voking an electron transfer quenching mechanism, therefore, requires that the rate of recombination (k_b) greatly exceed that of forward electron transfer. It is noteworthy that in the two analogous studies with ZnHb/Fe^{III}-b_5[7] and $\alpha_2^{Fe^{III}}\beta_2^{Zn^{II}}$-Hb,[6] in which electron transfer products have been detected, the low yields of formation of Fe^{II} are consistent with $k_b > 10k_f$.

Our results suggest that electron transfer within a protein–protein complex can be quite efficient, even over a large distance (18-Å center–center, 8-Å edge–edge). And they underscore the value of *energy* transfer as a tool for testing protein–protein structural models.

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Registry No. Cytochrome b_5, 9035-39-6.

Additions and Corrections

The Relaxational Behavior of Self-Associated 6-Methylpurine [*J. Am. Chem. Soc.* **1984**, *106*, 2239]. HEINZ STERK* and HERMANN GRUBER

Page 2240: The formula of the AK model should read

$$a_0 = a_1 + \frac{2K(2)}{K} a_1 [e^{Ka_1} - 1]$$

Book Reviews *

Electrical Properties of Polymers. Edited by Donald A. Seanor (Xerox Corporation). Academic Press: New York. 1982. xi + 379 pp. $52.00.

This is a comprehensive work edited by a chemist who has worked for many years on this complex interdisciplinary subject. Chapter 1 is an excellent overview of electrical conduction in polymers, written by the editor. It can be easily understood by readers with diverse scientific backgrounds. It assumes no previous knowledge of the subject but goes into some depth in the topics covered. It is rich in references but is much more than a simple listing of the literature, since it effectively merges much past work into understandable summaries and conclusions.

Chapters 2–8 are written in the same mode as Chapter 1, although they are by different authors. These chapters are much more detailed descriptions of the topics summarized in Chapter 1, such as photoconductivity, electrets, contact electrification, thermally stimulated discharge currents, and dielectric breakdown in polymers. The chapters overlap to some extent, but the book avoids the discontinuities present in many books written by multiple authors. A more detailed description of the interaction between electrical properties and polymer molecular structure and morphology would be useful.

Overall the book is well-written and a very valuable reference source on the electrical properties of polymers.

Perry L. Grady, *North Carolina State University*

Building Scientific Apparatus: A Practical Guide to Design and Construction. By J. H. Moore, C. C. Davis, and M. A. Coplan (University of Maryland). Addison-Wesley: Reading, MA. 1982. xiii + 483 pp. $54.95.

The authors' stated intention is to provide a practical volume to serve as "an introductory text for the beginning researcher and as a shelf reference for the experienced scientist". Given the breadth of their topic, they have done an excellent job. The material is divided into six chapters of varying length with greatest coverage given to optics (including charged particle optics) and electronics, each of which receives about one third of the volume's total coverage. The other third provides brief coverage of glassworking, mechanical design, and vacuum technology. The authors realize that the modern scientist's greatest need when approaching the construction of scientific apparatus will be to decide what he himself can do and what is best left to others. In the latter case, an ability to define and communicate needs is all important. Sufficient information is provided on each of the topics to permit the reader to converse intelligently without having to master excessive detail. End of chapter reference lists are provided to allow further study, as needed. It is worth noting that these lists are well catagorized and include both basic and more advanced works.

The book does have some flaws. Most importantly, a more detailed index would be expected in a book planned as a general shelf reference. Also, the listings of manufactures and suppliers given with each chapter, while not a bad idea, will date very rapidly. Particularly in a field such as electronics, a check with someone having current knowledge of suppliers is advisable. Finally, cost is likely to keep this volume from taking its place as a common reference in the libraries of many young scientists. If so, much of its great worth will be lost.

Donald Bath, *Western Illinois University*

Aggregation Processes in Solution. Edited by E. Wyn-Jones & J. Gormaly (University of Salford). Elsevier Science Publishing Company: Amsterdam and New York. 1983. x + 632 pp. $138.50.

This book is comprised of 20 chapters, each written by different authors, with an overall broad coverage of the field from a generally fundamental, physical-chemical point of view. Topics include micellar solutions, liquid crystals, bilayer membranes, colloidal properties of drugs, aggregation of dyes and of polymers, drug/protein binding, and even ferrofluids. A number of experimental techniques are also covered in separate chapters, including ultrasonic absorption, ultrasonic relaxation spectrometry, and stopped-flow measurements. The authors are from all over the world, mostly from England, many from Europe, with Americans in the minority.

The chapters generally stand alone as reviews of recent developments in the theoretical and physical chemistry of the systems discussed; all are appropriately subsumed under the general topic of aggregation in solution. As the editors point out, these areas traditionally have been pursued in isolation, and it is the express intention of this volume to bring such work and workers together. There are a number of common threads which run through several chapters each, such that the book may well succeed in its purpose. All chapters are authoritatively written, with generally good coverage of the literature, usually with emphasis on the

*Unsigned book reviews are by the Book Review Editor.