

Book Review

Wilson & Wilson's Comprehensive Analytical Chemistry, edited by G. Svehla. Vol. XII. *Thermal Analysis*, advisory editor W.W. Wendlandt. Part A. *Simultaneous Thermoanalytical Examinations by Means of the Derivatograph*, by J. Paulik and F. Paulik, Elsevier, Amsterdam, 1981, 277 pp., Dfl.170.00.

The book consists of 277 photoprinted pages, 187 illustrations and 5 tables. It contains a bibliography of almost 1300 citations and 20 pages of subject index related to the use of derivatography. The contents are divided into two parts: theory and techniques (85 pages) and material applications (92 pages).

First, the basic problems of studying decompositions are discussed in a detailed and well thought out manner, then the principles of differential, derivative and simultaneous methods are introduced and, finally, quasi-isothermal and quasi-isobaric techniques are described. Applications include inorganic and organic compounds, complexes, minerals, silicates, polymers, biological conditions and catalysts.

The book is easy to read and presents a satisfactory account for carrying out successful experiments which will be useful for both beginners as well as the more advanced workers. It forms a long needed in-depth approach, necessary for advanced studies and thus fills the gap which has existed since the publication of introductory thermoanalytical books such as those by Wendlandt [1], Garn [2] and Blažek [3]. In addition, the book gives an introduction to a new thermoanalytical method, often called "derivatography", which is appropriate for the investigation of solid-gas reactions as developed by the author's inventive and diligent work (having formed the basis for a well-deserved nomination for the North American Mettler Award in 1972). Among the extensive literature, however, one may miss citations showing the possible parallel (or even preceding) development of certain ideas which could contribute to this technique, namely, the method of "constant decomposition rate thermal analysis" proposed by Rocquerol [4] as early as 1969, as well as the construction and use of the ribbed (multi-store) crucible, already published by Šesták [5] in 1963.

In conclusion, the book is highly recommended to the wide society of thermoanalysts and solid state chemists in different fields. Numerous examples provide some indication of the limits, problems and goals of possible applications.

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REFERENCES

- 1 W.W. Wendlandt, *Thermal Methods of Analysis*, Wiley, New York, 1964, 1974.
- 2 P.D. Garn, *Thermoanalytical Methods of Investigations*, Academic Press, New York, 1964.
- 3 A. Blažek, *Thermal Analysis*, Van Nostrand Reinhold, London, 1974.
- 4 J. Rocquerol, in P.D. Garn et al. (Eds.), *Thermal Analysis, Proc. 2nd ICTA, Vol. 2*, Academic Press, New York, 1969, p. 281; *J. Therm. Anal.*, 2 (1970) 123.
- 5 J. Šesták, *Silikáty*, 7 (1963) 125; *Talanta*, 13 (1966) 567.