Protein Chemistry falls into the latter class. The present volume contains only six articles, which occupy more than 550 pages. For a comprehensive view of the whole field of protein chemistry, it is necessary to peruse the entire series of volumes. Nevertheless, the current volume is required reading for all who are interested in protein chemistry. As in the earlier volumes, the articles are well written, and the editing has been done with great care.

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The Proceedings of the Third International Conference on Electron Microscopy, London, 1954. V. E. Cosslett, chair., editorial committee; R. Ross, General Ed. Royal Microscopical Society, London, 1956. xv + 705 pp. Illus. + plates. $15.

This impressive volume represents the text of papers contributed to, and the discussion offered at, the third international Conference on Electron Microscopy, the previous meetings being those at Delft, in 1948, and Paris, in 1950. The book is a rich source of information on many aspects of electron microscopy and related fields of endeavor; it deserves a place on the shelf of every professional electron microscopist.

The contributions, 158 in all, including three introductory survey papers, although of rather unequal quality, contain many papers of high quality. A prime advantage of a volume such as this is that it brings together, in conveniently accessible and brief form, a wealth of information on topics such as electron optics, specimen preparation, microtomy, the action of electrons on the specimen, and the attainment of high resolution, which in this era of very rapid expansion of the field is only to be gleaned otherwise from a rapidly increasing and formidably diverse list of publications and, moreover, is not to be found in the textbooks. For those involved in pursuits less orthodox than transmission microscopy, there are the sections on ion microscopes, x-ray microscopes, and emission and reflection electron microscopy. In addition, there are sections devoted to applications—for example, those concerned with biological fine structure, metallurgy, and industrial and chemical applications.

The format of the volume and the quality of the reproductions are excellent. The classification of the contributions under a wide variety of headings assists the reader in locating information of interest, but it is to be regretted that no author or subject index, however brief, was included.

A further cause for regret, and a more serious one, is the excessively long time interval between the meeting itself and the appearance of the *Proceedings*. Such a time lag is particularly undesirable if results presented to the conference will not become available to those interested until and unless they are published elsewhere in addition. The spectacularly rapid growth of the field of electron microscopy in recent years makes it more and more important that the proceedings of such conferences be published promptly, so that results of importance are circulated in as short a time as possible. The editorial committee and the Royal Microscopical Society are, in the present case, to be congratulated on carrying out a fine and very thorough job, even though they considerably overstepped their original aim of publication within 12 months of the conference. However, the need for more stringent measures is clearly indicated for future conferences of this character. In the present volume, the discussions following papers or groups of papers appear contribute but a small fraction of the useful information contained in the book, yet they must surely have demanded an inordinate amount of editorial time as well as entailing considerable delay in publication. Publication of such discussions could probably be eliminated without detracting too seriously from the value of such a volume. It must seriously be considered whether rapidity of publication of such proceedings is not more important than detailed reporting, especially of discussions which are often of a sporadic nature, uneven in quality, and of questionable bearing on the subject under discussion.

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Quantum Mechanics. H. A. Kramers. Translated by D. ter Haar. North-Holland, Amsterdam; Interscience, New York, 1957. xvi + 496 pp. $12.50. (pt. 1, 5 chapters, also published separately as *The Foundations of Quantum Theory,* xv + 228 pp. $6.50.)

"When I was asked whether I would be willing to prepare a translation of Kramers' monograph, and thus complete an English edition of all his published works, I agreed for several reasons, even if it meant the hazardous task of translating from one foreign language into another. The main reason was that I felt that this book still represents the best available exposition of quantum theory and that the English speaking world was the poorer for not having it readily available. Also, in this book, as much as in some of his papers, Kramers showed some delightfully elegant methods which might otherwise be lost to the physics world in general."

With these words the translator's preface to *Quantum Mechanics* starts. I would like to add at once that this admirable translation, of which the language in parts is smoother than that of the original, is a good book for the intelligent, self-taught, theoretical student who wants to get a thorough understanding of many of the principles of modern quantum theory, in particular if he plans to continue his studies later by more specialized books. Some students may consider it a drawback that there are no assigned problems and that the number of applications of the theory worked out in the text itself is relatively small. An instructor using Kramers' book as a textbook can, of course, provide his class with his own choice of problems picked from other textbooks. For the students, however, working out in detail some mathematical derivations which the book gives merely in the form of an outline may be an assignment more useful than some of the useless "exercises for the sake of an exercise" found in certain other introductory textbooks. By not burdening the student with such useless material, this book finds space for a thorough discussion of a number of important aspects of wave mechanics and of matrix mechanics which in many other textbooks are neglected.

The book is somewhat mathematical in character, although the author purposely avoids mathematical rigor (see the preface on page v !), but at no place are theoretical results compared with any illustrative experimental data. The book consists of two parts, of which the first is available as a separate book under the title *The Foundations of Quantum Theory.* Part I deals with nonrelativistic wave mechanics of electrons and does not discuss spin, Pauli's exclusion principle, or electromagnetic radiation. It may be sufficient as a textbook for an introductory course on wave mechanics. Since part II is available only together with part I, in a single volume, students who need quantum theory for their later work, or who may later want to find out at least for themselves about spin, exclusion principle, Bohr's quantum jumps, and photons, would do well to buy at once the complete *Quantum Mechanics,* containing both parts.

Part I starts out with a discussion of de Broglie waves and their superposition and the uncertainty relations. Among the further topics treated we note thorough discussions of eigenvalue problems; proper and improper eigenfunctions; the approximately classical motion of wave packets for interacting particles; the interpretation of the state vector; transformation theory; Dirac's bra-and-ket nota-