

N. Y., 1960); the general chapters are shorter, on the whole, and directed to juniors or seniors in colleges of Pharmacy. Some of the specific drug categories have been treated in greater detail. In addition to the medicinal, biochemical, and metabolic aspects of drug chemistry and of drug design, purely descriptive statements are to be found which link the presentation to that of student-oriented pharmaceutical chemistry. However, on the whole the spirit of the book is forward-looking and up-to-date. The subject matter is covered through 1964, and thus a few important events of the last three years have not been included. This book should do much to elevate the standards of medicinal chemistry in Latin countries to a high level.

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Fluorescence: Theory, Instrumentation, and Practice. Edited by GEORGE G. GUILBAULT. Marcel Dekker, Inc., New York, N. Y. 1967. xxviii + 697 pp. 15.5 × 23.5 cm. \$15.75.

The increasingly revitalized area of luminescence has been the subject of several books in the past few years. Like certain other analytical techniques, fluorescence and phosphorescence theory and procedures were relatively well known but awaited the development of sufficiently sophisticated instrumentation to bring out their full potential. This book reports on recent progress in each of the three areas indicated in the title. In origin and development, it is similar to the volume edited by D. M. Hercules last year. Both books evolved from symposia organized by the Analytical Division of the American Chemical Society and represent

expansion of the symposia papers. It is not surprising that there is some overlap in topics and contributors.

The book can be considered as comprised of three parts. Chapters 1-4 treat fluorescence theory, starting generally at a level such that the novice is not completely overwhelmed. Chapter 2 on structural and environmental effects is particularly well done. The use of a laser for fluorescence excitation is described in Chapter 3. Part II, Chapters 5-6, involves two of the newer developments in instrumentation. Included is discussion of polarization-modulation techniques and also a description of an attachment for a popular commercial instrument which will now allow correction of excitation and emission spectra. Part III, applications of luminescence techniques, takes up the last 60% of the book. A short, but interesting, chapter on fluorescent metal chelates suggests sensitivities to the sub-p.p.b. level for certain elements, a remarkable achievement. Topics covered in other chapters of part III include kinetic methods, phosphorimetry, the use of fluorescence to study protein structure, the investigation of photosynthetic pigments by fluorescence, atomic fluorescence flame spectrometry, and electrochemiluminescence.

Of the three parts, coverage of instrumentation is considerably shortchanged. The editor's expressed hope that this book be useful to the "novice, the researcher, and the theoretician" is no doubt met to some extent, but a beginner would be advised to look elsewhere for a detailed description of instrumental problems and limitations. The range of applications is very useful, particularly inclusion of the newer techniques. This book will complement and supplement previous works and will be of value to all those interested in luminescence. Considering the large amount of material in the 14 chapters, it is probably not overpriced.

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