

## Book Review

Jay S. Siegel (Editor), *Supramolecular Stereochemistry*, Kluwer Academic Publishers, Dordrecht, 1995. ISBN 0-7923-3702-6.

In the 30 years since the discovery of crown ethers and their complexation properties, supramolecular chemistry, which is the chemistry beyond the covalent bond, has undergone a remarkable development. Intensive work has been devoted to the design and synthesis of macromolecules providing a wealth of information about the non-covalent bonds involved during the formation of supramolecular systems. These fundamental advances have been gathered, analysed and organised in a large number of reviews, special issues, books etc. As a consequence, it was to be expected that an extension of such fundamental work would lead to the development of investigations with applied exploitations. *Supramolecular Stereochemistry* edited by Jay S. Siegel seems to fulfill this expectation. *Supramolecular Stereochemistry* contains the proceedings of the NATO Advanced Research Workshop on Supramolecular Chemistry held in Hvragerdi, Iceland, September 14–19, 1994 and is a welcome addition to the NATO ASI Series, five volumes of which deal with supramolecular chemistry. As mentioned by the editor in the Preface, supramolecular stereochemistry is a widespread domain of research, and the presented communications (as Section I: 29 plenary lectures and as Section II: 2 poster sessions) involved leaders in various fields such as supramolecular chirality, liquid crystal and polymer chemistry, molecular encoding, transcription factors, carbohydrate interactions, bioorganic chemistry, symmetry and crystallization, crystal engineering, biomineralization, antibody catalysis, advanced materials, dendrimer and catenand chemistry, nanoscopic chemistry, tubular phases, columns and channels, molecular coils, helical complexes, clathration properties, molecular self-assembly, conformational analysis, association mechanisms, association thermodynamics, molecular modelling, supramolecular visualization, supercharged polycyclic aromatic systems, molecular recognition, cooperative interactions, concave reagents, and topology. The book is devoted to the study of molecular interactions beyond the simple investigation of the nature of non-covalent bonds to the intricated association interactions, rather than to the synthesis of newly designed molecules. The book demonstrates that supramolecular chemistry, previously dealing with recognition of molecular and ionic species and mainly devoted to the elaboration of

interacting systems, has now reached new areas of interest dealing with molecular interactions in chemistry, biochemistry and physics due to the understanding of its fundamental basis. Moreover, on an epistemological point of view, some experts in the field are creating supramolecular vocabulary and syntax – objects, words and concepts – with evidence of how their research is feeding and growing with them. Also of great value is the history and evolution of the 3D representation of a molecule with improvements in technology with the need to describe specific interactions between molecular objects. The word ‘stereochemistry’ in the title reflects this idea.

The book, in addition to the introduction to these new fields of research, demonstrates that *Supramolecular Chemistry*, because of wide implications in research with the generation of new concepts and words, has now become *Supramolecular Science*.

As is evident from the names and addresses of the authors, *Supramolecular Stereochemistry* has a particularly international flavor. No fewer than 13 countries are represented in this volume, presenting 31 contributed papers. The book will interest all those already engaged in host–guest systems and who want to expand their participation in supramolecular chemistry, as well as beginners in the field.

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