

as 'high', 'medium', or 'low'. The failure to incorporate published Vickers or Knoop microhardness indentation data is a serious omission to the mineragrapher, while the absence of microchemical tests must also be deprecated.

J. B. A.

CAGNET (M.), FRANCON (M.), and THRIERR (J. C.). *Atlas optischer Erscheinungen*. (Title and text in parallel German, French, and English.) Berlin, etc. (Springer-Verlag), 1962. 44 pages of photographs with explanations opposite. Cloth boards 11×14 in. Price DM 74.

This is a 'de luxe' reproduction of about 140 best-known photographs of diffraction and other interference patterns. Many will be familiar in text-books dealing with the sections headed 'Geometrical aberrations, Interference, Diffraction at Infinity, Diffraction at Finite Distance, Polarization, Phase Contrast and Interference Contrast'. The mineral examples comprise a few interference figures (uniaxial, biaxial, and for crossed plates) and strain figures, Schlieren, and growth figures. Explanations, in three languages, often occupy only half the page, and are of an elementary standard with simple diagrams.

A. F. H.

SCHMITT (HARRISON H.), editor. *Equilibrium diagrams for minerals at low temperature and pressure*. The Geological Club of Harvard (Cambridge, Massachusetts), 1962. ix+199 pp. Price \$2.80.

Compiled by the Geological Club of Harvard, this book contains 186 diagrams showing theoretical stability limits of minerals in simple chemical systems at 25° C and 1 atmosphere pressure. Apart from a brief introduction there is no textual matter. The minerals considered are of the more common or important metallic elements of the various periodic groups. The diagrams, including partial pressure diagrams for hydrous and anhydrous systems and Eh-pH diagrams for aqueous systems, have been reproduced directly from the originals, which were submitted by graduate students in Prof. R. M. Garrels's course 'Topics in Geochemistry' at Harvard University. Each diagram gives the information necessary to define the conditions for which it was constructed. Mineralogists and geologists who are familiar with the physical-chemical basis of the various types of equilibrium diagram given, discussed in some detail by Prof. R. M. Garrels in 'Mineral Equilibria' (1960), will find this new collection of diagrams a useful addition to the information already available on theoretical stability fields of minerals at low temperature and pressure.

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