retained. Formulas for tristearin and various fatty acids are given in a "long" form, such as $CH_3CH_2$-$CH_2CH_2CH_2CH_2CH_2CH_2CH_2CH_2CH_2CH_2CH_2CH_2$-$CH_2COOH$ for palmitic acid rather than the conventional shortened form, $CH_3(CH_2)_{14}COOH$ (pp. 119–121).

In general the book should prove to be a valuable teaching aid for instructors and a stimulating textbook for medical students. To quote from the foreword by John T. Edsall, it

> . . . has a freshness and vitality, in its general outlook and in the pattern of the presentation which give it a distinctive place among all the texts of biochemistry for medical students of which I am aware.

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***The Theory of Metals.*** A. H. Wilson, Cambridge Univ. Press, New York, ed. 2, 1953. 346 pp. Illus. $8.50.

This edition is a new work, not only in format, but also in that it is mostly rewritten and has been considerably enlarged. This, in spite of the fact that two chapters of the former edition (the one on optical phenomena and the one on superconductivity) and also the appendix on surface phenomena, including rectification, have been eliminated. Some of the other 10 chapters follow the original outline with the ones on metallic structures and the structure of alloys now forming a special chapter each. A great deal of progress has been made in the last 10 or 15 years, particularly in the understanding, preparation, and theory of semiconductors. These are now discussed in a special chapter, but conductivity in semiconductors and thermoelectric effect, as well as magnetoresistance of semiconductors, are treated in the chapters on the formal theory of conduction and on the mechanism of conductivity. These two chapters are the core of the present work and are the most interesting and most carefully prepared. The book closes with an application of the variational principle to conduction phenomena (a method that was introduced in 1948 by Kohler and expanded by Sondheimer); although mathematically more difficult, it is more powerful. The very large amount of both experimental and theoretical material that has been accumulated in the last decade has made it necessary to limit the material discussed to a certain arbitrary selection of fields.

The British literature is discussed in some detail, but a large amount of material, particularly that of the Russian literature, such as the investigations of Pekar on effective mass, the important investigations of Gurewich on the contribution of phonons to thermoelectricity at low temperatures, and Shifrins' investigations on semiconductors, has not been discussed by Wilson.

The chapter on thermal and magnetic properties of metals contains a very careful discussion of lattice specific heat, electronic specific heat, and a comparison of the experimental data on specific heat with theory. Some of the magnetic properties, such as spin paramagnetism of free electrons and diamagnetism of free and quasi-bound electrons, as well as the rather complicated phenomena of the de Haas-alphen effect, are discussed in detail and up to date.

One may wish that in a future edition the chapter on semiconductors—for the theory of which the author has laid the foundation—would be somewhat enlarged and brought up to date. It is a surprise to read "that cuprous oxide has been given more attention than any other semiconductor." With all the past and present work on germanium it is also somewhat surprising that a numerical example chosen for germanium is one that would hardly be found in practice ($10^{20}$ impurity centers/cm$^3$ and an activation energy of 0.03 ev). The author is well known for his careful and elegant mathematical deductions and considerations. The reader will find a large amount of material, particularly in the chapter on the mechanism of conductivity, that is not available in this form in other books in the field.

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***Abhandlungen aus der Sowjetischen Astronomie.*** Folge II. Gesellschaft für Deutsch-Sowjetische Freundschaft; Otto Singer, Ed. Verlag Kultur und Fortschritt, Berlin, 1951. 223 pp. Illus. DM 12.20 ($2.93).

This volume contains 13 German translations of Russian papers published in 1950. Most of these are of cosmogonical interest which is not surprising as Russian astronomers have made important contributions in this field in recent years. The publication of these volumes, as the publication of companion volumes on Russian physics, can only be heartily welcomed since the number of Western scientists capable of easily reading Russian papers in the original is still much smaller than the number of those who can read German.

The volume opens with two papers by Schain and Hase (*Uspekhi Fiz. Nauk* **43**, 3 [1950]; *Izvest. Krimskoi Astrofiz Obs.* **5**, 24 [1950]) on the occurrence of $C^{13}$ in stellar atmospheres.

The second group of papers is by Parenago and Massewitsch (*Astr. Zhur.* **27**, 41, 137, 150, 202, 329 [1950]). Two papers deal with the mass-luminosity-radius relation. The first paper considers the empirical data and the second tries to give a theoretical interpretation of these data. The other three papers in this group deal respectively with star velocities showing the differences between high and low velocity stars (Baade's populations are, however, nowhere mentioned!), with the gravitational potential of our galaxy, and with masses of eclipsing binaries.

Then follows a paper by Gurewitsch and Lewin (*Astr. Zhur.* **27**, 273 [1950]) on the formation of