

detail and will be found most useful by many geologists. Part II is largely descriptive and reviews the different types of beryllium occurrence. Many western readers may feel lost here owing to Russian pegmatite terminology, which differs from our own. This is particularly confusing where similar terms have different usages.

Part III considers the role of beryllium in various geological processes. Some may find this part rather thin, in particular there appears to be little explanation of the more regional aspects of beryllium mineralization. In this respect little is made of zoning even in Part II except from an idealized viewpoint: factual maps, rather than hypothetical block diagrams would have been most useful here.

Although descriptions of beryllium occurrences are strongly biased towards Russian examples, as might be expected, there are many references to deposits outside Russia. One omission from the extensive list of references is the work done by the editor of the translation himself and his colleagues, under the leadership of E. N. Cameron. Their publication on the internal structure of pegmatites surely warrants a reference in a book of this type. Although this book is mainly concerned with the geochemistry of beryllium, it is also subtitled '... and genetic types of beryllium deposits' and this reviewer feels the subject has been treated rather narrowly: but this is the view of a geologist and not of a geochemist. Despite such criticisms, it is still most useful to have this wealth of largely factual information gathered under one cover. However, the editor of the translation does warn the reader, in an introductory note, that much recent work from western sources has been ignored. Therefore, although a most useful review of the geochemistry of beryllium, it should not be considered the last word on the subject.

J. W. B.

EL-HINNAWI (ESSAM E.). *Methods in chemical and mineral microscopy*. Amsterdam (Elsevier), ix+222 pp., 103 figs., 1966. Price 90s.

The book aims at bridging the gap between Johannsen's 'Manual of Petrographic Methods' (1918) and the current needs of mineralogists, petrographers, and microscopists. The author has assembled a lot of useful published information together with less accessible manufacturers' data. The series of eleven chapters is concerned more with the description of the methods of examining crystalline substances under the polarizing microscope than with the principles of optical crystallography. It is assumed that the reader is already familiar with the principles and knows how to use the polarizing microscope. Hence the book provides

something more than the kind of information on optics that accompanies the popular texts on optical determinative mineralogy. The book includes references to literature published up to and including 1965. The contents of the book are:

1. Preparation of material for microscopic examination;
2. Morphological measurements (shape, particle-size, etc.);
3. Determination of refractive index;
4. Absorption and pleochroism;
5. Extinction and birefringence;
6. Quantitative conoscopy and the determination of the optic axial angle;
7. Dispersion;
8. Spindle stage methods;
9. Universal stage methods;
10. Hot stage microscopy;
11. Phase-contrast microscopy.

The chapter on universal-stage methods is rather inadequate since no attempt is made to illustrate the various operations in terms of stereographic projections. Indeed, the general application of stereographic projection to many other problems in optical crystallography is not discussed in the book. The text is well illustrated but unfortunately the quality of many illustrations is poor.

T. W. B.

STRAKOV (N. M.). *Principles of lithogenesis*. Vol. 1. Edinburgh (Oliver & Boyd), vii + 245 pp., 57 figs., 31 tables. Price £6. [Translated from the Russian by J. Paul Fitzsimmons, S. I. Tomkeieff, and J. E. Hemingway.]

This is the first volume of a three-volume study of sedimentary rocks; volumes two and three will deal with sedimentation in humid and arid zones. The book was first published in 1962 [M.A.15-329]. Like many Soviet geological works, the scope is wide with the accent on physical-chemical aspects, Ch. 1 starting with a map of the major types of weathering in the world. Mechanical and chemical erosion are described, together with the effect of organic material on the mobility of the chemical elements; hydrodynamic and hydrochemical features of marine basins; processes of sedimentation in marine basins and later diagenetic changes. Ch. 2 deals with humid sedimentary complexes and paragenetic rock associations, together with controls of the thickness of sedimentary formations and relationships between sedimentation rate and crustal movements. The loss by reworking of facies types associated with the original peripheral zones of the natural sedimentary region is stressed. Ch. 3 describes the features of humid rock formations on platforms and in geosynclines, and Ch. 4 deals with the glacial and arid types of lithogenesis and their relationships to the humid types. Volcanic-sedimentary lithogenesis is also discussed. Ch. 5 is an account of the distribution of