Photochemistry and Pericyclic Reactions

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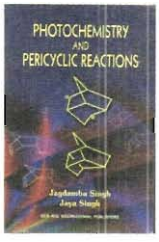

Photochemisry and Pericyclic Reactions
Jagadamba Singh and Jaya Singh
New Age International Publisher
New Delhi, 2003.

This book is actually a composite of two books – one dealing with photochemistry and the other with pericyclic reactions. (It should, at least, have been in two parts, because all photochemical reactions are not pericyclic, nor are all pericyclic reactions driven by light radiation). Pericyclic reactions are discussed in the first five chapters and the subsequent eight chapters deal with photochemical reactions. The fourteenth and final chapter contains problems and their solutions covering both photochemistry and pericyclic reactions.

The authors have discussed the basic principles of the important aspects of both pericyclic reactions and photochemistry with adequate number of illustrative examples. This is done in a manner that is fairly easily understandable by the students whom it is addressed to, namely those of advanced BSc and MSc degree in chemistry, as the authors have indicated.

The subject of photochemistry and pericyclic reactions is an integral part of the chemistry curriculum of all the Indian universities at the MSc level, and some elementary information on these topics is included in the BSc syllabus as well.

Although advanced textbooks of organic chemistry invariably devote a fair amount of space to these topics, simple and exclusive books at affordable cost that cater to the needs of our BSc and MSc students are not many. Books published by foreign publishers are beyond the reach of our students and as such, the courses dealing with specialised topics like photochemistry and pericyclic reactions suffer due to unavailability of source material. The book under review fills a gap concerning these two topics and helps students and teachers alike.

A useful feature of the book is the inclusion of a separate chapter (Chapter 13) on Photochemistry in Nature and Applied Photochemistry, which gives an idea of the relevance of photochemical processes in our daily life. The solved problems in Chapter 14 are helpful in understanding and mastering the principles and theory of photochemistry and pericyclic reactions.

Having said this in favour of the book, it must be pointed out that it suffers from poor editing. There are innumerable (in fact, it is impossible to keep count) errors and lapses in drawing structures, writing equations, mechanistic pathways and even concepts, not to mention

spelling and grammatical errors. There is not a single page that is completely free from any error. Even the tetracyclic structure on the cover is not properly drawn (it looks unnaturally twisted). The authors seem to have not cared to avoid such mistakes; it is sheer neglect or indifference on their part. It is impossible to record all of them, as the exercise itself would produce another book. Therefore, I do not venture to take up this enormous task though I started to do it. I shall leave it to the reader as an exercise and to use the book with great caution.

Another noticeable lapse is that there are no references or suggestions for further reading, anywhere in the book.

With good editing and addition of references, the book would become more valuable. Despite all the drawbacks, it is still useful for a course in photochemistry and pericyclic reactions, if the reader is watchful and takes note of the mistakes.

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J Heyrovský with his coworkers

Courtesy: M Heyrovský