

## Book reviews

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*An Introduction to Thermogravimetry*, by C. J. KEATTCH. Heyden & Sons, Ltd. (in U. S. A. by Sadtler Research Lab.), London, 1969, 59 pp., \$4.50.

The introductory booklet on thermogravimetry has chapters on: 1, Origins; 2, Thermobalances; 3, Thermogravimetric Data; 4, Interpretations of Data; 5, Applications — I (Inorganic Chemistry); 6, Applications — II (Organic and Polymer Chemistry); 7, Applications — III (Minerals and Applied Sciences); and an Appendix on commercially available equipment. The booklet is written on an elementary level and is intended as a brief survey of the field. There is an excellent review of the historical aspects of the art of weighing going back to Ancient Egypt of *ca.* 2800 B.C. The early Japanese and French work in this field is adequately described.

The author neglects, in numerous cases, to cite the source of his information. It is apparent that he has borrowed freely from other texts in the field without acknowledgement.

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*Experimental Thermodynamics. Volume I. Calorimetry of Non-Reacting Systems*, edited by J. P. McCULLOUGH AND D. W. SCOTT. Plenum Press, New York, 1968, xix + 606 pp., \$45.00.

In accordance with its task of establishing and promoting standards and techniques of high precision measurement in its area of responsibility, the IUPAC Commission on Thermodynamics and Thermochemistry has sponsored two volumes of "*Experimental Thermochemistry*". Volume I, Interscience Publishers, Inc., New York, edited by F. D. Rossini, appeared in 1956 and Volume II, Interscience-Wiley, New York-London, edited by H. A. Skinner, appeared in 1962. The present treatise is a continuation of this series. It reviews the current state of the art of measurement of heat capacity and heats of phase transitions of systems of constant composition.

The etymology of the word calorimeter implies that it is an instrument for the measurement of heat. In thermodynamics however, heat refers to the process of irreversible transfer of thermal energy from a high to a low temperature. This heat cannot be directly observed or measured. The quantities actually measured in a calorimetric experiment are work energy and temperature changes. Changes in the internal energy or enthalpy of the system in the calorimeter can then be deduced with the help of the First Law of Thermodynamics. Calorimeters are an indispensable tool for the generation of thermodynamic data of this kind. Quantitative calorimetry