

downright misleading. As in many such texts there appears to be poor judgement as regards what it is that is important for a chemistry book to contain; for example only two pages are devoted to the chemical properties of hydrocarbons.

The third of these volumes, *Fundamentals of Chemistry* by F.H. Redmore, is to be recommended. It does contain the trivial chapter (centimetres into inches), but after that it does assume the reader is of at least average intelligence and, in contrast to the Meyer and Miller/Augustine books, it is tightly written, and, like a number of good freshman chemistry texts, is able to simplify quite difficult theoretical concepts. Thus, simple molecular orbital and crystal and ligand field theory are very well presented. The structure of the atom is introduced early (Chapter 4) and is nicely done. I particularly liked Chapter 21: Periodic Variations. Redmore deals with the Born-Haber cycle — the first two books do not.

The fourth edition of *Chemistry. A Conceptual Approach* by C.E. Mortimer is, we are assured in the Preface, "the most student-oriented edition" yet. (Whatever

next? Orienting textbooks towards students!) But it is a good book and deserves to have lasted so long. Chapter 2 on atomic structure is excellent, and I also particularly liked the chapters on kinetics and thermodynamics. The standard of text and diagrams is high almost throughout (but I did find that molecular orbital schemes using circles for s orbitals and squares for p orbitals was intrusive and detracted from the otherwise well produced figures). There are some more serious objections — wave mechanics is dealt with beginning on p. 41, whilst the concept of a mole is not introduced until p. 152; the student who can understand simple wave mechanics surely doesn't need to have explained what the term molecular weight means (also on p. 152). I also feel that standard and non-standard states need clearer definition.

Chemistry for the Consumer by W.R. Stine is aimed at the non-scientist and intends to provide enough chemical knowledge and principles for an understanding of such concepts as nuclear and radiochemistry, agricultural chemistry, food chemistry, medicinal chemistry and pollution problems. It just

does not quite make it. I find it hard to imagine just to whom the book will appeal. If Stine would write such a book for the scientist he might achieve a more worthwhile object. I think this book has a most severe drawback; figures containing rather complicated chemical formulae coupled, albeit, with simplistic text, does not make for an understanding of chemistry by the non-scientist. Furthermore, although Stine says in the Preface that he hopes the reader will "gain a better understanding . . . of such things as energy, food, . . ." only passing reference to nuclear energy is made and the most important energy-capturing chemical system, photosynthesis, is briefly mentioned in the production of carbohydrate — but the non-scientist will probably not realise that photosynthesis converts solar energy into chemical energy. The word energy does not appear in the index. □

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Unifying concept in organic chemistry

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Organic Stereochemistry. By Henri Kagan. Pp.166. (Edward Arnold: London, 1979.) Paperback £4.95. Translated from *La Stéochimie Organique*. (Presses Universitaires de France, 1975).

ENGLISH LANGUAGE texts of organic chemistry are markedly derivative, so one might expect Professor Kagan's book to contain some fresh insight into a subject where the French contribution has been central. The reader will not be disappointed. Stereochemistry is seen to be a unifying concept in organic chemistry and it is satisfying to see a diverse range of topics from conjugation, through kinetic versus thermodynamic control, to pericyclic reactions discussed from this single standpoint. The treatment is from first principles and as rigorous as could be expected in a work of this size, though only a brief introductory account of the more marginal topics is possible.


All who teach stereochemistry will have been grateful for the moves toward a more logical and consistent terminology which have been evident in recent years. Substitution of the term "chirality" for the anthropomorphic "handedness" is allowing the too vague "dissymmetry" and the often misapplied "asymmetry" to fall

into disuse. The clear division of stereoisomerism into enantiomerism and diastereoisomerism has liberated us from having to tell our students that the optically inactive meso tartaric acid is an optical isomer of the (+)-form. We no longer have certain cyclic compounds uneasily carrying the banners of both optical and geometrical isomerism and the universally applicable RS/EZ system of configurational notation is especially welcome.

We cannot expect that a text originating in a foreign language should simultaneously present novel viewpoints and a sensitivity to the English nomenclature. Kagan and his translators have chosen to use a mix of the old and new terminology. The deliberately literal rendering of the original has, nevertheless, led to some unfortunate semantic choices, for example, where the usual meanings of the terms "racemic compound" and "racemate" have become exchanged. Finally, although this is an inexpensive book, one has the right to expect a higher standard of proof-reading and, more importantly, better diagrams. The latter are small, not always clear, and occasionally confusing.


Despite these caveats this is a valuable book which is commended to all those who have an interest in organic stereochemistry. □

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