

Book news

● *Ergonomics of hybrid automated systems-I*, edited by W. Karwowski, H.R. Parsaei, and M.R. Wilhelm. Amsterdam, Elsevier, 1988. 772 pp. Dfl. 345.

This volume contains a selection of 89 of the 122 papers presented at the First International Conference on Ergonomics of Advanced Manufacturing and Hybrid Automated Systems. The number and quality of the proposals submitted for the technical presentation testify to the importance of human aspects in implementing and managing advanced manufacturing technology and other computer-based automated systems. It also justifies the need for an international forum to discuss new ideas and exchange observations regarding the impact of technological progress on societies around the world. Hybrid automated systems, which combine human and machine intelligence, create progressively more and more challenges for workers, management, consumers, and government. Recent developments in advanced manufacturing technology, which include computer-integrated manufacturing, computer-aided design and engineering, computer-aided process planning and manufacturing resource planning, pose significant questions with respect to human involvement in hybrid automated systems. The complexity of problems that accompany both the social and technological progress in the area of artificially intelligent devices employed by modern manufacturing plants and service industries deserves special attention from all who care about the quality of life in the twenty-first century. This new series of biannual conferences will significantly contribute to the quest, and enhance the cooperation between researchers and practitioners around the world.

● *The Sprouse Collection of infrared spectra*, edited by Diana L. Hausen. Amsterdam, Elsevier Science Publishers, 1987. 3 vols.

The *Sprouse Collection* is a unique series of reference spectra collections produced by Sprouse Scientific Systems of Paoli, Pennsylvania. Its objective is to provide reliable, high-quality reference spectra that can be used for structural elucidation, qualitative analysis, development of quantitative analytical methods, computerized library searching, and software and algorithm development. Each volume in the series is devoted to a special class of compounds. An optional supplement to each volume is a peak table search software package (Dfl. 270 each).

Book I: Polymers

491 pp. Dfl. 520.

The polymer reference infrared spectra compiled in this

book represent nearly all the principal component polymeric materials in common use today. It contains reference spectra for 415 samples grouped in 15 chemical classes. The book begins with the straight-chain aliphatic hydrocarbons, e.g. paraffin, and finishes with the very complex polysaccharides. All the polymers are identified by chemical name, and representative molecular structures are included for 392 of the materials. A special feature of the book is an alphabetical index, which enables the user to locate reference spectra based on any polymer constituent within a material. Those materials containing more than one polymeric constituent, copolymers, terpolymers, etc., are listed in the alphabetical index under the chemical name for each component.

Book II: Solvents by cylindrical internal reflectance

776 pp. Dfl. 520.

The collection of 350 reference spectra for common organic solvents contained in this book demonstrates how simple, high-quality, easy-to-use sampling accessories can be used in conjunction with an FTIR to routinely measure high-quality infrared spectra. It was generated for materials commonly used with the CIRCLE sampling technique in order to provide a collection of reference spectra that can be directly compared with those measured by the same technique. Molecular structures and formulae are provided for all compounds.

Book III: Surface active agents

702 pp. Dfl. 520.

The surface-active agents in this book are grouped into four categories, with ionic nature as the criterion for classification. These categories—*anionic, cationic, non-ionic, and amphoteric*—are further subdivided and arranged by functional classification. This type of classification allows the user to easily compare the absorption characteristics of compounds with similar functionality. Each compound in the collection is presented in a single-page format, consisting of the infrared reference spectrum and pertinent information on chemical and physical properties. Three indices are included in this handbook. The first is a numerical index of the compounds, listing the primary name given for each compound. An alphabetical index is second, and includes the many synonyms, acronyms, and common tradenames associated with each of the primary names. The Chemical Abstracts Service registry number index is presented last, and lists each compound by increasing CAS number.