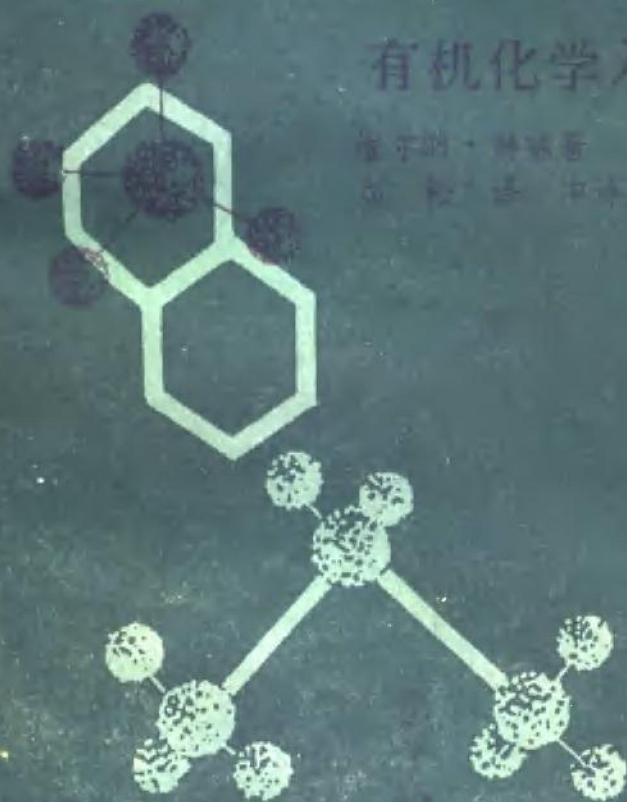
英汉对照

碳化合物的形状

有机化学入门

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南开大学出版社

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内 容 简 介

本书为W.A.Benjamin, Inc.出版社出版的普通化学专题丛书之一Werner Herz: The Shape of Carbon Compounds—An Introduction to Organic Chemistry的英汉对照本。本书以较多的篇幅论述了结构有机化学和有机化学反应机理, 适合于化学化工专业学生学习普通化学和有机化学课外参考用, 又可作专业英语读本。

碳化合物的形状

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The Shape of Carbon Compounds

碳化合物的形状

译 者 序

为了帮助大学化学化工专业学生和化学工作者学习化学专业英语,我们正在组织译出一套专业英语丛书,以英汉对照本的形式出版。这套书的第一部为F·Basolo和R.C.Johnson合著的《配位化学》(英汉对照本),已由北京大学出版社出版(1983年)。从该书之受到读者的普遍欢迎来看,证明我们的原设计思想是符合客观需要的。这鼓舞我们为完成此项计划继续努力。我们计划给化学基础课各选译一本内容和篇幅均为适宜的专著,既可作为专业参考书,又可作为专业英语读本,以配合专业教学的需要。在有机化学方面,我们选用了W·Herz的《碳化合物的形状》一书。本书专就结构有机化学的基本知识作了入门性的介绍,内容有很好的系统性和趣味性,颇能引人入胜。原文文字简练,也适合于学习专业英语之用。我们希望此书也能起到预期的作用。

在此书之外,我们将陆续选译合适的关于分析化学、物理化学、结构化学等方面的专著。本项计划得到了好几家出版社的支持。对此,我们向他们表示衷心的感谢。

本书的译者为南开大学化学系无机化学专业攻读硕士学位的研究生郑松同志,她在第二学年以课余时间完成了此书的翻译工作,这也是我们培养研究生工作中列入计划的一种尝试。由于经验不足,错误在所难免,恳望读者们不吝批评指正为谢。

南开大学

申泮文代序

一九八四年三月

Editor's Foreword

THE TEACHING OF GENERAL CHEMISTRY to beginning students becomes each day a more challenging and rewarding task as subject matter becomes more diverse and more complex and as the high school preparation of the student improves. These challenges have evoked a number of responses; this series of monographs for General Chemistry is one such response. It is an experiment in the teaching of chemistry which recognizes a number of the problems that plague those who select textbooks and teach chemistry. First, it recognizes that no single book can physically encompass all the various aspects of chemistry that all instructors collectively deem important. Second, it recognizes that no single author is capable of writing authoritatively on *all* the topics that are included in everybody's list of what constitutes general chemistry. Finally, it recognizes the instructor's right to choose those topics which he considers to be important without having to apologize for having omitted large parts of an extensive textbook.

编者前言

由于高中学生水平的提高和大学普通化学的内容越来越多样和复杂，从事大学一年级学生的普通化学教学工作就成为日益承受挑战 and 应给予褒奖的工作。这种挑战已经引起众多反响；这一套普通化学专题丛书便是这种反响之一。这项工作是化学教学中的一项实验，它承认有许多问题会给教师们在选择教科书和讲授化学当中造成困难。首先，它承认不会有一本单一的教本可以把所有教师都认为重要的化学各方面问题都包括在内。其次，它承认不会有独自一位著者能够权威性地写好一本能够满足所有人要求的普通化学。最后，它承认教师有权选择他认为重要的题材，而无需对他省略了一本大部头教科书中的一大部分而表示歉意。

This volume, then, is one of approximately fifteen in the General Chemistry Monograph Series, each written by one or more highly qualified persons very familiar with the current status of the subject by virtue of research in it and also conversant with the problems associated with teaching the subject matter to beginning students. Each volume deals broadly with one of the subdivisions of general chemistry and constitutes a complete entity, far more comprehensive in its coverage than is permitted by the limitation of the standard one-volume text. Taken together these volumes provide a range of topics from which the individual instructor can easily select those that will provide for his class an appropriate coverage of the material he considers most important.

Furthermore, inclusion of a number of topics that have only recently been considered for general chemistry courses, such as thermodynamics, molecular spectroscopy, and biochemistry, is planned and these volumes will soon be available. In every instance a modern structural point of view has been adopted with the emphasis on general principles and unifying theory.

These volumes will have other uses also: selected monographs can be used to enrich the more conventional course of study by providing readily available, inexpensive supplements to standard texts. They should also prove valuable to students in other

本书是总数约为15册的一套普通化学专题丛书之一，每一册是由一位或几位高水平的人士所撰写，他们由于在该领域中的研究工作而对该项题材的现状极为熟悉，并且他们对给大一学生讲授该专题材料时所出现的问题也是熟知的。在每一卷中广泛地讨论了普通化学中的一个专门问题并构成了一个完整的实体，它所包括的内容比标准的一卷本教科书所能包括的有限内容更为综合广泛。这些卷丛书总合在一起提供了一套专题，各位教师可以容易地从中选出一些他认为重要的材料，给他的班级提供合适的教材内容。

此外，本丛书计划列入为普通化学课程新近才考虑的一些专题，例如热力学，分子波谱学和生物化学，这些卷书不久将会出版。在每一卷书中都采用了近代的结构观点，同时强调一般原理和统一的理论。

这些卷书也还会有其他的用途：这些专著可用于丰富传统课程的学习内容，为标准教科书提供现成易得的补充材料。在物理

areas of the physical and biological sciences needing supplementary information in any field of chemistry pertinent to their own special interests. Thus, students of biology will find the monographs on biochemistry, organic chemistry, and reaction kinetics particularly useful. Beginning students in physics and meteorology will find the monograph on thermodynamics rewarding. Teachers of elementary science will also find these volumes invaluable aids to bringing them up to date in the various branches of chemistry.

Each monograph has several features which make it especially useful as an aid to teaching. These include a large number of solved examples and problems for the student, a glossary of technical terms, and copious illustrations.

The authors of the several monographs deserve much credit for their enthusiasm which made this experiment possible. Professor Rolfe Herber of Rutgers University has been of invaluable assistance in the preparation of this series, having supplied editorial comment and numerous valuable suggestions on each volume. Thanks are also due to Professor M. Kasha of the Florida State University for many suggestions during the planning stages and for reading several of the manuscripts.

RUSSELL JOHNSEN

Tallahassee, Florida

October 1962

和生物科学的其他领域的学生,由于他们的专业兴趣,他们对于有关的任何化学领域的补充知识是有所需求的,这些专著对他们会是有价值的。例如,生物学的学生将会发现生物化学、有机化学和反应动力学的专题对他们特别有用。物理学和气象学的大一学生将会发现热力学专题对他们是有益的。基础科学的教员们也将会发现这些卷书是宝贵的帮助,可以使他们在化学各分支学科方面的知识现代化。

每一卷书都有若干特色而使它在教学当中作为一种辅助读物是特别有用的。这些特色包括给学生提供的大量已解答的例题和作业,一份科技术语的词汇和丰富的插图等。

若干卷的著者值得我们予以推崇,由于他们的热情使本项实验成为可能。Rutgers大学的 Rulfe Herber教授在编辑本丛书时提供了可贵的帮助,他对每卷书提出了编辑评论和许多有价值的建议。也应该感谢Florida州立大学的M.Kasha教授,在本丛书的设计阶段提出了许多建议,并且通读了若干原稿。

Russell Johnsen

Tallahassee, Florida

1962年10月

Preface

THIS VOLUME is not intended as a textbook of organic chemistry for any single course. It was written in a flurry of enthusiasm for a project that seemed to me to have a good deal of merit—to afford beginning students of chemistry the opportunity to learn more about organic molecules than is given in the standard general chemistry textbook.

I have deliberately concentrated on one aspect of organic chemistry—structure—because it is most easily grasped. Moreover, I think that familiarity with this topic, more than any other, is important to the student who might not be exposed subsequently to formal courses in organic chemistry. If one wishes to understand, on a somewhat more sophisticated level than that adopted in newspaper supplements and magazines, what organic chemists do and why they do it, some knowledge of structural organic chemistry seems indispensable.

Mechanisms and functional group behavior have been touched upon only when necessary, and no attempt has been made to discuss organic nomenclature except through example. These subjects, I feel, can be profitably reserved for “the full treatment” given in second- and third-year chemistry courses, and I make no apologies for slighting them here.

WERNER HERZ

Tallahassee, Florida
January 1963

原 序

本卷书并不打算作为任何一门单独的有机化学课程的教科书。我是以很大热情为本丛书编写计划写这本书的，我认为这个计划十分有价值——它为初学化学的学生提供了机会，使他们能学习到比权威的普通化学教科书的内容更多一些的关于有机分子的知识。

我有意识地集中写有机化学的一个方面——结构，因为它很容易掌握。此外，我认为，对于那些以后可能不学正规有机化学课程的学生来说，熟悉结构知识比熟悉其他问题更为重要。如果你想了解有机化学家们在做什么，他们为什么要这样做，而且希望了解的程度比报纸副刊或杂志所提供的材料更为深入一点的话，有一些结构有机化学的知识看来是完全必要的。

仅在不可免时才谈到机理和官能团的性质。除了在举例时涉及在本书中不准备讨论有机物的命名法。我觉得这个问题以留在二年级和三年级课程的“全讲授过程”中去解决为好，在本书中删略了命名问题我是心安理得的。

WERNER HERZ

Tallahassee, Florida

1963年1月

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