

Book Review

Organic Chemistry: Structure and Function. By K. Peter C. Vollhardt (E-mail: vollhard@cchem.berkeley.edu) and Neil E. Schore (E-mail: schore@chem.ucdavis.edu). 3rd Ed.; W. H. Freeman and Company. 1998. 1210pp. \$ 136.25. ISBN 0-7167-2721-8.

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Teaching organic chemistry is a challenging task and tools which allow students to understand what is happening during an organic reaction are really difficult to find. You can present a 3D model of a molecule, but it is much more difficult to show orbitals or a reaction pathway.

Vollhardt and Schore fill this gap in the new edition of their well-known book *Organic Chemistry, Structure and Function*. Opening the book is a real surprise. Colour is present on every page and it is not only to look nice! The colour allows not only a faster and better understanding of the reactions, but also an attractive way to become interested in organic chemistry.

This edition is divided into 26 chapters going from structure and bonding in organic molecules and the description of the major class of functions and reactions to more biologically related molecules, such as peptides and nucleic acids. At the end of every chapter there is a paragraph containing integration problems, the new reactions and the important concepts, in addition to exercises. What I especially appreciate is the excellent presentation of two fundamental aspects of organic chemistry: orbitals, allowing an understanding of the geometry of molecules as well as the mechanism, and energy diagrams that are important in understanding, for example, where the selectivity of a reaction takes place.

A CD-ROM comes with the book. Despite being involved in electronic journal publications[1], I

was still skeptical when I was trying this CD-ROM and wondered if it could really help to teach chemistry. First of all, I was happy to see that it is for cross-platform, both PC and Macintosh. The CD-ROM is divided into three sections. The first one contains mainly Quicktime movies about reaction mechanisms. The quality of those movies are very good and allow, for example, an understanding of how an $\text{S}_{\text{N}}2$ or SE really works or what is an sp^2 orbital. You can also see animations about the formation of a molecule, such as ethane, based on a point of view of the orbitals. The second part of the CD-ROM is designed to illustrate a lecture by using the various figures that are included in the book. The lecturer can easily select the figures needed and make a slideshow during the lecture. Finally, the third part is designed to test the knowledge learned using interactive exercises. I showed this CD-ROM to the PhD students in our laboratory and not only were all of them really impressed by the quality but also they were able to better understand what was going on in the reactions!

This is a really excellent textbook and it should be on the shelves of all the people that want to learn organic chemistry or to teach organic chemistry.

References and Notes

1. The reviewer is the MolBank (<http://www.mdpi.org/molbank/>) section editor of *Molecules* (ISSN 1420-3049, CODEN: MOLEFW, <http://www.mdpi.org/molecules/>).

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