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Book Review

Modern X-Ray Analysis on Single Crystals, by P. Luger. W. de Gruyter,
Berlin and New York, 1980, xiv + 312 pages, DM 96.

The author describes his book as a guide for practical work in X-ray analysis directed at those who are not highly experienced crystallographers. It attempts to cover both the fundamentals of diffraction theory and the process of an X-ray structure determination. The background theory is couched mainly in matrix and vector notation and the book therefore starts with 40 pages of the mathematics of matrices and vectors. The average non-mathematically minded chemist may perhaps be put off by this approach. The description of the more practical aspects of X-ray structure analysis is usefully illustrated by details of most of the steps involved in three actual crystal structure determinations. This gives up to date coverage of diffraction data collection and structure solution and refinement. The only quibble that I have with this part of the book is that it covers some points in admirable detail but others are not discussed at all. For example, the uninformed reader might infer that all structural parameters that can be refined by least-squares should be refined, subject only to the capability of the computer, and irrespective of whether it is justified by the amount or quality of the diffraction data. On the whole this book has many appealing characteristics and is a useful but not comprehensive practical guide to X-ray analysis.

School of Molecular Sciences,
University of Sussex,
Brighton BN1 9QJ,
Great Britain.

Peter B. Hitchcock