IONIC ORGANIC MECHANISMS

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IONIC ORGANIC MECHANISMS

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MACMILLAN

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Introduction

WHY STUDY ORGANIC REACTION MECHANISMS?

There are many possible answers to this question! A teacher might reply that it is an interesting way of introducing what is called 'the scientific method'. He or she might also point to the pleasure which can result from satisfying the natural curiosity that chemists have about the way in which reactions occur.

Of more appeal to the student, perhaps, is that a good understanding of mechanisms provides a means of correlating and rationalising a large volume of otherwise apparently unrelated reactions. It is not intended that a mechanistic study of organic chemistry should replace the traditional approach, but in an integrated course even a simple treatment of mechanisms can help to give 'rhyme and reason' to many of the reactions studied.

It can also be argued, of course, that there are good economic reasons for studying mechanisms. The more that is known about the way in which a reaction occurs, the more successful a chemist is likely to be in designing a new synthesis or improving an existing process.

ABOUT THIS BOOK

Since this is a book just about mechanisms, it will be assumed that you have already made some progress in your study of organic chemistry, and are conversant with basic ideas of structure and stereochemistry, etc. Even so, the first four chapters are devoted to a revision of some of the concepts and terminology considered essential to the study of ionic mechanisms.

The order of subsequent chapters in which particular mechanisms (such as nucleophilic substitution or alkene addition) are discussed, may differ from that of the course which you are taking. If this is the case, you are still advised to read chapter 5 before embarking on other topics, because it is in the discussion of nucleophilic reactions that many of the ideas assumed

to be familiar in later chapters are first introduced and explained. Throughout the text there are a number of exercises designed to help you assess your own understanding and progress. It is hoped that you will attempt at least some of these, and outline solutions are given at the end of the book.