

to itself. Finally, we have a short but suggestive chapter on the acoustics of halls, containing an account of the experiments of Sabine and of Marage.

*The Preparation and Analysis of Organic Compounds.* By J. Bernard Coleman and Dr. Francis Arnall. Pp. xvi+352. (London: J. and A. Churchill, 1926.) 15s. net.

THE task of an author in compiling a text-book of practical organic chemistry is by no means an easy one, on account of the difficulty in framing a systematic scheme of qualitative organic analysis. The present authors, however, have made a very successful attempt to give a rational scheme of analysis of unknown organic substances and mixtures.

About a third of the book is devoted to a systematic description of the methods of synthesising the important members of the main groups of organic substances, the reactions, preparation, and properties of which are described, together with notes on precautions necessary to be observed. This forms a striking feature of the book, as the complete experimental detail for the preparation of eighty-nine representative bodies is associated with an explanation of the theoretical processes involved.

The next portion deals with the qualitative analysis and identification of organic compounds, and this, equally with the preceding section, has been carefully devised and should prove of great value to students. The systematic manner in which the properties of different types of organic substances are displayed appears to the reviewer to be specially valuable, although from his personal experience a few of the physiological tests, such as those depending upon smell, are not in accordance with his own observation.

Finally, there is an excellent portion dealing with methods of ultimate analysis and estimation of typical groups.

This book can be confidently recommended to students of organic chemistry. L. C. N.

*The Amarna Age: a Study of the Crisis of the Ancient World.* By the Rev. James Baikie. Pp. xix+465+32 plates. (London: A. and C. Black, Ltd., 1926.) 12s. 6d. net.

WHEN the discovery of the tomb of Tutankhamen was made the occasion of a newspaper 'stunt,' some misgiving was felt whether such wide publicity was likely to be a real benefit to archæology in the long run. In that particular instance it probably was not; but it had the advantage that it made the general public to a certain extent familiar with a very important period in Egyptian history. Indeed, as Mr. Stanley Cook says in his preface to Mr. Baikie's excellent account of the Amarna age, it was one of the great crises in the ancient world. Mr. Baikie's book has been written for those whose interest in this period has been aroused by the discovery of the tomb, and it is for such that he has been anxious, incidentally, to fit that discovery into its true perspective by placing it side by side with the less sensational but far more important

discovery of the Tel-el-Amarna tablets to which we owe our detailed knowledge of the history of this period and from which he quotes freely.

The greater part of Mr. Baikie's book is concerned with the political, military, and diplomatic history of the expansion and decline of the Egyptian empire, but naturally the character and religious reform of Akhenaten occupy a prominent position. Mr. Baikie discusses the origin of the Aton worship, but, while he acknowledges the existence of a strong Mitanni element in Egypt, he is not inclined to admit Asiatic influence in either its universality or its monotheistic tendency.

*A Guide to the Orchids of Sikkim: being a Guide to the Identification of those Species of Orchids found between the Terai and the Northern Frontier of Independent Sikkim, including the Chumbi Valley and British Bhutan.* By Prof. Paul Brühl. Pp. xvi+208. (Calcutta and Simla: Thacker, Spink and Co., 1926.) 5 rupees.

THIS little book will be warmly welcomed by lovers of the flora of the Darjeeling district. The text takes the form of a key, first to the genera and then to the species, the alternatives on the whole being well chosen and distinctly expressed. Unfortunately the technical finish of the book is not so satisfactory, there being a number of misspellings of generic names, while the taxonomy is not always in line with present-day conceptions; for example, *Tainia hookeriana* has been referred to *Ascotainia* for about twenty years, while *Cypripedium venustum* has not been included by botanists in that genus since 1898. At the same time a book of this nature seems scarcely the most suitable place for the publication of a new genus (*Cleisocentron*). Nevertheless, Prof. Brühl may be congratulated on having produced a useful guide to Sikkim orchids. V. S. S.

*Lehrbuch der Elektrodynamik.* Von Prof. Dr. J. Frenkel. Erster Band: *Allgemeine Mechanik der Elektrizität.* Pp. x+365. (Berlin: Julius Springer, 1926.) 28.50 gold marks.

As the title implies, this is an attempt to treat electromagnetic theory as a branch of general mechanics. The fundamental unit is not the charged particle, the existence of which depends upon the existence of the corresponding opposite charge, but the electric doublet or dipole, the moment of which vanishes in a neutral particle. This makes it possible to deal with vector quantities, instead of the scalar quantities represented by 'charges.' Vector algebra is therefore liberally employed, and the author devotes 36 pages to a consideration of its principal operations. It becomes necessary to regard electrons as geometrical points, or rather as point singularities in the space-time continuum. The author, as is natural in the atmosphere of Leningrad, seeks to break with the historical development of electricity, and as a first step discards the conception of the ether, which he regards as obsolete. It is an interesting attempt, but whether it will be fruitful is another matter. E. E. F. D'A.