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Book review

Handbook of Thermal Analysis and Calorimetry, **Series Editor: Patrick K. Gallagher, Volume 1, Principles and Practice, Editor: Michael E. Brown**
Elsevier, 1998, ISBN 0 444 82085 X

Sometimes, if one wishes to relax, takes a book to read, not only a fiction, but something close to his profession, close to his research interest. This is the way how I could get the first pearl of a promising book series entitled 'Handbook of Thermal Analysis and Calorimetry', series editor is Patrick K. Gallagher.
The first volume of this series is dedicated to the 'Principles and Practice' of thermal analysis and calorimetry, edited by Michael E. Brown.
The book with its green leather cover and golden letters radiates classical elegance and fresh tranquillity reflecting all, that among all instrumental analytical techniques, thermal analysis means for me.
In the first pages the Serial Editor and the Volume Editor greet the readers and issue their thoughts concerning the publication of this book.
The volume, divided into 14 chapters, systematically comprehends thermal analysis from the definitions, the thermodynamic and kinetic backgrounds (Chapters 1–3) over the detailed discussion of the individual and coupled techniques (Chapters 4–10 and Chapters 11–12), up to the problems of calibration and standardisation in DSC and finally a fascinating description of the beauties of calorimetry (Chapter 13 and Chapter 14, respectively).
The detailed explanation of the methods together with their applicability provides an excellent arrangement not only for the common readers, but also for the well experienced researchers.
All authors of the chapters are well known conference participants, world-wide acknowledged specialists of the given sub-domains. It was an extra pleasure, that P. Gallagher and M. Brown acted not only as editors, but they appeared among the authors, too.
We all know that thermal analysis is in its renaissance nowadays, as it is indicated mainly by the continuously increasing popularity of calorimetry and modulated techniques. That's why the relevant parts of Chapter 5 (Differential Thermal Analysis and Differential Scanning Calorimetry by P. J. Haines, M. Reading and F. W. Wilburn), Chapter 11 (Simultaneous Measurements by J. van Humbeeck), Chapter 12 (EGA – Evolved Gas Analysis by J. Mullens) and Chapter 14 (Nonscanning Calorimetry by R. B. Kemp) were read with real pleasure, where the last one deals exhaustively with the description of different calorimeters.
Since I work at a university, besides the research work I participate in education, too. Previously, I had some problems with the proper illustration of scarcely used techniques. Chapters 9 and 10 ('Less-Common Techniques' by V. Balek, M. E. Brown and 'Thermomicroscopy' by H. G. Wiedemann, S. Felder-Casagranda, respectively) give a valuable help to elucidate these difficulties.

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Despite its excellent edition, I was somewhat confused reading Chapter 1 (Definitions, Nomenclature, Terms and Literature by W. Hemminger, S. M. Sarge), where the restricted list of books published after 1980 were announced. Here an unbelievably large set of book titles could be read, some of them published in the sixties and seventies making the relevant literature even more complete.

Besides books, journals are the platforms where the progresses and tendencies of researches are primarily followed. Since the list of papers published in Thermochimica Acta seems to be complete, let me mention the missing data appeared in the Journal of Thermal Analysis and Calorimetry during the period covered. At page 57 in the section *Conferences of the International Union of Pure and Applied Chemistry, IUPAC, on Chemical Thermodynamics* 13th International Conference on Chemical Thermodynamics, Joint Meeting with the 25th AFCAT Conference, Clermont-Ferrand, France, 17–22.07.1994, J. Thermal Anal., 46 (1996) p. 335-440., S. L. Randzio (ed.) is missing. The publication was shared between the two journals.

As far as the special issues are concerned at page 58 in the section *6.4 Journals*

H. A. Schneider (ed.): Polymers

J. Thermal Anal., 47 (1996), p. 897–1173.

H. Levine, L. Slade (eds): Recent Advances in Applications of Thermal Analysis Methods to Food and Food-related Materials and Systems

J. Thermal Anal., 47 (1996), p. 1175–1609. are missing.

The layout of the different chapters is not unified properly due to the lack of a desk editor. Generally it can be stated that the written text is not in harmony with the figures in many cases. In addition to that, the figures are extremely big without any reason, e.g. at page 611, 615, 622 and 664. In some cases the quality of demonstration is very poor. May I refer to Fig. 17 (a) at page 491, which should not have been published in such an otherwise high-quality handbook.

However, there are professionally edited chapters both scientifically and technically, e.g. Chapter 3 written by Galwey and Brown, Chapter 5 written by Haines, Reading and Wilburn, Chapter 12 written by Mullens and Chapter 13 written by Richardson and Charsley.

To summarize my experience, a well-readable book has been published which gives an excellent collection of the fundamentals and thermoanalytical methods containing examples sufficiently enough on the application of these techniques.

The book is available from Elsevier Science, Inc., P.O. Box 211, 1000 AE Amsterdam, The Netherlands and P.O. Box 945, Madison Square Station, New York, NY 10160-0757, USA.

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