

X-ray crystallographers, that this theory is so completely excluded by the work of Perutz & Kendrew and their collaborators, that I find it difficult and saddening even to look at the book, much less can I face criticizing it in detail, as I could, on a number of grounds. But the fact that the authors do not themselves immediately come to my conclusions, in the Appendix which they write on the recent X-ray analysis of haemoglobin and myoglobin, raises an interesting general problem for X-ray analysts. *R*, when I last heard of it for myoglobin, was over 40%, and yet I do not doubt that the structure described by Kendrew and his collaborators is essentially correct. The coincidences between the electron-density distribution they find and that required by the  $\alpha$ -helix peptide-chain configuration and protein and porphyrin

chemistry seem to me extremely convincing. Add to these the low-resolution similarity between the chain structures of myoglobin and haemoglobin and the evidence becomes, to me, overwhelming. But it does not appear so to the authors of this book. Their difficulties call for careful consideration of the ways in which the evidence on complex structures is made available for critical examination. Should, for example, the whole electron-density map for myoglobin at 2 Å resolution be deposited in some central store?

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## Books Received

*The undermentioned works have been received by the Editors. Mention here does not preclude review at a later date.*

**Research in surface forces.** Edited by B. V. DERYAGIN. Translated from the Russian (translator's name not given). Pp. vi+190. New York: Consultants Bureau, 1963. Price \$27.50.

This publication, reproduced photographically from unjustified typescript, contains 28 papers presented at a conference on surface forces held in the U.S.S.R. in April 1960. The papers are divided into five parts, with the headings General problems in surface forces, Polymer adhesion, Surface forces in thin liquid films, Surface effects in dispersed systems, and Surface forces in aerosols. The subject is only of marginal interest to crystallographers, the paper by M. S. Metsik 'The role of surface forces in mica crystals' being the only one making detailed use of structural considerations.

**Métallurgie physique.** By BRUCE CHALMERS. Translated 'from the American' by G. DORZÉ and D. DUTILLOY. Pp. xviii+430, with 423 figs. Paris: Dunod, 1963. Price 68 F.

The English edition was published by Wiley. The French translation has a preface by Prof. P. Lacombe, but appears otherwise unchanged.

**Special ceramics 1962.** Edited by P. POPPER. Pp. xiv+482, with many figs. London and New York: Academic Press, for the British Ceramic Research Association, 1963. Price £5. 5s.

This book contains twenty-five papers presented at a symposium held in Stoke-on-Trent, England, in July 1962. In his preface the editor defines a special ceramic as a heat-resisting material without prospects of short-

term commercial profitability. Once the materials become commercially established they 'appear to cease to be special but become electrical ceramics or refractories.' The materials index covers a little over two pages, and in it nitrides, borides, carbon and carbides, and compounds of heavy metals like thorium, uranium and tungsten are prominent.

X-ray methods are frequently mentioned, but none of the techniques appear to be novel. A paper by the editor on the formation of non-oxide coatings by pyrolysis mentions boron nitride white as analogous to carbon black.

### Principles of zoological micropalaeontology.

By VLADIMÍR POKORNÝ. Translated from the German by K. A. ALLEN and edited by J. W. NEALE. Pp. xvi+652, with 549 figs. Oxford: Pergamon Press, 1963. Price 84s.

This book forms volume X of the International Series of Monographs on Earth Sciences. The original Czech edition appeared in 1954, but the English translation has been made from the revised German edition of 1958. The book is well printed and well produced, and has nearly 60 pages of indexes. It will, however, be of interest to geologists and biologists rather than crystallographers. X-rays are mentioned in connexion with chemical composition and the distinction between calcite and aragonite.

**Fragilité et fragilisation des métaux et alliages.** By D. ADENIS and P. BLANCHARD. Pp. xvi+207, with 118 figs. Paris: Dunod, 1963. Price 38 F.

This book discusses brittleness and embrittlement of metals, a subject very important in the prevention of