monograph. Primary and secondary standards and their requisite properties for comparative ebulliometric measurements are discussed.

Among the ebulliometers described are:

An improved simple ebulliometer for the precise determination of boiling points and changes in barometric pressure.

The differential type, with and without fractionating columns between thermometer wells, for comparing boiling and condensation temperatures, testing for purity, determining molecular weights, measuring solubilities and constructing diagrams of boiling point plotted with respect to composition of mixtures.

An ebulliometer for mixtures containing small amounts of highly volatile components.

One for measuring condensation temperatures of vapors before and after passing through a rectifying column.

A multi-stage ebulliometer with four thermometer wells to measure boiling points and condensation temperatures at several points along a column.

Ebulliometers for systems having two-liquid phases.

A universal ebulliometer composed of interchangeable standardized units of specified dimensions provided with ground joints of standard taper. This is a particularly desirable innovation, since with these parts it is possible to construct quickly any of several types of ebulliometers.

Modifications for the application of electrical heating and redesigned thermometer wells for use with ordinary Beckmann thermometers are illustrated.

Some idea and appreciation of the variety of the topics and applications described can be gained from the following captions of the eighteen chapters: ebulliometric measurements; classification of liquid mixtures; method of comparative measurements; calibration of thermometers and measuring of changes in pressure; determination of the degree of purity of liquid substances; applications of ebulliometers to the study of azeotropy; purification of liquid substances and microebulliometric determination of impurity content; microebulliometric determination of moisture content; microebulliometric determinations of impurity content in solid substances; ebulliometric examination of thermal resistivity (resistivity here refers to resistance to decomposition); microebulliometric determination of the amount of vapors adsorbed by solid substances; macroebulliometric determination of moisture; molecular weight determination of solid substances; boiling and condensation phenomena observed under high pressure; ebulliometric measurements under high pressure; determination of the solubility of solid substances; ebulliometric method of determination of equilibrium constants; ebulliometric examination of physicochemical standards. A postscript, a numbered bibliography of references, author index and subject index close the volume.

The printing is good and the illustrations are clear, which could not be said of the previous edition. Very few errors were noted and these are minor and obvious. This new edition should prove even more popular and useful than the previous one. It should be included in the library of every chemist and physicist connected with industrial distillation, research on the physical properties of pure liquids and solutions or teaching physical chemistry.

EDGAR REYNOLDS SMITH

INFINITE SERIES

Infinite Series. By J. M. HYSLOP. xi + 120 pp. New York: Interscience Publishers, Inc. 1942. $1.75.

THIS book furnishes an excellent account of the fundamental features in the convergence theory of real series. Some space is allotted to the discussion of complex series and infinite products. Also, a chapter is devoted to the more important properties of double series.

The book is intended for the student who wishes to acquire a good working knowledge of the theory of infinite series after acquiring a grasp of the fundamentals of elementary analysis. Some of the theory concerning functions and limits that might not be presupposed in this case is given in the first two chapters.

In view of the steadily increasing use of summability theory in current works dealing with infinite series and their applications, it seems to the reviewer that it would have been worth while to have touched on this field, as the simpler phases of it are no more difficult than other topics treated in the book. In particular, since there is a chapter on the multiplication of series, Cesàro methods and their application to this problem might well have been discussed at that point.

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BOOKS RECEIVED

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