

wonderful to read and should be available to every student of crystallography.

The book provides an extensive overview of molecular reactivity studies that should be useful to those new to the field. The detailed analyses of structural information are instructive and can provide inspiration for new investigations of structural results. The book should be available to everyone who trains young crystallographers.

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**Topics in nucleic acid structure, Part 3.** (Volume 9 of **Topics in molecular and structural biology.**) Edited by S. NEIDLE. Pp. x+230. London: Macmillan, 1988. Price £42.50.

It is now more than 35 years since the historic discovery of the double helix by Francis Crick and James Watson, yet we are still a long way from understanding the subtleties of the relationship between the structure and function of nucleic acids. Major discoveries in recent years in the diverse areas of gene manipulation and chemical synthesis of DNA have provided scientists with the tools to probe the biological and physical properties of nucleic acids in a degree of detail that was not previously possible. The sudden advent of the AIDS epidemic with its tragic human consequences has concentrated the minds of chemists and biologists and provided further impetus for researchers in this area. At the same time, developments in X-ray crystallographic and, in particular, dramatic strides in high-field NMR technology have facilitated the study of nucleic acids and DNA-protein complexes at high resolution.

Volume 9 of *Topics in Molecular and Structural Biology* reviews a number of key areas which have received recent attention. The book contains chapters on the following subjects: biologically active nucleosides and nucleotides, the barrier to pseudorotation of the furanose ring, X-ray fibre-diffraction studies on DNA, side-by-side models of DNA, Z-DNA in solution, and, finally, restriction enzymes

and DNA. The contributions are presented in a clear and readable way with good illustrations and a wealth of references.

It is impossible to cover more than a tiny fraction of the important developments in this field in 230 pages of text, and many researchers would dispute the selection of material. The book is, however, well balanced, and the active research worker is likely to benefit substantially from reading the articles. The chapter on biologically active nucleosides by Burnbaum and Shugar is particularly interesting and topical as is the final chapter on restriction enzymes by Malcolm. The chapter on X-ray fibre diffraction will be of great interest to specialists in the field but the discussion of side-by-side models of DNA highlights some of the limitations of the technique. The review of Z-DNA by Singleton is concise and well worth reading, giving an overview of the possible biological role of Z-DNA. The chapter on the barrier to pseudorotation of the furanose ring gives a mathematical approach and is in parts difficult to follow.

In summary, this book contains a great deal of valuable and readily accessible information in a number of highly specialized areas.

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#### Book Received

*The following book has 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.*

**Mineralogie.** By *Siegfried Matthes*. Pp. xvii + 444. Berlin: Springer-Verlag, 1987. Price DM 69.

A review of this book, by J. E. Chisholm, has been published in the December 1988 issue of *Journal of Applied Crystallography*, page 996.