energies of the various idealized geometries. The possible chemical coordination polyhedra for that coordination number are then discussed. This discussion, which occasionally extends over two chapters, takes account of variations in ligand type, multidentate-ligand character, and the effects of mixing ligand types. Points in these discussions are amply illustrated by the repulsion-energy plots referred to above, by extensive tabular data from the structural literature, and by carefully chosen structural diagrams. Exceptional structures are identified, and important types of structural distortions, such as the trans influence and the Jahn–Teller effect, are taken into account.

Taken in its entirety, this book makes a strong case for the viability of the repulsion approach to stereochemistry. The relatively simple repulsion model clearly has the advantage of allowing ready correlation of structural data for inorganic compounds involving a variety of central atoms and ligand species.

The reader interested in a systematic understanding of inorganic stereochemistry will find this work very valuable. The wealth of information (tables with references, repulsion-energy diagrams, structural drawings) presented makes the book useful as a reference source. However, the successful synthesis of structural facts with the repulsion model makes the book’s value extend beyond mere reference use. The careful and systematic discussion of possible stereochemistries, together with their structural and energetic relationships, can be extremely helpful in identifying and rationalizing seemingly complicated, unusual, and/or distorted stereochemistries. Careful perusal of the ideas set forth here should also aid the reader immensely in making rational predictions of stereochemistry in other systems of interest.

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The book consists of a collection of papers, both invited and contributed, which were presented at an international symposium organized at Eger, Hungary, 5–8 October 1981 ‘to bring together scientists interested in the combined application of diverse experimental and theoretical methods to special biochemical problems’.

The book is composed mainly of three sections: small molecules (14 papers), DNA and RNA (3 papers) and proteins (10 papers). In section (1) the conformational characteristics and the results pertaining to the structure–activity relationships of biologically active molecules such as tetracyclines, ionophorous antibiotics, natural ergot alkaloids, macrotetrolide antibiotics, hypothalamic hormones etc. are discussed. The three papers in section (2) deal with rather different aspects of DNA and RNA molecules. One of the papers discusses aminoclaylation of tRNA whereas the remaining two present theoretical results on accessibilities and molecular electrostatic potential in B- and Z-DNA as well as tRNA. The papers in section (3) mainly pertain to the structure–function relationships of a few enzymes and proteins, e.g. serine proteases, sulfonamide–human erythrocyte carbonic anhydrase, snake neurotoxins etc. Data obtained from X-ray crystallography, NMR, CD and quantum-chemical methods have been the basis for the discussions in most of the papers appearing in this book.

Since each of the 27 papers contained in the book is separately prepared, there are the expected variations in style and typescript. All the authors have given detailed references and a subject index is also provided.

In summary, the book embodies valuable information for crystallographers working on drug molecules, for protein crystallographers and for medicinal chemists.

The editor is to be congratulated in producing this excellent book.

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Books Received

The following books have been received by the Editor. Brief and generally uncritical notices are given of works of marginal crystallographic interest; occasionally a book of fundamental interest is included under this heading because of difficulty in finding a suitable reviewer without great delay.
