correlations cannot be completely separated from the dynamics of the elementary processes at high energies and that the two will have to be studied together.

Similar intertwining of problems appears in the articles on hypernuclei, which contain most of the present information on lambda-nucleon interactions. The extraction of this information requires knowledge of the nuclear systems to which the lambda particle is bound. Alternatively, Primakoff has turned nuclei into a class of "elementary particles," to treat their weak interaction by the current conservation methods of high-energy physics.

I think the book will be useful to two kinds of readers. The physicist who is interested particularly in one of the topics involving the interaction of elementary particles with nuclei will find a concise, not always complete, but up-to-date review of each subject; the articles are of sufficient length, well enough illustrated, and with adequate references, to be useful guides to recent work. A nuclear physicist who wants to broaden his view of the subject, and see to what extent nuclear structure and high-energy physics are both part of it, would do well to sample the material in this collection.

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Spectroscopic Technique

Electron Spin Resonance in Chemistry. PETER B. AYSCOUGH. Methuen, London, 1967 (distributed in the U.S. by Barnes and Noble, New York). xviii + 451 pp., illus. $13.50.

For some time there has been need for a general book on electron spin resonance that would provide a comprehensive, up-to-date discussion of results together with pertinent details of the theory. This book is an attempt to fill the need. The author has put emphasis on chemical applications and is trying to reach the interested nonspecialist. On the basis of the topics included in the book it should be very successful. However, it is written in a way which makes reading somewhat difficult, particularly for the intended audience. In addition, there are more than the usual number of careless errors and inaccuracies. In a few places incorrect or misleading impressions are given. The problem is most severe in the first third of the book, which is devoted to theory. The author correctly recognizes and states that the most rigorous mathematical treatment is not needed for an understanding of most applications; but in the presentation of this version of the theory the logical continuity has been lost, and the reader must accept nearly all conclusions on the author's word, with little true understanding. New relationships are introduced or a new direction is taken without the reason's being apparent. Unfortunately the intended audience may be confused in a number of places.

The excellent selection of topics covered in the discussion of applications and work to date compensates considerably for these weaknesses. The value of single-crystal studies is properly emphasized, and results from irradiated organic and inorganic systems are covered. Particularly good is the treatment of powder spectra (including those of triplet molecules), which establishes both the difficulties encountered in their interpretation and the fact that simple spectra of this type can be analyzed in detail. This topic has not been well covered before. There are several places in which additions or extensions would have been of value. Although the mathematical problems associated with actually carrying out the analysis of a single crystal spectrum are mentioned, it is nowhere made clear how one makes certain of the relative signs of the diagonal values of the hyperfine tensor. Also, only a brief, qualitative discussion of line broadening due to conformational changes is given when a more quantitative treatment would be valuable. A final point is that some discussion might have been included on the limitations of electron spin resonance for detecting rapidly varying radical concentrations following production by, for instance, flash photolysis.

In conclusion, the book is valuable and will be used by the nonspecialist (and by the specialist) because of the comprehensive treatment of recent results. It will not, however, come as close as desired to representing a single source of information. Other books will have to be consulted, particularly for a more lucid discussion of some parts of the theory.

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