

Packaging Research In Food Product Design And Development

This book shows how the concepts of the value chain and value chain can improve packaging and create efficiencies. It gives packaging designers, manufacturers, suppliers and buyers new tools for understanding how their respective contribution to packaging development can be more effectively leveraged by understanding in practical terms how each fits within an extended set of people and groups adding value to a package. Using case studies from the packaging industry, the book reveals how value chain thinking solves technical and business problems. Here packaging specialists will find specific recommendations on contracts, innovation and knowledge management that will help them reduce costs, meet environmental regulations, and develop better products.

Food and beverages can be very aggressive chemical milieu and may interact strongly with materials that they touch. Whenever food is placed in contact with another substance, there is a risk that chemicals from the contact material may migrate into the food. These chemicals may be harmful if ingested in large quantities, or impart a taint or odour to the food, negatively affecting food quality. Food packaging is the most obvious example of a food contact material. As the demand for pre-packaged foods increases, so might the potential risk to consumers from the release of chemicals into the food

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product. Chemical migration and food contact materials reviews the latest controls and research in this field and how they can be used to ensure that food is safe to eat. Part one discusses the regulation and quality control of chemical migration into food. Part two reviews the latest developments in areas such as exposure estimation and analysis of food contact materials. The final part contains specific chapters on major food contact materials and packaging types, such as recycled plastics, metals, paper and board, multi-layer packaging and intelligent packaging. With its distinguished editors and international team of authors, Chemical migration and food contact materials is an essential reference for scientists and professionals in food packaging manufacture and food processing, as well as all those concerned with assessing the safety of food.

Reviews worldwide regulation of food contact materials
Includes the latest developments in the analysis of food contact materials
Looks in detail at different food contact materials

The Handbook of Research on Food Processing and Preservation Technologies is a valuable 5-volume collection that illustrates various design, development, and applications of novel and innovative strategies for food processing and preservation. The roles and applications of minimal processing techniques (such as ozone treatment, vacuum drying, osmotic dehydration, dense phase carbon dioxide treatment, pulsed electric field, and high-pressure assisted freezing) are discussed, along with a wide range of applications. The handbook also explores some exciting computer-aided

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techniques emerging in the food processing sector, such as robotics, radio frequency identification (RFID), three-dimensional food printing, artificial intelligence, etc. Some emphasis has also been given on nondestructive quality evaluation techniques (such as image processing, terahertz spectroscopy imaging technique, near infrared, Fourier transform infrared spectroscopy technique, etc.) for food quality and safety evaluation. The significant roles of food properties in the design of specific foods and edible films have been elucidated as well. Volume 4: Design and Development of Specific Foods, Packaging Systems, and Food Safety presents new research on health food formulation, advanced packaging systems, and toxicological studies for food safety. This volume covers in detail the design of functional foods for beneficial gut microflora, design of specific foods for gut microbiota, composite probiotic dairy products: concepts and design with a focus on millets, encapsulation technology for development of specific foods, prospects of edible and alternative food packaging technologies, recent advancements in edible and biodegradable materials for food packaging, potential of ozonation in surface modification of food packaging polymers, characterization applications and safety aspects of nanomaterials used in food and dairy industry, toxic effects of tinplate corrosion, and mitigation measures in canned foods. Other volumes in the set include: Volume 1: Nonthermal and Innovative Food Processing Methods Volume 2: Nonthermal Food Preservation and Novel Processing Strategies Volume 3: Computer-Aided Food Processing and Quality Evaluation Techniques Volume 5:

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Emerging Techniques for Food Processing, Quality, and Safety Assurance The book helps to provide an understanding of different food formulations and development of edible packaging techniques with emphasis on the assessment of food product safety and quality. The book also provides information on various methods of formulation for development of new and safe products. Together with the other volumes in the set, Handbook of Research on Food Processing and Preservation Technologies will be a valuable resource for researchers, scientists, students, growers, traders, processors, industries, and others.

Food Packaging and Preservation, Volume 9 in the Handbook of Food Bioengineering series, explores recent approaches to preserving and prolonging safe use of food products while also maintaining the properties of fresh foods. This volume contains valuable information and novel ideas regarding recently investigated packaging techniques and their implications on food bioengineering. In addition, classical and modern packaging materials and the impact of materials science on the development of smart packaging approaches are discussed. This book is a one-stop-shop for anyone in the food industry seeking to understand how bioengineering can foster research and innovation. Presents cutting technologies and approaches utilized in current and future food preservation for both food and beverages Offers research methods for the creation of novel preservatives and packaging materials to improve the quality and lifespan of preserved foods Features techniques to ensure the safe use of foods for longer periods

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of time Provides solutions of antimicrobial films and coatings for food packaging applications to enhance food safety and quality

This book reviews the science and technology of food packaging and covers the potential innovations in the food packaging sector. At the same time, it highlights the issues and prospects for linking the laboratory research to the market. In addition to typical packaging requirements such as food quality, shelf life, protection, communication, and marketing, the book emphasizes the need for novel packaging materials, including biodegradable packaging for a variety of food products. A wide range of food products has been kept in focus and includes animal-based food products such as dairy products and sea foods. The book presents the next level of packaging solutions i.e., smart packaging with the applications of potential tools such as intelligent and active packaging, and includes the latest research on emerging digital technologies for packaging development, assessment, and acceptability. It further highlights the strategies including blends, reinforcing agents, cold plasma, UV light applications, chemical, and enzymatic methods and explores the new opportunities leading to improvement in the packaging performance. Smart freshness indicator applications, including gas and time-temperature indicators for quality and safety of packaged products, have been covered in detail. The book also includes the functional characteristics of edible films and coatings, including their bioactive characteristics. Finally the book presents the rules and regulation related to packaging.

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Antimicrobial Food Packaging takes an interdisciplinary approach to provide a complete and robust understanding of packaging from some of the most well-known international experts. This practical reference provides basic information and practical applications for the potential uses of various films in food packaging, describes the different types of microbial targets (fungal, bacteria, etc.), and focuses on the applicability of techniques to industry. Tactics on the monitoring of microbial activity that use antimicrobial packaging detection of food borne pathogens, the use of biosensors, and testing antimicrobial susceptibility are also included, along with food safety and good manufacturing practices. The book aims to curtail the development of microbiological contamination of food through anti-microbial packaging to improve the safety in the food supply chain. Presents the science behind anti-microbial packaging and films reflecting advancements in chemistry, microbiology, and food science Includes the most up-to-date information on regulatory aspects, consumer acceptance, research trends, cost analysis, risk analysis and quality control Discusses the uses of natural and unnatural compounds for food safety and defense

Integrating the Packaging and Product Experience in Food and Beverages: A Road-Map to Consumer Satisfaction focuses on the interrelationship between packaging and the product experience. In both industry and academia there has been a growing interest in investigating approaches that capture consumer responses to products that go beyond traditional sensory and liking measures. These approaches include

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assessing consumers' emotional responses, obtaining temporal measures of liking, as well as numerous published articles considering the effect of situation and context in the evaluation of food and beverage products. For fast-moving consumer goods (FMCG) products in particular, packaging can be considered as a contributor to consumer satisfaction. Recent cross-modal research illustrated consumers' dissatisfaction or delight with a product can be evoked when there is dissonance between the packaging and the product experience. The book includes an extensive overview of an adapted satisfaction scale that has been tailored for the food and beverage sector and which identifies varying satisfaction response modes such as contentment, pleasure, and delight with a product. This is an important development as it provides insights about products that can be used to market specific categories and brands of foods and beverages. The book demonstrates the value of this approach by bringing together case studies that consider the interrelationships between packaging design, shape, on-pack sensory messages, expectations, and consumer satisfaction with the product. Focuses on the inter-relationship between packaging and the product experience, specifically in the context of the food and beverage sector Presents the expectancy disconfirmation model of satisfaction, which is well developed within the social sciences, to the food and beverage sector Contains case studies demonstrating how these practices can be used in industry to better enhance customer's responses to products Includes an extensive overview of an adapted satisfaction scale that has been

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tailored for the food and beverage sector and which identifies varying satisfaction response modes such as contentment, pleasure, and delight with a product. A unique insight into the decision-making and food consumption of the European consumer. The volume is essential reading for those involved in product development, market research and consumer science in food and agro industries and academic research. It brings together experts from different disciplines in order to address the fundamental issues related to predicting food choice, consumer behavior and societal trust in quality and safety regulatory systems. The importance of the social and psychological context and the cross-cultural differences and how they influence food choice are also covered in great detail.

The Impact of Nanoscience in the Food Industry, Volume 12 in The Handbook of Food Bioengineering series, explores how nanoscience applications in food engineering offer an alternative to satisfying current food needs that cannot be fulfilled by natural products. Nanotechnology enables the development of tailored food ingredients and structures to replace products that are difficult to obtain. The book discusses how specialized nano-preservatives, sensors and food degradation and contamination detectors were developed and how they can be introduced in food products without degrading quality or properties of the final product. A valuable resource for food engineering researchers and students alike. Identifies common nanomaterials used in food preservation and food packaging Provides industrial applications to increase food

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production Describes analytical methods for assessing food safety Identifies how nanoscience advances allow for new developments in functional foods and nutraceuticals Discusses safety concerns, regulations and restricted use of nanomaterials in food bioengineering

The successful employment of food packaging can greatly improve product safety and quality, making the area a key concern to the food processing industry. Emerging food packaging technologies reviews advances in packaging materials, the design and implementation of smart packaging techniques, and developments in response to growing concerns about packaging sustainability. Part one of Emerging food packaging technologies focuses on developments in active packaging, reviewing controlled release packaging, active antimicrobials and nanocomposites in packaging, and edible chitosan coatings. Part two goes on to consider intelligent packaging and how advances in the consumer/packaging interface can improve food safety and quality. Developments in packaging material are analysed in part three, with nanocomposites, emerging coating technologies, light-protective and non-thermal process packaging discussed, alongside a consideration of the safety of plastics as food packaging materials. Finally, part four explores the use of eco-design, life cycle assessment, and the utilisation of bio-based polymers in the production of smarter, environmentally-compatible packaging. With its distinguished editors and international team of expert contributors, Emerging food packaging technologies is an indispensable reference work

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for all those responsible for the design, production and use of food and beverage packaging, as well as a key source for researchers in this area. Reviews advances in packaging materials, the design and implementation of smart packaging techniques, and developments in response to growing concerns about packaging sustainability. Considers intelligent packaging and how advances in the consumer/packaging interface can improve food safety and quality. Examines developments in packaging materials, nanocomposites, emerging coating technologies, light-protective and non-thermal process packaging and the safety of plastics as food packaging materials.

Packaging Research in Food Product Design and Development is the first book to comprehensively address the issues of graphics design and visual concepts, from a systematic, scientific viewpoint, yet with business applications in mind. Positioned specifically for foods and beverages, Packaging Research in Food Product Design and Development uniquely combines consumer liking, segmentation and “how to” business methodology with a detailed treatment of the different facets of concept research.

Packaging Research in Food Product Design and Development John Wiley & Sons

During the past decade, tremendous growth has occurred in the use of nutrition symbols and rating systems designed to summarize key nutritional aspects and characteristics of food products. These symbols and the systems that underlie them have become known as front-of-package (FOP) nutrition rating systems and symbols, even though the symbols themselves can be found anywhere on the front of a food

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package or on a retail shelf tag. Though not regulated and inconsistent in format, content, and criteria, FOP systems and symbols have the potential to provide useful guidance to consumers as well as maximize effectiveness. As a result, Congress directed the Centers for Disease Control and Prevention (CDC) to undertake a study with the Institute of Medicine (IOM) to examine and provide recommendations regarding FOP nutrition rating systems and symbols. The study was completed in two phases. Phase I focused primarily on the nutrition criteria underlying FOP systems. Phase II builds on the results of Phase I while focusing on aspects related to consumer understanding and behavior related to the development of a standardized FOP system. *Front-of-Package Nutrition Rating Systems and Symbols* focuses on Phase II of the study. The report addresses the potential benefits of a single, standardized front-label food guidance system regulated by the Food and Drug Administration, assesses which icons are most effective with consumer audiences, and considers the systems/icons that best promote health and how to maximize their use.

Food Packaging: Innovations and Shelf-life covers recently investigated developments in food packaging and their influence in food quality preservation, shelf-life extension, and simulation techniques. Additionally, the book discusses the environmental impact and sustainable solutions of food packaging. This book is divided into seven chapters, written by worldwide experts. The book is an ideal reference source for university students, food engineers and researchers from R&D laboratories working in the area of

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food science and technology. Professionals from institutions related to food packaging. Creating an environment in which children in the United States grow up healthy should be a high priority for the nation. Yet the prevailing pattern of food and beverage marketing to children in America represents, at best, a missed opportunity, and at worst, a direct threat to the health prospects of the next generation. Children's dietary and related health patterns are shaped by the interplay of many factors—their biologic affinities, their culture and values, their economic status, their physical and social environments, and their commercial media environments—all of which, apart from their genetic predispositions, have undergone significant transformations during the past three decades. Among these environments, none have more rapidly assumed central socializing roles among children and youth than the media. With the growth in the variety and the penetration of the media have come a parallel growth with their use for marketing, including the marketing of food and beverage products. What impact has food and beverage marketing had on the dietary patterns and health status of American children? The answer to this question has the potential to shape a generation and is the focus of *Food Marketing to Children and Youth*. This book will be of interest to parents, federal and state government agencies, educators and schools, health care professionals, industry companies, industry trade groups, media, and those involved in community and consumer advocacy.

Microbial attacks occur on food surfaces even when the food is packaged. This can be

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attributed to moisture permeability in the packaging materials and other environmental conditions. Therefore, active agents like antimicrobial components and antioxidants must be incorporated into the packaging system; these active agents function by enhancing the stability of the product to a greater extent. Implementing an active packaging system ensures the safety and quality aspects of packaged foods so that consumers may use the products without worry. Active Packaging for Various Food Applications addresses the significance of active packaging for enhancing the quality and safety of various packaged foods. This book discusses extending the shelf life of various food products by incorporating various active packaging systems. It also addresses bioactive materials used for packing food products and applications of nanomaterials in an active packaging system. Key Features: Describes the uses of active packaging materials for various food processing industries like dairy, cereals, fruits and vegetables, meat, etc. Explains the application of biosensors for the detection of spoilage of active packed food products Discusses the importance of active packaging techniques for retaining antioxidants and micro as well as macronutrients Highlights the importance of active packaging of foods and its advantages This book is a great source for academicians, scientists, research scholars, and food industry personnel because it sheds light on the recent techniques used in active packaging systems for enhancing quality aspects.

Integrating the Packaging and Product Experience in Food and Beverages: A Road-

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Map to Consumer Satisfaction focuses on the interrelationship between packaging and the product experience. In both industry and academia there has been a growing interest in investigating approaches that capture consumer responses to products that go beyond traditional sensory and liking measures. These approaches include assessing consumers' emotional responses, obtaining temporal measures of liking, as well as numerous published articles considering the effect of situation and context in the evaluation of food and beverage products. For fast-moving consumer goods (FMCG) products in particular, packaging can be considered as a contributor to consumer satisfaction. Recent cross-modal research illustrated consumers' dissatisfaction or delight with a product can be evoked when there is dissonance between the packaging and the product experience. The book includes an extensive overview of an adapted satisfaction scale that has been tailored for the food and beverage sector and which identifies varying satisfaction response modes such as contentment, pleasure, and delight with a product. This is an important development as it provides insights about products that can be used to market specific categories and brands of foods and beverages. The book demonstrates the value of this approach by bringing together case studies that consider the interrelationships between packaging design, shape, on-pack sensory messages, expectations, and consumer satisfaction with the product. Focuses on the inter-relationship between packaging and the product experience, specifically in the context of the food and beverage sector Presents the

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expectancy disconfirmation model of satisfaction, which is well developed within the social sciences, to the food and beverage sector Contains case studies demonstrating how these practices can be used in industry to better enhance customer's responses to products Includes an extensive overview of an adapted satisfaction scale that has been tailored for the food and beverage sector and which identifies varying satisfaction response modes such as contentment, pleasure, and delight with a product

Phytochemicals are plant derived chemicals which may bestow health benefits when consumed, whether medicinally or as part of a balanced diet. Given that plant foods are a major component of most diets worldwide, it is unsurprising that these foods represent the greatest source of phytochemicals for most people. Yet it is only relatively recently that due recognition has been given to the importance of phytochemicals in maintaining our health. New evidence for the role of specific plant food phytochemicals in protecting against the onset of diseases such as cancers and heart disease is continually being put forward. The increasing awareness of consumers of the link between diet and health has exponentially increased the number of scientific studies into the biological effects of these substances. The Handbook of Plant Food Phytochemicals provides a comprehensive overview of the occurrence, significance and factors affecting phytochemicals in plant foods. A key objective of the book is to critically evaluate these aspects. Evaluation of the evidence for and against the quantifiable health benefits being imparted as expressed in terms of the reduction in the risk of disease

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conferred through the consumption of foods that are rich in phytochemicals. With world-leading editors and contributors, the Handbook of Plant Food Phytochemicals is an invaluable, cutting-edge resource for food scientists, nutritionists and plant biochemists. It covers the processing techniques aimed at the production of phytochemical-rich foods which can have a role in disease-prevention, making it ideal for both the food industry and those who are researching the health benefits of particular foods. Lecturers and advanced students will find it a helpful and readable guide to a constantly expanding subject area.

Organosilicon Compounds—Advances in Research and Application: 2013 Edition is a ScholarlyBrief™ that delivers timely, authoritative, comprehensive, and specialized information about ZZZ Additional Research in a concise format. The editors have built Organosilicon Compounds—Advances in Research and Application: 2013 Edition on the vast information databases of ScholarlyNews.™ You can expect the information about ZZZ Additional Research in this book to be deeper than what you can access anywhere else, as well as consistently reliable, authoritative, informed, and relevant. The content of Organosilicon Compounds—Advances in Research and Application: 2013 Edition has been produced by the world's leading scientists, engineers, analysts, research institutions, and companies. All of the content is from peer-reviewed sources, and all of it is written, assembled, and edited by the editors at ScholarlyEditions™ and available exclusively from us. You now have a source you can cite with authority, confidence,

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and credibility. More information is available at <http://www.ScholarlyEditions.com/>. Innovations in Food Packaging addresses selective topics of functions of food packaging to modify the traditional notion of this process. This book is organized into five parts. Part I focuses on the fundamental theories covering physical chemistry background and quality preservation of foods. Parts II and III discuss active packaging research and development and modified atmosphere packaging of fresh produce, meats, and ready-to-eat products, respectively. Part IV talks about edible and biodegradable coatings and films, whereas Part V discusses commercialization aspects of packaging technologies. Each part is divided into chapters of subject review and detailed technical information. This text will benefit those who are interested in innovative technology of food packaging in general, and experienced field packaging specialists and graduate-level food scientists in particular. This book will be useful as a textbook not only for extension programs of food packaging development in food industry, but also for advanced graduate-level food packaging courses. Covers four major food packaging topics: * Theories in food packaging * Active packaging * Modified atmosphere packaging * Edible films and coatings

Brand owners are in crisis. Consumer trust is at an all time low. Over 95% of all consumer product launches in the packaged goods sector fail to achieve their goals for success. This book gives a clear answer to why success rates are so low in the consumer packaged good industry and lays out a roadmap for product innovation - to

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make ideas successful. This book will inspire the reader to make a paradigm shift in how they approach product innovation - to be driven by the science of consumer behavior. The basic premise for this book is that emotions are at the root of all consumer motivations. Therefore, an innovation process focused on identifying how to turn up or down emotions that drive behavior will lead to product success. The applications of this process will be presented with several product success stories that show that understanding consumer behavior leads to deeper emotive connectivity, a broader playing field for differentiation, and speed to market. Using case studies and real-world examples of product launch successes and failures, Behavior Driven Innovation is a must-read for those involved in product development, consumer research, and marketing. Explores the role that emotion plays in consumer decision making Case studies of product successes (and failures!) and the role behavioral understanding played Provides insights into understanding the "whys" of consumer behavior, using a pull strategy to rapidly learn what consumers want, and designing for emotional impact Provides a blueprint for the creation of nimble innovation strategies Food Packaging: Principles and Practice, Third Edition presents a comprehensive and accessible discussion of food packaging principles and their applications. Integrating concepts from chemistry, microbiology, and engineering, it continues in the tradition of its bestselling predecessors and has been completely revised to include new, updated, and expanded content and provide a detailed overview of contemporary food packaging

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technologies. Features Covers the packaging requirements of all major food groups Includes new chapters on food packaging closures and sealing systems, as well as optical, mechanical, and barrier properties of thermoplastic polymers Provides the latest information on new and active packaging technologies Offers guidance on the design and analysis of shelf life experiments and the shelf life estimation of foods Discusses the latest details on food contact materials including those of public interest such as BPA and phthalates in foods Devotes extensive space to the discussion of edible, biobased and biodegradable food packaging materials An in-depth exploration of the field, *Food Packaging: Principles and Practice* includes all-new worked examples and reflects the latest research and future hot topics. Comprehensively researched with more than 1000 references and generously illustrated, this book will serve students and industry professionals, regardless of their level or background, as an outstanding learning and reference work for their professional preparation and practice.

Product development, from refining an established product range to developing completely new products, is the lifeblood of the food industry. It is, however, a process fraught with risk, often ending in failure. What are the keys to making the process a success? Based on a wealth of experience gathered over 40 years, *Food Product Development* provides the answers. After an introductory chapter, the first half of the book considers the four core elements of product development: the overall business strategy which directs product development, the various steps in the product

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development process itself, the knowledge required to fuel the process and, last but not least, keeping product development focused on consumer needs and aspirations. The second part of the book looks at managing the product development process in practice with four case studies of successful product launches. It also discusses how to evaluate and improve the process to make future product innovation more successful. Filled with examples and practical suggestions, and written by a distinguished team with unrivalled academic and industry expertise, Food Product Development will be an essential guide for R & D and product development staff, and all managers concerned with this key issue throughout the food industry. Mary D. Earle and Richard L. Earle are both Professors Emeritus in Massey University, New Zealand. Mary Earle is a pioneer in product development research, and both she and her husband have worked with industry on numerous product development projects. Allan M. Anderson is Chief Executive of the New Zealand Dairy Research Institute, the central R & D organisation for the New Zealand dairy industry, and has extensive experience of managing successful product development projects.

Research Paper from the year 2015 in the subject Business economics - Marketing, Corporate Communication, CRM, Market Research, Social Media, grade: Distinction, course: Higher National Diploma in Business (Marketing), language: English, abstract: Consumer decision making is very familiar in business matter especially in marketing scope. Every person in this world has the right to make decision when purchasing a

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product or goods. Consumer decision making can be identified as a consumer uses to make purchase decisions, as well as to use and dispose of purchased goods or services; also includes factors that influence purchase decisions and the product use. People will identify their needs and make decision making to purchase something. It determined by psychological and economic factors. Nowadays, communities are too busy with their daily routine such as working, studying and so on. Regarding these matters, communities will purchase something that gives convenient for them whenever they are in hurry. In order to overcome the barriers, so they usually purchase groceries especially canned foods to cook because it is less time consuming. Normally, attractive packaging of canned foods will be chosen. Attractive packaging can influence people to purchase the products. This research utilized a focus group methodology to understand consumer decision making toward canned foods and how packaging elements can affect buying decisions. Most impulse buying occurs because of product display, and attractive packaging plays an important role in product display. Packaging seems to be one of the most important factors in purchase decisions made at the point of sale. Previous studies have indicated that packaging is a marketing communication vehicle used to capture consumer attention. Other researcher also defined packaging as the enclosing of a physical object, typically a product that will be offered for sale. It is the process of preparing items of equipment for transportation a

The olive (*Olea europaea*) is increasingly recognized as a crop of great economic and health

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importance world-wide. Olive growing in Italy is very important, but there is still a high degree of confusion regarding the genetic identity of cultivars. This book is a source of recently accumulated information on olive trees and on olive oil industry. The objective of this book is to provide knowledge which is appropriate for students, scientists, both experienced and inexperienced horticulturists and, in general, for anyone wishing to acquire knowledge and experience of olive cultivation to increase productivity and improve product quality. The book is divided into two parts: I) the olive cultivation, table olive and olive oil industry in Italy and II) Italian catalogue of olive varieties. All chapters have been written by renowned professionals working on olive cultivation, table olives and olive oil production and related disciplines. Part I covers all aspects of olive fruit production, from site selection, recommended varieties, pest and disease control, to primary and secondary processing. Part II contains the chapter on the description of Italian olive varieties. It is well illustrated and includes 200 elaiographic cards with colour photos, graphs and tables.

The protection and preservation of a product, the launch of new products or re-launch of existing products, perception of added-value to products or services, and cost reduction in the supply chain are all objectives of food packaging. Taking into consideration the requirements specific to different products, how can one package successfully meet all of these goals? Food Packaging Technology provides a contemporary overview of food processing and packaging technologies. Covering the wide range of issues you face when developing innovative food packaging, the book includes: Food packaging strategy, design, and development Food biodeterioration and methods of preservation Packaged product quality and shelf life Logistical packaging for food marketing systems Packaging materials and processes The battle rages

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over which type of container should be used for which application. It is therefore necessary to consider which materials, or combination of materials and processes will best serve the market and enhance brand value. Food Packaging Technology gives you the tools to determine which form of packaging will meet your business goals without compromising the safety of your product.

This new edition of Innovations in Food Packaging ensures that readers have the most current information on food packaging options, including active packaging, intelligent packaging, edible/biodegradable packaging, nanocomposites and other options for package design. Today's packaging not only contains and protects food, but where possible and appropriate, it can assist in inventory control, consumer education, increased market availability and shelf life, and even in ensuring the safety of the food product. As nanotechnology and other technologies have developed, new and important options for maximizing the role of packaging have emerged. This book specifically examines the whole range of modern packaging options. It covers edible packaging based on carbohydrates, proteins, and lipids, antioxidative and antimicrobial packaging, and chemistry issues of food and food packaging, such as plasticization and polymer morphology. Professionals involved in food safety and shelf life, as well as researchers and students of food science, will find great value in this complete and updated overview. New to this edition: Over 60% updated content — including nine completely new chapters — with the latest developments in technology, processes and materials Now includes bioplastics, biopolymers, nanoparticles, and eco-design of packaging Food Quality and Shelf Life covers all aspects and challenges of food preservation, packaging and shelf-life. It provides information on the most important pillars in the field, starting with

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active and smart packaging materials, novel technologies, and control tools in all stages between production and consumer. The book gives emphasis to methodological approaches for sensory shelf-life estimation and the impact of packaging on sensorial properties. Researchers and professionals alike will find this reference useful, especially those who are interested in the performance evaluation of future packaging for fresh produce in the cold chain and temperature management in the supply chain. Presents insights regarding new trends in emerging technologies in the field Includes hot topics, such as modified atmosphere packaging and active materials to improve shelf-life Provides shelf-life assessment and modeling methodologies and accelerated shelf-life testing

Packaging plays an essential role in protecting and extending the shelf life of a wide range of foods, beverages and other fast-moving consumer goods. There have been many key developments in packaging materials and technologies in recent years, and Trends in packaging of food, beverages and other fast-moving consumer goods (FMCG) provides a concise review of these developments and international market trends. Beginning with a concise introduction to the present status and trends in innovations in packaging for food, beverages and other fast-moving consumer goods, the book goes on to consider modified atmosphere packaging and other active packaging systems, including smart and intelligent packaging, and the role these play in augmenting and securing the consumer brand experience. Developments in plastic and bioplastic materials and recycling systems are then discussed, followed by innovations and trends in metal, paper and paperboard packaging. Further chapters review international environmental and sustainability regulatory and legislative frameworks, before the use of nanotechnology, smart and interactive packaging

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developments for enhanced communication at the packaging/user interface are explored. Finally, the book concludes by considering potential future trends in materials and technologies across the international packaging market. With its distinguished editor and international team of expert contributors, Trends in packaging of food, beverages and other fast-moving consumer goods (FMCG) is an important reference tool, providing a practical overview of emerging packaging technologies and market trends for research and design professionals in the food and packaging industry, and academics working in this area. Introduces the present status, current trends and new innovations in the field whilst considering future trends in materials and technologies Considers modified atmosphere packaging and other active packaging systems including smart and intelligent packaging Discusses developments in plastic and bioplastic materials and recycling systems

Food packaging performs an essential function, but packaging materials can have a negative impact on the environment. This collection reviews bio-based, biodegradable and recycled materials and their current and potential applications for food protection and preservation. The first part of the book looks at the latest advances in bio-based food packaging materials. Part two discusses the factors involved in choosing alternative packaging materials such as consumer preference, measuring the environmental performance of food packaging, eco-design, and the safety and quality of recycled materials. Part three contains chapters on the applications of environmentally-compatible materials in particular product sectors, including the packaging of fresh horticultural produce, dairy products and seafood. This section also covers active packaging, modified atmosphere packaging and biobased intelligent food packaging. The book finishes with a summary of the legislation and certification of environmentally-

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compatible packaging in the EU. With its distinguished editor and contributors, Environmentally-compatible food packaging is a valuable reference tool for professionals in the food processing and packaging industries. Reviews bio-based, biodegradable and recycled materials and their current and potential applications Discusses consumer preference, environmental performance, eco-design and the quality of recycled materials as factors involved in choosing alternative packaging materials Summarises EU legislation and certification of environmentally compatible packaging

This edited collection presents state-of-the-art reviews of the latest developments in multisensory packaging design. Bringing together leading researchers and practitioners working in the field, the contributions consider how our growing understanding of the human senses, as well as new technologies, will transform the way in which we design, interact with, and experience food and beverage, home and personal care, and fast-moving consumer products packaging. Spanning all of the senses from colour meaning, imagery and font, touch and sonic packaging, a new framework for multisensory packaging analysis is outlined. Including a number of case studies and examples, this book provides both practical application and theoretical discussion to appeal to students, researchers, and practitioners alike. Provides information on technical and consumer research, food quality assurance, health and nutrition, food engineering and packaging, global product development, regulation compliance, and intellectual property protection.

This book is arguably the first one focusing on packaging material testing and quality assurance. Food Packaging Materials: Testing & Quality Assurance provides information to help food scientists, polymer chemists, and packaging technologists find practical solutions to

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packaging defects and to develop innovative packaging materials for food products. Knowledge of packaging material testing procedures is extremely useful in the development of new packaging materials. Unique among books on packaging, this reference focuses on basic and practical approaches for testing packaging materials. A variety of packaging materials and technologies are being used, with glass, paper, metal, and plastics as the most important groups of materials. Material properties such as mechanical and other physical properties, permeability, sealing, and migration of substances upon food contact are determining factors for food quality, shelf life, and food safety. Therefore, food packaging materials have to be tested to ensure that they have correct properties in terms of permeability for gases, water vapor, and contaminants; of mechanical and other physical properties; and of the thickness of main components and coating layers. This book has been designed to shed light on food packaging material testing in view of packaging integrity, shelf life of products, and conformity with current regulations. This comprehensive book, written by a team of specialists in the specific areas of food packaging, package testing, and food contact regulations, deals with the problems in a series of well-defined chapters. It covers the relations between packaging properties and shelf life of products and describes testing methods for plastics, metal, glass, and paper, including the areas of vibration, permeation, and migration tests. It will be of benefit for students, scientists, and professionals in the area of food packaging.

The efficient design of microwave food products and associated packaging materials for optimum food quality and safety requires knowledge of product dielectric properties and associated heating mechanisms, careful consideration of product geometry, knowledge of modern packaging and ingredient technologies, and application of computer simulation,

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statistics and experimental design. Integrated knowledge and efficient application of these tools is essential for those developing food products in this demanding field. Development of packaging and products for use in microwave ovens provides a focused and comprehensive review for developers. Part one discusses the principles of microwave heating and ovens, with an emphasis on the effect of food dielectric properties and geometry on heating uniformity and optimising the flavours and colours of microwave foods. Microwave packaging materials and design are discussed in Part two; chapters cover rigid packaging, susceptors and shielding. Product development, food, packaging and oven safety is the topic of Part three. Computer modelling of microwave products and active packaging is discussed in Part four. Written by a distinguished team of international contributors, Development of packaging and products for use in microwave ovens is a valuable resource for those in the food and packaging industries. Comprehensively reviews the principles of microwave heating and ovens assessing the effect of food dielectric properties on heating uniformity Thoroughly reviews microwave packaging materials and design including testing and regulatory issues Features a seven page section of colour diagrams to show heat distributions

Consumer acceptance is the key to successful food products. It is vital, therefore, that product development strategies are consumer-led for food products to be well received. Consumer-led food product development presents an up-to-date review of the latest scientific research and methods in this important area. Part one gives the reader a general introduction to factors affecting consumer food choice. Chapters explore issues such as sensory perception, culture, ethics, attitudes towards innovation and psychobiological mechanisms. Part two analyses methods to understand consumers' food-related attitudes and how these methods can be

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effectively used, covering techniques such as means-end chains and the food-related lifestyle approach. The final part of the book addresses a wide variety of methods used for consumer-led product development. Opportunity identification, concept development, difference testing and preference trials are discussed, as well as the use of techniques such as just-about-right scales and partial least squares methods. Written by an array of international experts, Consumer-led food product development is an essential reference for product developers in the food industry. Introduces the factors affecting consumer food choice Explores issues such as sensory perception, culture and ethics Analyses methods to understand food related attitudes

The importance of food packaging hardly needs emphasizing since only a handful of foods are sold in an unpackaged state. With an increasing focus on sustainability and cost-effectiveness, responsible companies no longer want to over-package their food products, yet many remain unsure just where reductions can effectively be made. Food Packaging and Explains the basics of food technology and new product development from initial planning through formulation, market research, manufacturing and product launch Carefully outlined test protocols plus quantified sensory, financial and feasibility analysis Recaps key technical concepts across the entire food science curriculum Developed as a comprehensive guide to how food products are planned, budgeted, manufactured and launched, this original textbook forms a cohesive introduction to all phases of food product development. A unique feature of the book is that it reviews the main concepts of food chemistry, ingredient functionality, additives, processing, quality control, safety, package labeling and more—virtually the entire food technology curriculum. With this specialized information as context, the book spells out

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the procedures needed to formulate, cost-justify and test market safe and profitable new products that meet regulatory guidelines and consumer expectations. The technical exposition is highlighted by case studies of novel food items introduced by U.S. companies. Syllabus-ready and furnished with back-of-chapter questions and projects, the volume is highly suited for university courses, including the capstone, as well as in-house and team training short courses in industry.

The Encyclopedia of Food and Health provides users with a solid bridge of current and accurate information spanning food production and processing, from distribution and consumption to health effects. The Encyclopedia comprises five volumes, each containing comprehensive, thorough coverage, and a writing style that is succinct and straightforward. Users will find this to be a meticulously organized resource of the best available summary and conclusions on each topic. Written from a truly international perspective, and covering of all areas of food science and health in over 550 articles, with extensive cross-referencing and further reading at the end of each chapter, this updated encyclopedia is an invaluable resource for both research and educational needs. Identifies the essential nutrients and how to avoid their deficiencies Explores the use of diet to reduce disease risk and optimize health Compiles methods for detection and quantitation of food constituents, food additives and nutrients, and contaminants Contains coverage of all areas of food science and health in nearly 700 articles, with extensive cross-referencing and further reading at the end of each chapter

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