Democratic Republic and the German Academy of Sciences in Berlin. The organization of the volume is of some interest because of the presuppositions involved. Three large sections comprise the bulk of the book: (1) cell components affected by the active compounds (divided into subsections for the following components: membranes, cell walls, enzymes, nucleic acids); (2) active compounds (discussions of test methods, uptake by the organism, experimental and biological transformations, synergisms and antagonisms); and (3) a general discussion of primary and secondary actions of fungicides and antibiotics. The presuppositions referred to are mainly that antibiotics have specific sites of action and that we know something about the "primary and secondary" inhibitory actions of antibiotics. Both of these assumptions are largely unwarranted at this time.

The work, thus organized, is made up of some 50 papers reporting original research and including the questions and responses that their presentation evoked from the participants in the conference. For the most part the papers describe effects of antibiotics on metabolic reactions, and few of them report experiments on systems simpler than the cell. In this sense, the classification of papers in the first section is somewhat misleading in that a site of action is assumed although the experimental systems most frequently involved are whole cells.

Nevertheless, the papers present a good cross-sectional view (though an unbalanced one) of ways of studying modes of action of antibiotics, and the book illustrates the common (and often deplorable) assumptions derived from them regarding "*the* mode of action" of antibiotics. For example, and at random: "Nigericin . . . is one antibiotic of a group of antibiotics which under certain conditions inhibits respiration in mitochondria" (p. 13). This—a type of sentence that occurs in several of the papers—implies a known specificity for mechanism of action which does not exist. In practically all cases, such statements should be amplified by the phrase "which under certain conditions *and among their other effects* inhibits respiration." The point is emphasized because of the too-common practice of assuming that because the antibiotic has a certain effect it has only that effect. This leads (and has led) to the error which I call an implication of false specificity, which gives rise to spurious and misleading classifications of antibiotics according to mode of action; it has also led, in some notable cases, to a circular type of reasoning in which the supposed specific mode of action of the antibiotic is used to "establish" the presence or absence of a given metabolic pathway in a microorganism or tissue. Studies should not focus on specific inhibition reactions or groups of reactions until the many other possibilities have been ruled out or included. It is to be hoped that some critical mind, sophisticated in this general field, will sometime take up the task of establishing, from the plethora of literature on these subjects, just what is and is not known regarding "Wirkungsmechanismen" of each antibiotic.

Some of the contributions from the Slavic countries are presented in imperfect English, but they are readily understandable to one familiar with this area of research. About half the contributions are in German. The papers all have valuable bibliographies, and the book is well indexed.

J. F. SNELL
Department of Biochemistry and Molecular Biology,
Ohio State University, Columbus

Plasma Physics

Theoretical Methods in Plasma Physics. N. G. VAN KAMPEN and B. U. FELDERHOF. North-Holland, Amsterdam; Interscience (Wiley), New York, 1967. x + 215 pp., illus. $9.50.

This is a charming book which can fill many needs. First it is a very readable introduction to plasma physics for the student. Being short and not encyclopedic, it provides a quick overall picture of the field. As compared to conventional treatises it does not get the reader bogged down in tedious (even if important) details. The book also would make excellent reading for any young student of theoretical physics. Many techniques are introduced. Although these are not always explained fully enough so that the novice can completely master them from what is presented, the power of the methods is made abundantly clear. I would assume that when stumped the student would rush to the literature to find out further details. Lastly, the book will make delightful light reading for the mature theorist. Things he may already know are discussed very lucidly and from a somewhat unconventional approach. Particularly good are the discussions of the various types of waves that can exist in a plasma, the statistical mechanics of an electron gas, and the derivation of kinetic equations.

K. M. CASE
Department of Physics,
University of Michigan, Ann Arbor

Spectroscopy

Structure of High-Resolution NMR Spectra. P. L. CORIO. Academic Press, New York, 1966. xii + 548 pp., illus. $15.

This is a useful book for chemists who are skilled in quantum mechanics and thoroughly familiar with the principles of high-resolution nuclear magnetic resonance spectroscopy. It presents in a formal manner the relevant theory of spin quantum mechanics and many of the mathematical techniques required for analysis of the multiplet structure of NMR spectra. In addition, a number of figures and tables provide representative calculated spectra of the simpler spin systems containing two groups of magnetically equivalent nuclei.

The author accomplishes his purpose well, although his meticulous style in some cases sacrifices clarity for the sake of generality. Thus, his nomenclature is occasionally unnecessarily esoteric, even for this specialized audience. The inclusion of only the moment method for analysis of complex spectra is unfortunate in a book which is otherwise so thorough, since both the iterative and direct analysis techniques are at least as useful as the moment method.

This is a good book, competently prepared, but it is not very interesting, there is little or nothing new, and even the mathematical treatment is distinguished more by its thoroughness than by its elegance. Thus it is hard to see who really needs it, good as it is. Perhaps the time is coming for a protest movement against good, solid, superfluous books. If libraries stop buying them, then publishers may begin to insist that their books be instructive, or interesting, or new, or *something* besides just sound. We would have fewer authors—but more readers.

DONALD R. WHITMAN
Department of Chemistry,
Case Western Reserve University,
Cleveland, Ohio