

foreground amongst other requirements, such as nutrition, variety, adequate shelf life and reasonable cost of products. To meet these demands, the development and knowledgeable application of sensors and instruments is a key element. It follows the first edition, which is established as a standard reference on instrumentation for measuring food quality. This book covers a discussion on a wide range of established and emerging instrument types with the underlying principles described too for application in industry.

The book sets the scene with two introductory chapters followed by three parts. Part 1 is focused on the in-line measurement for the control of food processing operations. It includes colour measurement; the measurement of food composition using varied techniques, such as near infrared, rheology and FTIR; and the measurement of pressure, temperature, level, flow and viscosity in food process control. Part 2 addresses instrumental techniques in the quality control laboratory. It covers rheological measurements and texture measurements; and water and microbial activity. Part 3 devotes five chapters to the use of chemosensors, biosensors, immunosensors, electronic noses and tongues and DNA probes. This section also illustrates the complex and expensive process of developing a novel instrument.

In conclusion, each subject is presented in a comprehensible and engaging manner with references provided at the end of each chapter. Also included are the appendices of glossary and tables. The book is intended for engineers and managers involved with process optimisation and development of new instruments within the food sector. Additionally, students of instrument engineering, food science, physics or biochemistry would also find this book helpful. Furthermore, this book is of interest to scientists in the field of process engineering, industrial instrumentation and process control.

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The all-encompassing field of biotechnology has experienced dramatic growth over the last decade. This directory has been compiled by the editors of *Genetic Engineering News*, and provides current information and statistics on over 5000 private and public companies in over 50 countries, in one volume. It is divided into 15 smaller directories and six key indexes. The introduction to the volume also includes a comprehensive listing of new medicines in development, and a list of new approved biotechnology products.

The individual directories cover biotechnology companies, bioprocessing and bioprocess engineering companies, peptide and peptide instrumentation companies, law firms specialising in biotechnology, venture capital companies, recruiters specialising in biotechnology, biotechnology consultants, cell and tissue culture companies, state biotechnology centres and university bioprocessing facilities, attaches at foreign embassies, contract research organisations, technology transfer centres, advertising agencies, biotechnology software companies, and drug discovery companies. The new section on drug discovery covers companies doing genomic research and development. The indexes are organised by technology, market, company, state (for the USA), and country, and there is also an index of advertisers.

The entry in the directory for each company provides detailed contact information, which includes addresses, phone and fax numbers, e-mail addresses, and the names of senior company officials and contacts in research, marketing, regulatory affairs, legal affairs, licensing, purchasing, etc. Critical information on business focus, primary business, subsidiaries, joint ventures, licensing agreements, technologies, markets, major products, patents, and projects under development are also provided.

This volume manages to bring together a vast amount of company information covering the world of biotechnology and can therefore be utilised for a wide variety of tasks, from keeping up to date on biotech trends, patents, and product developments, to finding funding for new ventures. Access to such information in a single concise volume should be of value to many researchers in academia and industry with interests in the diverse aspects of biotechnology.

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