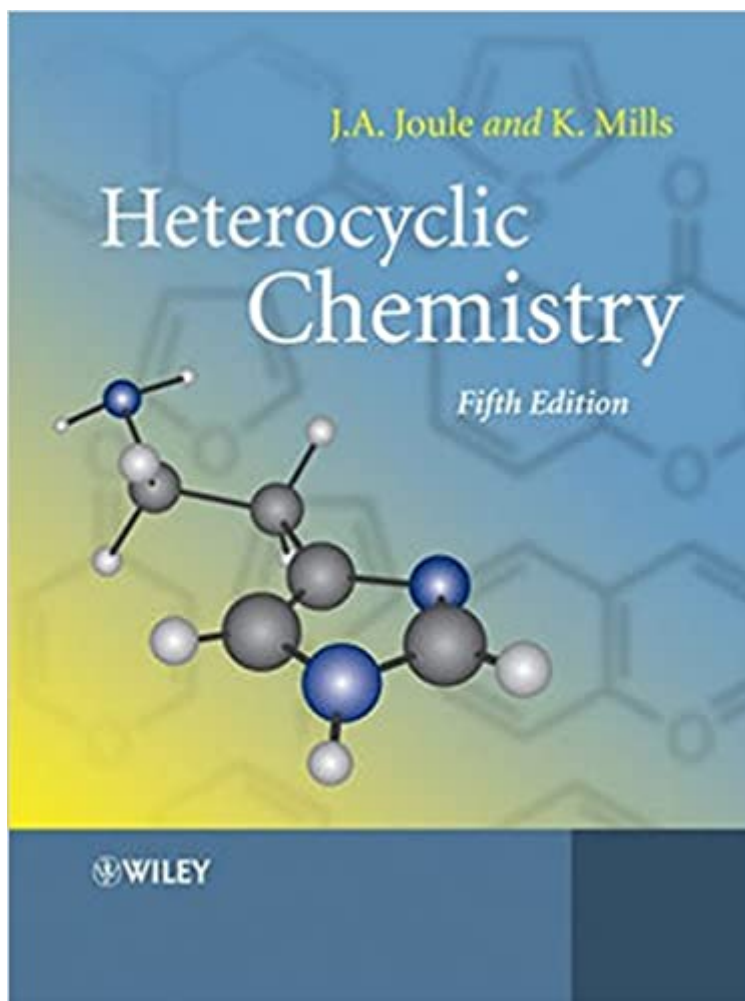


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# Heterocyclic Chemistry



## Synopsis

This book has so closely matched the requirements of its readership over the years that it has become the first choice for chemists worldwide. Heterocyclic chemistry comprises at least half of all organic chemistry research worldwide. In particular, the vast majority of organic work done in the pharmaceutical and agrochemical industries is heterocyclic chemistry. The fifth edition of Heterocyclic Chemistry maintains the principal objective of earlier editions – to teach the fundamentals of heterocyclic reactivity and synthesis in a way that is understandable to second- and third-year undergraduate chemistry students. The inclusion of more advanced and current material also makes the book a valuable reference text for postgraduate taught courses, postgraduate researchers, and chemists at all levels working with heterocyclic compounds in industry. Fully updated and expanded to reflect important 21st century advances, the fifth edition of this classic text includes the following innovations: Extensive use of colour to highlight changes in structure and bonding during reactions Entirely new chapters on organometallic heterocyclic chemistry, heterocyclic natural products, especially in biochemical processes, and heterocycles in medicine New sections focusing on heterocyclic fluorine compounds, isotopically labeled heterocycles, and solid-phase chemistry, microwave heating and flow reactors in the heterocyclic context Essential teaching material in the early chapters is followed by short chapters throughout the text which capture the essence of heterocyclic reactivity in concise resumés suitable as introductions or summaries, for example for examination preparation. Detailed, systematic discussions cover the reactivity and synthesis of all the important heterocyclic systems. Original references and references to reviews are given throughout the text, vital for postgraduate teaching and for research scientists. Problems, divided into straightforward revision exercises, and more challenging questions (with solutions available online), help the reader to understand and apply the principles of heterocyclic reactivity and synthesis.

## Book Information

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## Customer Reviews

Overall, this book is recommended as a text for undergraduate and more advanced students on this pervasive, important, and underappreciated topic in chemistry. (Journal of Chemical Education, 1 October 2012) "This excellent book is well written, heavily referenced, and thoroughly indexed. Accordingly, it serves as both an instructional heterocyclic chemistry textbook and a portal to the primary synthetic chemistry literature." (Journal of Medicinal Chemistry, 2011) "My favourite chapter is the organometallic chemistry that presents an up-to-date treatment of the topic and helps confirm a colleague's observation that 'With today's techniques one can be convinced that a modern organic chemist can make any small molecule he or she desires.' I particularly like the treatment of the concatenation of five-membered ring systems, an increasingly important area in medicinal chemistry. This chapter proves a real 'coup de grace'." (Reviews, December 2010) "In summary, Heterocyclic Chemistry by Joule and Mills is in a class of its own and can be thoroughly recommended as supplementary reading for undergraduate courses and as a first port of call for researchers seeking a quick entry to the extensive heterocyclic literature." (Applied Organometallic Chemistry, 2010) "My recommendation is, even if you already have the 4th edition, to buy the latest version. At only £39.95 for the paperback version this is outstanding value for money." (Organic Process Research & Development Journal, 2010)

Heterocyclic chemistry is a central part of organic chemistry and biochemistry. The term refers to a particular set of chemical structure characteristics, with many drugs and specialty chemicals, and most agrochemicals, containing these characteristics. Heterocyclic Chemistry by Joule & Mills has established itself as the premier textbook of heterocyclic chemistry, used by high level undergraduates, postgraduates and industrial researchers all over the world. Heterocyclic Chemistry covers the fundamentals of heterocyclic reactivity and synthesis in a way that is understandable to second- and third-year undergraduate chemistry students. It also includes more advanced material, making the book appropriate for postgraduate taught courses and to researchers, either at postgraduate degree level or those working with heterocyclic compounds in industry. Essential teaching material is collected in specific introductory chapters, explaining the

principles of heterocyclic reactivity in the simplest terms, suitable either as introductions or as summaries for examination preparation. These chapters are augmented by detailed, systematic discussions of the chemical reactivity of particular heterocyclic systems. References to both primary literature and reviews are given throughout the text, and whilst these are essential for postgraduate teaching and to research workers, they do not interfere with the readability of the text for undergraduate students.

I'm a chemist by education, trade, and love for the art. Although I hardly ever work with heterocyclic compounds aside from the occasional pyridine I have always been fascinated by them. This book gives a good overview of a number of systems complete with some reactions of them and their synthesis. All of this is presented in a very concise format that allows the casual reader to read the book for enjoyment without getting bogged down. I'm sure many of you out there know the feeling of reading a few paragraphs of information and then to be given several 'dry' paragraphs of one literature reaction after another. There are few if any actual detailed procedures in this book, it's overview and if you have the background that's what makes it fun.

I bought this book because it was required for a medicinal chemistry course. We were required to read almost the entire text so it sort of flew by. It seemed a little fast at first, but you see that after introducing a lot of concepts in the first few chapters, the rest of the book simply covers the same topics in greater detail. The book was extremely dry reading and although I don't love it, I elected not to sell it back because it is a good reference that I may actually use later, it also contains journal citations for most methods mentioned in the text.

It's pretty much obsolete in the days of Beilstein (at most universities). But if you don't have Beilstein, this will do nicely. It is also telling that the authors made it a point NOT to put lots of pretty pictures in the book to cover up a weak text. (I am not saying that this text was weak, but that many authors do try to cover up weak texts with lots of pretty pictures. Chemistry books change very little from year to year and old editions say pretty much the same thing as new ones.) This is well worth a secondhand purchase and a keeper for reference in the lab.

great textbook, very useful

It's a very good book. My boyfriend really like it~

it came as advertised

The book was exactly as it was described and it did not take more than a week for it to arrive.

The field of heterocyclic chemistry is very extensive. While a lot of topics and molecules are covered in this book, the emphasis is on aromatic compounds that have medicinal utility or serve as intermediates to compounds with pharmaceutical or agrochemical utility. There is nothing on three membered ring heterocycles such as azirines, aziridines, or oxiranes. There is nothing on polymers such as polypyrroles, polythiophenes, polyimides, polybenzimidazoles, polybenzoxazoles, or polyphthalocyanines. There is no mention of the cyclotrimerization of cyanates to triazines to form useful thermally stable polymers. Thus the all inclusive title of *Heterocyclic Chemistry* is a little over-reaching, and readers desiring coverage of these topics in heterocyclic chemistry will need to look elsewhere.

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