

petrogenesis is interesting in that most of the major theories for the formation of nepheline-bearing rocks have been written by experts in each particular field. The following processes are discussed: melting within the mantle, melting in the deep crust, fractional crystallization, limestone assimilation, role of volatiles, liquid fractionation, resorption of silicates, and metasomatic processes. Not one of these chapters, however, mentions the potassium-rich rocks, and it is fortunate that the chapter on potassium-rich alkaline rocks in the section on petrography and petrology does treat their origin although of necessity the treatment is brief.

The editor has been very successful in obtaining contributions from Russian authors and thus making available, to petrologists who cannot read Russian, information not readily accessible to them.

There is an index of rock names, a subject index, a geographical index, and an author index. In addition there is a glossary of rock names of 'alkaline and related rocks'. Unfortunately the references are to be found at the end of each chapter instead of a complete list of references at the end of the book. This reviewer believes that if all the references are put together at the end of the book they are easier to locate. In addition, to find a particular reference may sometimes require looking through a dozen or more lists of references instead of one list.

This book covers too much to be considered suitable to recommend to an undergraduate although the keen student may wish to read many of the chapters; the price has ensured that the only way a student will be able to obtain it will be as a present from an indulgent relative because it seems doubtful whether he will be able to borrow it from one of his teachers. It seems a pity that publishers are unable to judge the potential sales of a book of this high quality which should be bought by every geology department library.

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TENNISSEN (A. C.). *Nature of Earth materials*. London and Englewood Cliffs, New Jersey (Prentice-Hall), viii+439 pp., 332 figs., 1974. Price £6.25.

This is a very simple introductory survey of mineralogy and petrography (hand-lens only) with 65 pp. on the uses of some metals, minerals, and rocks. The first 95 pp. cover chemical bonding, morphological crystallography, physical properties (except optics), and mineral classification. Standardized 18-line descriptions of 114 minerals follow. Each of these is accompanied by a half-tone illustration, but these are of uneven quality and are mostly of little help in recognition. Chapters 4, 5, and 6 discuss the nature of igneous (53 pp.), sedimentary (52 pp.), and metamorphic (28 pp.) rocks—a concise survey of well-selected technical terms. The last chapter on utility of Earth materials includes a short account of the nature of ore-deposits.

The pace of development is intentionally slow, but the style is somewhat prolix. In dealing with concepts the attempt to make things simple sometimes means the sacrifice of sharp and accurate statement, which is a pity. A book at this level is useful, but one might go to an equal depth in the subject with a good deal more economy.

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