since it tends to be poorly presented in the individual papers and much of it, in any case, is already accessible in translated periodicals.

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Micron – The International Journal of Electron Microscopy, Electron Probe Micro-analysis and Associated Techniques. Vol. 1 No. 1. Pp. xiii + 83: 1969. U.K. Structural Publications, Price. £2·10 each number.

The development of the transmission electron microscope alone is one of the triumphs of post war applied science. Later developments in electron optics such as the scanning electron microscope and the microprobe analyser confirm that the story is one of remarkable success. The appearance of the new quarterly journal *Micron* devoted entirely to the application of these instruments is evidence enough that they are now in widespread use in a number of different disciplines.

Judging any journal by reference to any one edition is always hazardous and the first edition of *Micron* is no exception. The editors have managed to include papers mentioning the use of all the instruments. Nevertheless, there is clearly a biological flavour in the choice of discipline; of the eight papers presented, five deal with problems in biological science, two with materials science, and one with the instruments themselves. Most of the papers are qualitative rather than quantitative, being written in the manner of an observer peering down a microscope reporting to someone who isn't. Certainly the journal is not intended for the theoretically inclined unless the search is for raw material.

One of the striking features is the large number of plates. In this first edition there are 83 pages of script and no less than 48 plates. Every laboratory using electron optical equipment will certainly have its favourite collection of micrographs and *Micron* seems destined to become their resting place. It is to

be hoped that the journal will not develop into a sort of scientific *Picture Post*. A series of plates giving progressively more detail of a leaf, without any depth of focus problem, is not without interest; the worry concerns the number of available leaves.

The production of the journal is good, being printed on fine quality gloss paper which gives a feeling that no expense has been spared. Anyone wishing to purchase a single personal copy will no doubt confirm this feeling on receipt of the bill for two guineas — sorry £ 2·10. Every plate is printed on just one side of a page, the reverse side being used to give brief details. Because of the large number of plates this does mean a lot of vacant space. An irritating point, particularly when reference is made to them in the text, is the gathering together of the plates at the end of each paper. The contents include the usual diet of a diary, book reviews, conference reports and a sprinkling of advertisements. The publishers are also offering a reader inquiry service for the latter. Justification for the international title is provided by an abstract of each paper in French and German.

If there is a demand for a non-mathematical journal capable of reproducing to high standards the sort of visual information that electron optical devices yield, then *Micron* should survive to become a permanent feature of the library shelf.

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Principles of structural metallurgy. By B. HARCOPOS. Pp. 146. London: Iliffe, 1963. Price £0·50.

This is a cheap student's edition of a book that was first published in 1963. The advantage of the book is that it contains forty-eight photomicrographs of the most common alloy structures with discussions on them. The rest of the book (the first half) contains standard material on phase diagrams, solidification, defects and mechanical properties *etc*. It is a good little book that could be used in introductory

courses that aim at a practical knowledge rather than a deeper understanding of the mechanisms that determine the mechanical properties of alloys.

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An outline of crystal morphology. By A. C. BISHOP. Pp. 314. London: Hutchinson, 1967. Price £1·50.

This modest work whose objective, according to the author, is 'to give an outline of the principles of crystal structure and then, on this foundation, to acquaint the reader with the more practical aspects of crystal morphology that he is likely to meet in an elementary university course,' consists of two parts: 1, *The Principles of Crystallography* (80 pages), and 2, *Systematic Crystallography* (207 pages). This book is essentially one on morphological crystallography, as the title indicates, but part 1 cannot be regarded as giving an adequate 'outline of the principles of crystal structure'. In chapter 1, *General Introduction to Crystallography*, the principal weakness is the inadequate discussion of the 14 Bravais lattices, symmetry, and the crystal systems. The symmetries of the space lattices are not dealt with, and so the restrictions upon the (non-translation) symmetry elements observed in crystals are not explained. Similarly, the fact that the 14 space lattices fall into seven symmetry groups cannot be correlated with the existence of the seven crystal systems. Initially (p. 22) the systems are defined only in terms of the shape of the 'lattice' (the term 'unit cell' is not used), although later in chapter 4 of part 2 (p. 100) the systems are defined in terms of characteristic symmetry.

In the rest of part 1, chapter 2 entitled *A Chemical View of Crystals*, gives a very elementary introduction to crystal chemistry including simple descriptions of some classical structures, but no real attempt is made by the author to relate the chemical characteristics of a crystal structure to the morphology of the crystal. In chapter 3, *Methods of Study*, the author discusses X-ray diffraction by crystals in six pages and then gives reasonably satisfactory descrip-