

Part 1 (44 pp.) contains two chapters of general information, mainly on immersion media, preparation of mounts, and staining procedures. Chapter 3 considers shape and optic orientation of minerals, followed by a brief Chapter 4 on elementary chemical aspects of isomorphism. Information on the *theory* of convergent light and the indicatrix is omitted and Chapter 5, which deals with immersion identification technique, illustrates very satisfactorily the relationship of the principal optic vibration directions (and hence R.I.) to various types of interference figure.

Part 2 contains the descriptions of minerals and is well illustrated with line drawings, photomicrographs, variation diagrams, and drawings of detrital grains. A coloured birefringence chart is also included in the book. The data on the various minerals is well presented, up to date, and there is generally more information on variations within mineral groups than in Kerr.

The problem facing the reviewer is whether this book represents (at its not inconsiderable price) any significant advance on existing texts. Perhaps the final criterion is the degree to which the reader is prepared to forgo the theoretical aspects of optical mineralogy for its practical application.

T. W. BLOXAM

BRANCAZIO (P. J.) and CAMERON (A. G. W.), editors. *The origin and evolution of atmospheres and oceans*. New York (Wiley), 1964. xii + 314 pp. Price: 94s.

This book contains the proceedings of a conference held at the Goddard Institute for Space Studies of the National Aeronautics and Space Administration in April, 1963. There are seventeen papers, some followed by discussions, which fall under the several general headings of: processes by which gases escape from the earth's interior to form terrestrial oceans and atmosphere; processes leading to alterations of the atmosphere such as chemical reaction with surface rocks, biological interactions and thermal escape; the gas content of meteorites and its significance in relation to the earth's history; and seven papers on the atmospheres of other planets.

T. W. BLOXAM

CRAIG (G. Y.), editor. *The geology of Scotland*. Edinburgh (Oliver & Boyd), 1965. xv + 556 pp. Price: 105s.

The book contains fifteen contributions by various authors on several major topics of Scottish geology: 1. The geological growth of Scotland (T. N. George); 2. Lewisian (J. Watson); 3. Torridonian and Moinian