

chemical reactions such as thermoset cure, and decomposition. Use of the phase correction to account for thermal lags during modulation can result in further signals which include the complex, reversing, and kinetic heat capacities in addition to the now phase corrected reversing and non-reversing heat flows. Other manufacturers may have different terminology. For example, Perkin-Elmer's DDSC separates the complex heat capacity into a storage and loss heat capacity. However, no heat capacity is actually lost, but the terminology and mathematics applied is based on linear response analysis, which is used in dynamic mechanical analysis and dielectric analysis and extended to DSC by Schawe.

The number of published TMDSC related papers has increased rapidly, from less than 20 articles in 1993 to over 100 written in 1997. More than 300 papers (including lectures and seminars) have been published so far with the use of this new technique (see Menczel and Judovits: Literature Status on Temperature-Modulated Differential Scanning Calorimetry in this issue).

The articles in this special issue were placed in six general categories:

Introduction, which contains a special paper from M. Reading describing the 'birth' of TMDSC, and a paper from the guest editors of this issue organizing most publications on TMDSC; TMDSC theory; instrumental response analysis; applications of TMDSC to polymeric systems; food and pharmacology; and other techniques.

We are very pleased to present this collection of outstanding articles which demonstrates the diversity of use and interest of this new technique.

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