synthesis, glyceride breakdown, and glycogen breakdown in adipose tissue: Mechanisms and regulation" by Martha Vaughan and Daniel Steinberg; "Comparative physiology of adipose tissue in different sites and different species" by Eleazar Shafrir and Ernst Wertheimer; "Triglyceride metabolism" by B. Shapiro, and "Pathological anatomy of adipose tissue" (27 pages) by C. G. Tedeschi.

Perhaps it is misleading to note a few strong chapters, because most of the volume is authoritative, well written, and critical, with excellent, though not exhaustive coverage of subject matter and references. Many of the papers are well illustrated. "The physiological role of brown adipose tissue" by Cliffe D. Joel has an illustration in color.

As might be expected, some chapters are not strong. An example is "Fat metabolism in fish." An area under active investigation over the past few years, the origin of the polyunsaturated fatty acids in marine fish, is not touched on, and only 30-year-old work on the relation between diet and body fat is referred to. The authors do not refer to their own work. As far as I know they have not published on the subject. A few other chapters were written by persons who have made relatively little contribution to the specific subject that they reviewed. While, theoretically, it may be argued that some scholars may be better able to discuss a subject than persons engaged in advancing knowledge, certainly those with both qualifications can be found.

Very few of the authors limited themselves to purely objective reporting of past work. Thus, in the chapter "Comparative anatomy of adipose tissue," Jean Vagne and Robert Fenasse propose eight groups of factors responsible for the development and distribution of fat within human adipose tissue. In the chapter "Fatty acid patterns in human adipose tissue" Jules Hirsch devotes considerable space to sources of error in gas liquid chromatography of the fatty acids in adipose tissue.

A large number of the chapters contain original data—"Adipose tissue in migratory birds" by Eugene P. Odum, "The physiological role of brown adipose tissue" by Cliffe D. Joel, and "Enzymes in carbohydrate metabolism" by G. Weber, H. J. Hird, N. B. Stamm, and D. S. Wagle. But shouldn't original data be deposited in the technical journals?

The references are all collected alphabetically (senior author) at the end of the volume; they include titles. They are followed by a "Code of subject index to bibliography" which classifies the subjects covered. The next section repeats this index, listing the numbers of the references under each. Finally, there is a list of all authors quoted, with reference numbers. The last three parts of this complex cross-index are not all useful, whereas there is no way to trace a listed reference back to the paper in which it is quoted.

This is a well printed book, though some may find 10-point print small. It is printed on 10-pound coated paper, bringing its weight to almost 6 pounds.

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Chromatography Series

"Advances in . . . " are appearing thick and fast, and one wonders who buys them and what purpose they serve. The purpose, it seems, is to provide review articles more extensive than those appearing annually or biennially in technical journals, but briefer and more up-to-date than book-length monographs. The specialist will buy the standard books on his subject and keep them within easy reach. He will buy *"Advances in . . ."* for his own use only if there are articles of special value to which he will refer again and again.

The initial volume of **Advances in Chromatography**, edited by J. Calvin Giddings and Roy A. Keller (Dekker, New York, 1965. 408 pp. Illus. $14.50) contains at least half a dozen chapters that make it worth buying [the ten chapter titles were listed in *Science* **152**, 1498 (10 June 1966)]. "Teaching chromatography and electrophoresis on paper and thin layers," by Ivor Smith, is of value to the educator and especially to the teacher of biochemistry. It also gives a quick idea of what can be done with paper chromatography and electrophoresis and what equipment is used.

"The techniques of laminar chromatography," by E. V. Trutter, is a fine supplement to Randerath's book on thin-layer chromatography and is self-contained in its own right. "The stationary phase in paper chromatography," by G. H. Stewart, shows what can be done with a very complex system by combining chemical and mathematical insights. "Capillary columns: trials, tribulations and triumphs," by D. H. Desty, is an exceptionally lively and well-written essay reflecting the personal experiences of one of the most active workers in the field. The concluding paragraph recounts the investigation of coffee essence by A. I. M. Keuelmans, and is so delightful that it will be quoted many times. "Inorganic gas chromatography," by R. S. Juvet and F. Zado, has 406 references, nearly all later than 1959, and is a most valuable review of a burgeoning field.

More than half the book deals with gas chromatography, the remainder with liquid chromatography. The first chapter, by F. Helfferich, with 377 references, reviews recent advances in ion-exchange chromatography. It summarizes a lot of information, with useful periodic-table charts of distribution data, and has some general observations on elution and displacement and on concentration profiles. Helfferich has made perceptive and original theoretical contributions to this field, and I look forward to their publication.

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Techniques for Chemistry

One of the contributors to **Applied Infrared Spectroscopy** (Reinhold, New York, 1966. 576 pp. Illus. $23) quotes R. B. Woodward to the effect that "no single tool has had a more dramatic impact upon organic chemistry than infrared measurements." Few people would dispute this sweeping statement, or similar ones which have been made about the importance of infrared spectroscopy to other branches of chemistry. The infrared spectrum probably provides the greatest variety of information, on the largest number of chemical compounds, which can be obtained from a single relatively simple instrument.

Applied Infrared Spectroscopy, edited by David N. Kendall, is a collection of articles, written mostly by industrial spectroscopists, which discuss the application of infrared methods to a variety of chemical problems. As the title indicates, the emphasis is on practical industrial problems, ranging from the differentiation between East Indian and West Indian oil of nutmeg to the