

The first chapter of the volume provides an overview of the diversity of cheese varieties, and the general aspects of cheese technology are discussed in the second chapter. The market for cheese as a food ingredient has increased rapidly in recent years and now represents up to approximately 70% of cheese production in some countries. The uses of cheese as ingredient are discussed in the last chapter of the book.

In conclusion, this edition contains comprehensive information on the chemical, biochemical, microbiological and physico-chemical aspects of cheese in general as well as the principal families of cheeses. These volumes can be highly useful not only to the students and academicians but also to the researchers, production management and quality control personnel working in the dairy industry.

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numbers, hyphens, primes, subscripts and superscripts are ignored when ordering terms; neither are small capitals, hyphenated modifies and alphabetic Greek characters used to determine primary alphabetic order. One special merit has to be mentioned that extensive cross references within definitions to other terms appearing in the *Dictionary* are shown in bold. Thus, the entries for the bold terms show that the *Dictionary* also contains definitions for them.

In conclusion, the *Dictionary* should be a valuable tool for people working in related fields or anyone who has a general interest in the issues facing the international food sector. This *Dictionary* has been compiled to appeal to a wide range of users, not just for students of food science and technology and for teaching or research in this field or food processors.

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International Food Information Service, Dictionary of Food Science and Technology, Blackwell Publishing, Oxford, UK, 2005 (x + 413 pp., £75.00, ISBN 1-4051-2505-5)

The *Dictionary of Food Science and Technology* was compiled by the *International Food Information Service* (IFIS) which is a non-profit organization providing international products and services, commissioning research and providing education in information science for the international food science, food technology and human nutrition community. There are 7852 defined terms in this edition of the *Dictionary*.

It contains a large number of definitions of terms which are specific to food science and technology (covering sensory analysis, consumer research, food composition, nutrition [food related not clinical aspects], catering, and food safety) and is augmented with definitions of terms from cognate disciplines (including chemistry, biochemistry, physics, microbiology, public health, economics, engineering and packaging). The *Dictionary* also contains a large number of definitions covering food commodities of every description including processed and prepared foods of all types together with. Furthermore, the food biotechnology related terms are also involved in the *Dictionary* such as gene cloning, genetic engineering, gene transfer, immobilization, protein engineering, PCR, and bioremediation. Whenever appropriate, local names, synonyms and Latin names also appear.

Alphabetical order in the dictionary is determined not on word by word but letter by letter basis. Characters such as

C.O. Kappe and A. Stadler, Microwaves in Organic and Medicinal Chemistry, Wiley-VCH, Weinheim, Germany, 2005 (xii + 409 pp., €139.00, ISBN: 3-527-31210-2)

There is currently an explosive growth in the general field of 'microwave chemistry'. Microwave chemistry has been used in both academic and industrial contexts. Especially the impact on the pharmaceutical industry, has led to the development of microwave-assisted organic synthesis (MAOS). *Microwaves in Organic and Medicinal Chemistry* offers a complete guide to microwave synthesis in organic and medicinal chemistry. This book focuses on the underlying theory, latest developments in microwave applications and includes a variety of examples from the recent literature, as well as less common applications that are equally relevant for organic and medicinal chemists.

The first chapter gives a brief introduction into microwave synthesis and its history. The physical principles behind and the factors determining the successful application of microwaves in organic synthesis are not widely familiar to chemists, so the next chapter offers a brief summary on the current understanding of microwaves and their interactions with matter. Although many of the early pioneering experiments in microwave-assisted organic synthesis were carried out with domestic microwave ovens, the current trend is undoubtedly to use dedicated instruments for chemical synthesis. This book also provides a detailed description of the various

commercially available microwave reactors that are dedicated for microwave-assisted organic synthesis (chapter 3). A brief summary of alternative processing techniques, the use of microwave reactors and general comments on reaction optimization are presented in the next two chapters.

Two literature surveys, Part A, General organic synthesis, and Part B, Combinatorial and high-throughput synthesis methods, constitute the major part of the book. Part A summarizes recent applications of controlled microwave heating technology in organic synthesis. Organic reactions, from Heck to Pauson-Khand reactions and from Diels-Alder reactions to Michael additions, are discussed in a systematic manner. Afterwards syntheses of N-, O-, and S-containing five- and six-membered heterocyclic ring systems are also presented in this chapter. Part B mainly focuses on the solid-phase organic synthesis, peptide synthesis, multicomponent reactions, and the use of polymer-supported reagents, catalysts, and scavengers. The final chapter presents an outlook and conclusions.

This book is an indispensable information source for organic and medicinal chemists in academia, as well as those in the chemical and the pharmaceutical industry. It provides the reader a well-structured, up-to-date, and exhaustive overview of known synthetic procedures involving the use of microwave technology. Some chapters of this book are sufficiently convincing as to encourage scientists not only to use microwave synthesis in their research, but also to offer training for their students or co-workers.

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J. Cazes, editor. Ewing's Analytical Instrumentation Handbook, Marcel Dekker, NY, USA, 2005 (xxiv + 1037 pp., £145.00, ISBN 0-8247-5348-8)

Analytical methods are applied in a number of different industrial processes. These may be employed for a variety of purposes such as research, development, manufacturing monitoring or quality control practices. Thus, analytical techniques play a vital role in all the industrial processes. Science has witnessed a rapid expansion of all types of analytical methods, and different instruments have come into picture with the advancement of technology. This rapidly growing area has brought together scientists from different disciplines to develop techniques, which are highly sensitive, accurate and less time consuming.

Ewing's Analytical Instrumentation Handbook provides a basic introduction, theory and methodology of different instrumental techniques. The book opens with a basic chapter on the laboratory use of computers. The topics of flow injection/sequential injection analysis, inductively coupled plasma optical emission spectrometry, atomic absorption spectrometry, spectrophotometers, molecular fluorescence and phosphorescence have been described in the subsequent chapters. The vibrational spectroscopy, photoacoustic spectroscopy, chiroptical spectroscopy, nuclear magnetic resonance, electron magnetic resonance and auger electron spectroscopy have been discussed in the individual chapters.

Mass spectrometry (MS) instrumentation has undergone a dramatic increase in popularity with the recognition that MS is an invaluable tool in biological analysis. The separate chapters have been included on the mass spectrometry, thermoanalytical instrumentation, electrochemical stripping and electrochemical lab-on-a-chip in the book. Biosensors are analytical devices that use a biological or biologically derived material immobilized at a transducer to measure one or more analytes. Biosensor technology has also been given in a summarized form.

Chromatographic methods are unique in that they possess dual capabilities, the mixture is separated into components and simultaneously the quantity of each component present is measured. Different chromatographic techniques (high performance liquid chromatography, gas chromatography, supercritical fluid chromatography, gel permeation and size exclusion chromatography etc.) have been described in individual chapters. The validation of chromatographic methods has been discussed in the last chapter.

In conclusion, the book provides a detailed description of the most frequently utilized analytical instrumental techniques and it can be a unique resource not only to the students and academicians but also the researchers working in the area of analytical techniques.

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K. S. Birdi, Scanning Probe Microscopes: Applications in Science and Technology, CRC Press, Boca Raton, FL, USA, 2003 (314 pp., £85.00, ISBN 0-8493-0930-1).

Mankind has always been keen to understand all kind of natural phenomena. Typical of all humans, seeing is believing,