

Prof. Florence starts by setting out nine leading 'trends' or 'trains of events' in industrial development, such as the growing importance of industrial and service activities as against agriculture; the application of science; the growing importance of organizers, managers and administrators as against working operatives; urbanization; enlargement of scale in industry; the managerial revolution; and higher standards of living. This concept of a 'trend' that is something less than a 'law' seems somewhat vague but useful for the broad canvas on which Florence is engaged.

Prof. Florence then goes on to examine the mobility of labour geographically and occupationally, which always has been, and is to-day as much as ever, a key question in regional and national development policies, as to which analytical economists' assumptions have, since Ricardo, often been in terms of an unrealistic rapidity of movement in response to wage differentials. Prof. Florence's call for much more empirical investigation of the factors making for mobility and immobility can only be supported. The mobility of labour leads on to the economics of industrial location and urban development, and to problems of the selection of industries which can advantageously be stimulated in one way or another, towards the development of depressed or rural areas, and away from congested 'conurbations' (a Florentine term). Problems of the scale of industries come next, and of management and industrial relations and psychology, to which the trend to large scale gives rise. Here Prof. Florence is at his best. The last three chapters take us to the emergent countries, that is, those countries the economics of which have scarcely begun to follow out the 'trends' distinguished at the beginning of the book. The treatment here, though often lively and acute, becomes rather unsystematic, with disproportionate emphasis on one or two special enthusiasms, for example, the tourist trade. But Prof. Florence is never dull, and he manages to provide a just sufficient thread of argument to carry his readers through his wide-ranging variegated survey. Indeed, as regards some of the problems now recognized as central and critical, for example, population and birth control, Prof. Florence writes as a pioneer of long standing.

This would be a rousing, broadening book for students of economics to read alongside their narrower and more analytical text-books, setting before them in lively terms the realistic problems, for coping with which their analytical training is meant to prepare them.

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REVIEW OF SOLID-STATE CHEMISTRY

Progress in Solid State Chemistry

Vol. 1. Edited by H. Reiss. Pp. vii + 536. (London and New York: Pergamon Press, 1964.) 120s. net.

THE growth in the number of the various series "Advances in this . . .", "Progress in that . . .", is familiar to all practising chemists. The book under review is the first volume of yet another one, and consists of eleven chapters. These are entitled: "The Thermal Expansion of Ceramic Crystals" (H. P. Kirchner), "Lattice Energies and Related Topics" (M. F. C. Ladd and W. H. Lee), "Phases with the Nickel Arsenide and Closely-Related Structures" (A. Kjekshus and W. B. Pearson), "Lattice Imperfections and the Thermal Conductivity of Solids" (D. Greig), "The Relationship of Photoluminescence and Electroluminescence to Structure" (D. W. G. Ballentyne), "Ferroelectricity in Crystals" (C. F. Pulvari), "Alloy Semiconductors" (J. C. Woolley), "Physico-Chemical Aspects of Organic Semiconductors" (H. A. Pohl), "X-Ray Diffraction Studies of Crystal Perfection" (L. V. Azaroff), "Application of Nuclear Quadrupole Resonance" (G. A. Jeffrey and T. Sakurai), and "Use of

Infra-red and Raman Spectroscopy in the Study of Organometallic Compounds" (Huggins and Kaesz).

The various 'Progress' and 'Advances' series now play an important part in the increasing volume of scientific literature, since they review the state of a limited area of subject matter at a given time. The value of a particular series, however, must depend to a considerable extent on whether it is up to date. Taking into account modern production techniques, it should be possible to reduce the time interval between submission of a manuscript to an editor and its appearance in a volume to less than one year. Volume 1 of *Progress in Solid State Chemistry* has evidently not met this requirement, because references to work published after 1961 are rare indeed. Clearly some of the authors deserve sympathy for the delay in appearance of their work. The book is unlikely to have a wide sale privately because of its high cost, and libraries which represent somewhat of a captive market for publishers of this kind of volume will have to judge whether the price of the book, coupled with the apparent two- or three-year delay in publishing some of its contents, makes purchase worth while.

Although the chapter on infra-red and Raman spectroscopy is excellent, one wonders why it is included at all in a book on solid-state chemistry, because the chapter is principally concerned with observations on liquids or solutions. To a lesser extent this criticism applies to the chapter on nuclear quadrupole resonance.

References in the book in general are not numbered, authors often being referred to by name within the cursive text with the year of their published work in parentheses. Since there are many hundreds of references this procedure has made the book longer than it need be. Even more important, in my opinion, because of the liberal scattering of names on most pages, the book has been made more difficult to read.

Production of the first volume of a series of books presents special problems. In view of this, perhaps the above comments are somewhat harsh, and a final judgement must await the publication of further volumes.

F. G. A. STONE

ASPECTS OF GEOLOGY

Les Volcans et leur Activité

Par Alfred Rittmann. Édition Française à Partir de la Deuxième Édition Originale Établie et Introduite par Haroun Tazieff. Pp. 461 (6 planches). (Paris: Masson et Cie., 1963.) 95 F.

The Study of Fossils

By Prof. J. F. Kirkaldy. (Hutchinson Biological Monographs.) Pp. 116. (London: Hutchinson Educations, Ltd., 1963.) 12s. 6d.

Minerals and Rocks

By Prof. J. F. Kirkaldy. Pp. 176 + photographs. (London: Blandford Press, 1963.) 18s.

THE English translation of the second edition of Rittmann's important monograph, *Vulkane und ihre Tätigkeit* (*Nature*, 199, 1125; 1963), has now been followed by a translation into French made by J. Fridmann, and edited by H. Tazieff, of the University of Brussels. This version is noteworthy on account of the inclusion of 88 new text figures, additional to those originally used. Many of these are excellently reproduced photographs of volcanic phenomena, including a selection from the classic photographs taken by A. Lacroix in Martinique in 1902, and others that are recent and hitherto unpublished. Sixteen have been printed in colour, on four plates. A further addition, as an appendix, is an essay by Prof. Rittmann himself on the nomenclature and classification of volcanic rocks that have not been included in any previous edition. Libraries that do not already possess a