

A Practical Guide to Supramolecular Chemistry, by Peter J. Cragg; Wiley: Chichester, 2005, 214 pp, hardcover: € 135, ISBN 0-470-86653-5; paperback € 48.80, ISBN 0-470-86654-3

Introduction into the synthesis of simple supramolecular moieties

Since more than two decades, supramolecular science has been an established part of modern chemistry. According to Lehn's definition, supramolecular chemistry is the chemistry 'beyond the molecule'. Consequently, it has developed into a vast and highly interdisciplinary field for the different aspects of chemistry.

Peter Cragg has written an introductory manual of practical experiments in supramolecular chemistry for students with little or no prior experience in the field. Therefore, this book mainly addresses students on an undergraduate level. The manual is focussed on synthetic aspects of supramolecular chemistry. All experiments have been checked by the author himself. The selection of organic preparations requires simple laboratory equipment which will be available in most synthetic laboratories. The individual protocols are written in a style similar to *Organic Syntheses*. Thus, plenty of useful and essential synthetic tricks are described in detail. The book is organized into five chapters, beginning with an additional general introduction which I personally recommend to every scientist in this field. Three major segments of the book deal with the preparation of the supramolecular moieties and are divided into linear, cyclic, and container-type molecules. The fourth chapter is devoted to the analytical tools which are commonly applied to study supramolecular systems. This includes also the determination of association constants and molecular modelling. This particular survey will communicate the appropriate vocabulary and make

the reader quickly familiar with the power and the limitations of the corresponding methods. Unfortunately, no information is given as to which software might be suitable to perform the *in silico* studies. The manual is well written and should be easily understood by undergraduates. The individual chapters are enriched with some historical details and refer to contemporary supramolecular chemistry. Since the appropriate literature is given, further reading could be easily performed.

Unfortunately, the nomenclature is not consistent with the depicted molecules, e.g. wrong name (p. 11, compound 4), isonicotinyl instead of isonicotinoyl (p. 13 and throughout the whole book), the shown example is not identical to the given literature (p. 25), additional bonds (p. 58), hydroxy is mixed up with hydro (p. 69), or the simulated structure is difficult to recognize as the chemical compound (p. 100), thus the less experienced student may have significant problems in understanding at these points.

In summary, this monograph provides a good entry into the synthesis of simple supramolecular entities. Furthermore, the performance of basic experiments to study, e.g. molecular recognition, is well presented and fulfills the requirements as an introductory manual. For undergraduate students dealing with synthetic supramolecular chemistry, this book will be a compulsory reading. Despite some weaknesses, this book will have a definite place in every good library collection. Furthermore, the well-chosen selection of simple but reliable experiments will be a good source for planning practical courses.

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