

do not diminish the value of the book. A wealth of information that is inaccessible to most geologists has been carefully selected and clearly arranged. All this makes the book a valuable addition to the library of anyone interested in the geo-sciences.

E. F. STUMPF

OSTROUMOV (E. A.) [ОСТРОУМОВ (Э.А.)]. *The application of organic bases in analytical chemistry*; translated from the Russian by D. A. PATERSON. London (Pergamon Press), 1962. xxvi+159 pp. Price 50s.

This book runs to six chapters, a long introduction (26 pp.), and a conclusion. The organic bases referred to in the title are pyridine, α -picoline, and hexamethylene tetramine, the use of which makes possible the formation of compact or crystalline precipitates of low adsorptive power, notably the hydroxides of the group III metals and the sulphides of nickel, cobalt, and manganese. In consequence many troublesome separations are made simple. The book is free from all but minor errors, but reads like a thesis; much is repetitive and the eighty tables of results are more than adequate.

A. A. MOSS

GRAY (G. W.). *Molecular structure and the properties of liquid crystals*. London and New York (Academic Press), 1962. vii+314 pp. Price 63s.

The mesomorphic state (commonly called a liquid crystal) is almost, if not quite, confined to organic compounds of some complexity, and its interest to mineralogists and crystallographers lies essentially in the fact that it is a state intermediate between the three-dimensional order of a crystal and the disorder of a liquid. Some inorganic compounds and minerals with layer-lattices can reach a state of complete stacking disorder that is in many respects similar to the smectic phase, though there does not appear to be any evidence of order within the layers of the latter.

In the present book the author gives a very useful review of the structure and properties of the mesomorphic state (or rather states, for there are at least two distinct states), and considers in detail the requirements for a substance to exist in a mesomorphic state. Particular attention is paid to regularities in homologous series of organic compounds.

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