

insufficiently emphasized and it seems that the significance of Ramberg's experiments in providing explanations of many structural phenomena of migmatites is not fully realized. Further, the account of the migration of elements is confusing and that of sampling methods, although perhaps suitable for intrusive plutons, is inadequate and unrealistic in dealing with migmatite complexes.

Despite these reservations I liked this book with its wide coverage, abundant references, and discussion of most of the main lines of research on migmatite terrains: the general reader might be discouraged but the specialist will not.

W. S. PITCHER

SALMANG (H.) and SCHOLZE (H.). *Die physikalischen und chemischen Grundlagen der Keramik*. 5th ed. Berlin, Heidelberg, and New York (Springer-Verlag), 1968, viii+450 pp., 197 figs., 56 tables. Price DM 66 (U.S. \$16.50).

The fifth edition of the late Professor Salmang's comprehensive textbook has been revised and re-arranged by Professor H. Scholze whose researches into ceramics are well known. Ceramics are essentially defined by a common process of manufacture in which the powdered material is first shaped and then consolidated by firing. It now includes a very wide range of products, from those based on clay to special ceramics based on pure oxides and other chemicals. The book presents the most recent generally accepted views on structural compositions, types of bonding, surface properties, and thermochemistry, and covers raw materials, manufacturing processes, and properties of finished products together with methods of investigation. In order to cover such a wide field the information is often necessarily condensed, but a large number of references are given to the latest work to facilitate a more comprehensive study of particular topics. The book is well illustrated with diagrams and tables.

P. S. KEELING

MURCHISON (DUNCAN M.) and WESTOLL (THOMAS S.). *Coal and Coal-bearing Strata*. Edinburgh and London (Oliver and Boyd) 1968, xii+418 pp., 124 figs., 21 tables, 41 plates. Price 168s.

This book contains the printed versions of fifteen papers read to the 13th Inter-University Geological Congress appropriately held at the University of Newcastle in January 1965. The papers are assembled under five headings. Part I deals with coal as a rock and contains five papers; Part II, concerned with the sedimentary environment of coal formation, has three papers. Part III has three papers on the biological environment of coal formation. Geochemistry and metamorphism are dealt with in four papers in Part IV, while Part V has two papers on coal basins, including Gondwana coalfields and German Mesozoic and Cainozoic coalfields.

In Part I the uses of the terms 'macerals' and 'microlithotypes' are clarified and their development in coal in relation to the process of coalification described, as well