

BOOK REVIEW

OPTICAL MINERALOGY, Second Edition. By David Shelley. Elsevier Science Publishing Company, Inc., New York, 1985. 321 pages, \$37.50.

With substantial changes and expansion, Shelley's *Manual of Optical Mineralogy* (1975) has been revised from six chapters (239 pages) into a second edition with nine chapters (321 pages) and a slightly different title. Chapter 3 ("Principles of Optical Mineralogy," 28 pages) was doubled to include a more thorough treatment of retardation, interference figures, and optic-axis dispersion topics, which are indispensable for the understanding and mastery of related laboratory techniques. The discussion of laboratory techniques has been expanded from one chapter into three chapters ("Flat-stage Techniques—Thin Sections," 37 pages; "Flat-stage Techniques—Grain Mounts," 15 pages; and "Universal-stage and Spindle-stage Techniques," 20 pages). Students will appreciate this new arrangement and will find it convenient for quickly locating the right techniques for dealing with different types of samples (petrographic thin sections, loose or crushed grains). I was glad to see that such familiar semiquantitative methods as estimating $2V$ and birefringence in the optic-axis figure and estimating $2V$ in the acute-bisectrix figure have been included. It is regrettable, however, that Kamb's method for estimating $2V$ in the obtuse-bisectrix or the large- $2V$ acute-bisectrix figure, which has been proved to be practical and easy to use, was omitted.

Another major addition is a concise section on the uses of the elegant spindle-stage techniques in Chapter 6. These have received more and more attention in recent years by mineralogists and microscopists. However, the procedure for locating the three principal vibration directions X , Y , and Z on the extinction curves,

which is of primary importance in studying biaxial crystals, did not receive adequate coverage. The statement that the positions of X , Y , and Z on the extinction curve "can be discovered by inspection" is oversimplified and perhaps misleading. But this should not constitute real problems to potential users of spindle-stage techniques, because they can always find the needed information in the original papers or the comprehensive treatise to which the author of this book referred.

Besides the addition of five minerals to the mineral descriptions, the mineral systematics were also updated in terms of revisions of optical data, terminology, etc. Unfortunately, errors in the existing refractive index curves of high-temperature alkali feldspars (Fig. 9.61) have escaped the author's notice, and precise refractive index measurements of crushed grains were still cited as an accurate method for determining composition of alkali feldspars.

Forty color microphotographs of common rock-forming minerals have been added to this edition. These, which present plane-polarized and cross-polarized views side-by-side (Plates 38 and 39 should be transposed), should serve well as an instant guide to the appearance of those common rock-forming minerals in thin sections of igneous, metamorphic, and sedimentary rocks. Although the inclusion of these color plates inevitably increased the book's price, it seems worthwhile, especially for beginning students in optical mineralogy and petrology.

Indeed, *Optical Mineralogy* (second edition) will be useful for all stages of undergraduate and later work and will likely prove to be an even bigger success than its first edition.

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NOTICES

The origin of granites

The Royal Society of Edinburgh and the Royal Society of London will hold a three-day symposium on the "Origin of Granites" in Edinburgh, Scotland, September 14–16, 1987. The meeting celebrates the Bicentenary of the publication of the historic articles on the origin of granites by James Hutton, which represented a landmark in the development of geology. A number of leading international authorities on granite genesis will be giving invited lectures, and there will be opportunities for open presentations in poster sessions. There will also be an associated excursion to Donegal. Further details can be obtained from the Meeting Secretary, Royal Society of Edinburgh, 22, 24 George Street, Edinburgh, EH2 2PQ, Scotland.

Mössbauer conference

The International Conference on the Applications of the Mössbauer Effect (ICAME 87) will be held August 17–21, 1987, at Monash University, Melbourne, Australia. The conference will continue the established ICAME practice of embracing all the scientific disciplines in which Mössbauer spectroscopy has application. The deadline for abstracts is March 1, 1987. For further information, write to John Cashion, Department of Physics, Monash University, Clayton, Victoria 3168, Australia.