

## Short Notices

*Crystals and the Polarising Microscope: a Handbook for Chemists and Others.* By Dr. N. H. Hartshorne and A. Stuart. Pp. viii+272. (London: Edward Arnold and Co., 1934.) 16s. net.

SECTIONS 1 and 2 of this book deal with crystal morphology. The information included in the fifty pages is surprisingly complete. It is to be regretted, therefore, that the authors have not made use of the stereographic projection (space could have been found by deleting the recapitulations on pp. 50 and 92). The use of etch-figures in, say, distinguishing between ortho- and clino-pinacoids and these in turn from prisms, might have added to the completeness of this portion of the book. The text is liberally illustrated with clear diagrams. (In Fig. 31, 111 should read  $\bar{1}10$  and on p. 44, lines 6, 7 and 11 from top should be . . .  $2\{100\}$  . . .  $4\{101\}$  and . . .  $6\{10\bar{1}1\}$ ).

It is difficult to refer to the optical treatment (Sections 3-6) without enthusiasm. The ground covered would not be amiss in a volume of twice the size, and descriptions are throughout clear and concise. The drawings, hereabouts, serve their purpose well, those of interference brushes, viewed through differently orientated sections, being particularly useful. Some confusion may result from the authors' description of the mica plate. It is the practice in Great Britain for quartz, mica and gypsum plates to be cut with the longer edge parallel to the  $\epsilon$  or  $\gamma$  axis of the ellipsoid (Miers, Tutton, etc.). In Sections 7 and 8, the authors make out a good case for the increased use of the polarisation microscope in industry and research.

The printing is clear, and authors and publishers are to be congratulated on a book, useful alike to research physicists, geologists and crystallographers, as well as to chemists.

H. E. B.

*Sexual Life in Ancient Rome.* By Otto Kiefer. Translated from "Kulturgeschichte Roms unter besonderer Berücksichtigung der Römischen Sitten" by Gilbert and Helen Highet. Pp. ix+379+16 plates. (London: George Routledge and Sons, Ltd., 1934.) 25s. net.

IN matters relating to sex, the ancient Romans displayed the practical qualities which they brought to bear on all the problems of their lives, both public and private. It affected their attitude generally to all forms of erotic emotion, as well as in the relation of the sexes. For it has to be remembered that the ancient Romans, if not universally, very commonly, were indifferently homo- and heterosexual, and accepted that as a matter of course. Dr. Kiefer, in the work of which this is a translation, has explored the records of the reactions of the Roman world in marriage, in religion, in literature and in art, and finds not only that there is little of the spiritualisation of this emotion such as existed among many of the Greeks, but also that there is in it no little of a sadistic element. He is, however, by no means a

supporter of the view which would ascribe the downfall of the Empire to decadent mores in relation to sex. An acute analysis of the sexual element in the character of certain of the early emperors and members of their entourage, discounts the scandals of their biographers in some, but not all, instances.

*Satellite Station Tables.* By C. M. L. Scott. Pp. vii+44. (London: Edward Arnold and Co., 1934.) 12s. 6d. net.

It sometimes happens in minor triangulation that well-marked objects, which are otherwise suitable as trigonometrical points, cannot be observed from, though they are well placed for 'observing to'. Burma, with its innumerable pagodas, offers thousands of examples of this, and it is not surprising that the book under review should have been written by the port surveyor at Rangoon. These tables will save labour in cases in which there is much satellite-station work, though in ordinary minor triangulation, in which satellite stations are usually avoided, or are but rarely used, the surveyor may prefer to make his corrections by the application of elementary trigonometry.

The tables have been carefully prepared and are well set out and printed. They are suitable for the purpose intended, which is, briefly, to reduce the angles taken at a satellite station to the values which they would have had if they had been observed at the inaccessible station itself. The corrections are given to the nearest second, an accuracy more than sufficient for this class of work. The book can be recommended to those who find themselves obliged to use satellite stations frequently. The tables can, as remarked in the foreword, be made use of for tacheometrical calculations.

*Introduction to Modern Physics.* By Prof. F. K. Richtmyer. (International Series in Physics.) Second edition. Pp. xviii+747+6 plates. (New York and London: McGraw-Hill Book Co., Inc., 1934.) 30s. net.

THE first edition of Prof. Richtmyer's book has been appreciated by so many physicists that the appearance of a second edition is bound to be warmly welcomed, and it is only necessary here to note the chief changes which have been made. An adequate outline of the application of Fermi-Dirac statistics to problems in photo-electricity has been added and the chapter on X-rays brought up to date. The chapter on the structure of the nucleus has been considerably altered in view of recent work on artificial disintegration, and the neutron and positron both find a place, though perhaps a small one in the case of the latter. Two very important new chapters have been included, one on the vector model of the atom and one on the wave theory of matter. The first will be particularly helpful to students, and the latter properly completes a first-class introduction to modern physics.