studies published in the primary literature between 1993 and 1999, with some data from 2000. However, some data from older sources were also included. The data were taken from almost 1030 literature references. Parameters of correlating equations for temperature dependence of heat capacities of liquids were developed. This paper is an update of a two-volume monograph entitled *Heat Capacity of Liquids: Critical Review and Recommended Values* (96ZAB/RUZ) that was published in 1996 in the *Journal of Physical and Chemical Reference Data* as Monograph No. 6 and was the product of IUPAC Project No. 121/11/87.

www.iupac.org/projects/2000/2000-031-1-100.html

Pesticide Formulation and Application Systems: A New Century For Agricultural Formulations

Jane C. Mueninghoff, Alan K. Viets, and Roger A. Downer (editors)
American Society for Testing and Materials, 2001.
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Pesticide Formulation and Application Systems, Twenty-First Volume contains 21 selected papers presented at the Pesticide and Application Systems Symposium, which was held 24–26 October 2000 in Orlando, Florida, USA. The symposium, sponsored by the ASTM E 35.22 subcommittee, had the theme "A New Century for Agricultural Formulations."

The papers published in this volume cover recent work on the main aspects of formulation science and technology, including product development, formulation ingredients, regulatory issues, application technology, and biological efficacy. The papers and the extensive reference citations are evidence of how successful efforts have been in recent years to provide formulators with up-to-date information necessary for them to perform their jobs.

As one turns the pages from topic to topic one is again made aware of the important role that surface-active agents play in all phases of agricultural formulations. Study after study provides data showing that the development of new formulations, the ease of processing, the final product quality and stability, the application characteristics, and the efficacy of the product are critically impacted by the choice of surfactant.

Formulation work is often focused on optimizing specific commercial goals, and thus such work often must be narrowly focused. However, this volume provides broad and valuable guidance for workers in this field, who must know how to fit together the active ingredient, the adjuvants such as surfactants, and the product quality criteria in order to arrive at a successful agricultural formulation.

Reviewed by Claude Corty, former manager of Formulation and Application Technology Research and Development in the Agricultural Products Department at DuPont.

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Reports from Conferences

Advanced Materials

by Joshua Jortner

The IUPAC Conference on New Directions in Chemistry, Workshop on Nanostructured Advanced Materials (IUPAC–WAM II), which was held in Jakkur, Bangalore, India, from February 13–16, 2002, constituted a remarkable scientific accomplishment. The conference's high-quality lectures—on recent developments in the broad, interdisciplinary research field of nanostructured materials—merged the latest scientific results and potential technological applications.

WAM II fulfilled one of the core objectives of IUPAC: to identify significant, emerging research fields involving cutting-edge technologies. The conference focused on quantum structures (i.e., nanoparticles and nanocrystals of metals and of semiconductors, nanostructures, nanowires, and nanobiological systems), assemblies of nanostructures (e.g., nanoparticles and nanowires), and the use of biological systems (e.g., DNA) as templates for metallic or semiconducting nanostructures. The conceptual framework for dynamics, response, and transport in nanostructures was provided by the theoretical and computational studies that were presented.

The program's 20 plenary lectures were delivered by international scientific leaders in the fields of chemistry, material science, biophysics, and physics. Most of the 10 invited lectures were delivered by young Indian scientists, thereby providing them the opportunity to present their impressive scientific work before an international audience. In addition to the plenary and invited lecturers, about 50 additional scientists, mostly from India, but also from the USA, UK, and Slovenia, participated in WAM II.

The impressive visibility of IUPAC during WAM II provided a clear message that the Union is broadening the scope of its international activities beyond nomenclature. As an important core activity of IUPAC, the conference:

- Promotes high-quality, international scientific-technological activities and communication.
- Contributes recommendation for future technologies based on the chemical sciences.