

**Optical crystallography.** Fourth edition. By ERNEST E. WAHLSTROM. Pp. 489. London: Wiley, 1969. Price 132s.

This is the fourth edition of a book first published in 1943. It deals in a systematic and exhaustive way with all aspects of the behaviour of light when it passes through transparent materials.

Initial chapters (about 200 pages in all) are devoted to the elementary basic concepts of optical crystallography—crystal morphology, the nature of light, the optics of isotropic materials, measurement of refractive index, polarized light and interference and other phenomena concerned with the composition and resolution of light waves.

The treatment is for the most part descriptive and the mathematics is kept to a minimum. Since the diagrams are numerous and of a good standard the basic concepts are put over quite well. However, in his preface the author states that, quite deliberately, his material is a collection of theory and recipes and sometimes this reviewer felt that the theory was a little underplayed. For example, Miller indices are introduced without any reference to the under-

lying reasons for their existence and a reader fresh to the subject might well wonder at the good fortune that made them such small integers.

The next 160 pages give a very complete and highly satisfactory explanation of the optical properties of uniaxial and biaxial crystals and their behaviour under the orthoscope and conoscope. Once again the quantity and quality of the diagrams help greatly to clarify the subject matter.

Final chapters are devoted to optically active crystals, the study of crystals mounted on stage goniometers and, finally, a detailed procedure for the systematic microscopic examination of transparent materials.

This book is highly recommended to all crystallographers. Even the least 'optically aware' crystallographer would do well to have it handy as a work of reference.

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