**The Chemistry of Heterocycles**; edited by Theophil Eicher and Siegfried Hauptmann; Wiley-VCH: Weinheim, **2003**; 556 pp, 65 €, ISBN 3-527-30720-6

This is the second, thoroughly revised and enlarged edition of a one volume book, written by highly competent authors, which in a little more than 500 pages gives a well arranged and clearly structured overview of the most important features of heterocyclic chemistry. Though in treating a subject as broad as the chemistry of heterocycles it is obviously not possible to cover each topic in great depth in a limited number of pages – with the consequential inevitable selection of the subjects discussed – it provides a comprehensive coverage of the field. Among the wide range of possibilities to arrange the discussion, the authors decided to put special emphasis on three main aspects of heterocyclic compounds: syntheses, reactions, and synthetic applications. Therefore, the prospective readers and users of this book are expected to be primarily interested in knowing how heterocyclic compounds can be prepared and modified. A reader who has completed the reading of this book should have a sound knowledge of these topics.

The book can be divided in three parts.

The introductory part, chapters 1-2, provides some fundamental concepts on the structure and systematic nomenclature of heterocyclic compounds.

The second part, chapters 3-8, treats several important heterocyclic systems according to increasing ring size: chapters 3-7, from three-membered heterocycles to seven-membered heterocycles (including their condensed derivatives) and, chapter 8, larger ring heterocycles. The discussion of each heterocyclic system is presented in a practical standardized form. Without a doubt, the readers will appreciate this choice which makes it easier to locate and compare information in each chapter and among chapters. In particular, the discussion of each heterocyclic system highlights the following topics: physical and spectroscopic properties; chemical properties and reactions, focusing on the reactions involving significant mechanisms; synthetic procedures - to construct or functionalize heterocyclic ring systems - based on general synthetic principles; important derivatives (biologically active compounds, industrial intermediates, etc.); use of heterocycles in organic synthesis (intermediates, auxiliaries, etc.). The discussion includes some important heterocyclic syntheses involving transition metal catalysis, a research area which has known an explosive and continuing growth over the last fifteen to twenty years and that has remarkably changed the design of heterocyclic synthesis.

The third part, chapter 9, is dedicated to the readers who wish to learn more about heterocyclic compounds through exercises. This chapter contains about 150 well arranged problems - mostly taken from the literature - and solutions, and can be recommended as an invaluable tool for deepening knowledge and understanding of the field. As the authors have done with the discussion of heterocyclic systems, problems are presented in a standardized form, which includes the formulation of the problem, with clearly outlined and detailed experimental conditions, the question to be answered, and the solution, based on literature references, notes and additional information. Notably, and very appropriate from an educational standpoint, solutions have not been explicitly given in details but the readers have been given the possibility to elaborate the solutions by studying references and literature results.

The book contains more than 600 references. Though the coverage of literature cannot be considered up-to-date (the bibliography is essentially given up to 2001 and only 10% of the cited references have been published in 2000 and 2001), considering the scope of the book, this does not limit its great efficacy and utility.

The book is also equipped with two very useful indexes: abbreviations and symbols, and an index of named reactions.

To sum up, this book will provide both advanced students in organic chemistry and industrial and academic chemists interested in having a quick overview of heterocyclic chemistry with a rich source of background information.

**Sandro Cacchi,** Università degli Studi “La Sapienza”, Rome, Italy

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