

Scio Molecular Sensor From Consumer Physics Le

The determination of food authenticity is a vital component of quality control. Its importance has been highlightd in recent years by high-profile cases in the global supply chain such as the European horsemeat scandal and the Chinese melamine scandal which led to six fatalities and the hospitalisation of thousands of infants. As well as being a safety concern, authenticity is also a quality criterion for food and food ingredients. Consumers and retailers demand that the products they purchase and sell are what they purport to be. This book covers the most advanced techniques used for the authentication of a vast number of products around the world. The reader will be informed about the latest pertinent analytical techniques. Chapters focus on the novel techniques & markers that have emerged in recent years. An introductory section presents the concepts of food authentication while the second section examines in detail the analytical techniques for the detection of fraud relating to geographical, botanical, species and processing origin and production methods of food materials and ingredients. Finally, the third section looks at consumer attitudes towards food authenticity, the application of bioinformatics to this field, and the Editor’s conclusions and future outlook. Beyond being a reference to researchers working in food authentication it will serve as an essential source to analytical scientists interested in the field and food scientists to appreciate analytical approaches. This book will be a companion to under- and postgraduate students in their wander in food authentication and aims to be useful to researchers in universities and research institutions.

Over the last few years, near-infrared (NIR) spectroscopy has rapidly developed into an important and extremely useful method of analysis. In fact, for certain research areas and applications, ranging from material science via chemistry to life sciences, it has become an indispensable tool because this fast and cost-effective type of spectroscopy provides qualitative and quantitative information not available from any other technique. This book offers a balanced overview of the fundamental theory and instrumentation of NIR spectroscopy, introducing the material in a readily comprehensible manner. A considerable part of the text is dedicated to practical applications, including sample preparation and investigations of polymers, textiles, drugs, food and animal feed. However, special topics, such as two-dimensional correlation analysis, are also covered in separate chapters. Written by eight experts in different fields, this book presents an introduction to the current state of developments and is valuable to spectroscopists and to practitioners applying NIR spectroscopy as a daily analytical tool.

Advances in Near Infrared Spectroscopy and Related Computational MethodsMDPI

This is a multi-authored compilation that reviews six families: Nautiliidae, Sepiidae, Sepiolidae, Sepiadiariidae, Idiosepiidae and Spirulidae, with 23 genera and the 201 species known to the date of the completion of the volume. It provides accounts for all families and genera, as well as illustrated keys to all taxa. Information under each species account includes: valid modern systematic name and original citation of the species (or subspecies); main synonyms: English, French and Spanish FAO names for the species; illustrations of dorsal and ventral aspect of the whole animal (as necessary) and other distinguishing illustrations; field characteristics; diagnostic features; geographic and vertical distribution, including GIS map; size; habitat; biology; interest to fishery; local names when available; a remarks section (as necessary) and literature. The volume is fully indexed and also includes sections on terminology and measurements, an extensive glossary, an introduction with an updated review of the existing biological knowledge on cephalopods (including fisheries information and catch data for recent years) and a dedicated bibliography.

Health, Safety, and Nutrition for the Young Child

Suitability of portable NIR sensors (food-scanners) for the determination of fruit quality along the supply chain using the example of tomatoes (Band 50)

Biosensors in Agriculture: Recent Trends and Future Perspectives

Principles of Infrared Technology

Molecular and Laser Spectroscopy

Cookery

In the last few decades, near-infrared (NIR) spectroscopy has distinguished itself as one of the most rapidly advancing spectroscopic techniques. Mainly known as an analytical tool useful for sample characterization and content quantification, NIR spectroscopy is essential in various other fields, e.g. NIR imaging techniques in biophotonics, medical applications or used for characterization of food products. Its contribution in basic science and physical chemistry should be noted as well, e.g. in exploration of the nature of molecular vibrations or intermolecular interactions. One of the current development trends involves the miniaturization and simplification of instrumentation, creating prospects for the spread of NIR spectrometers at a consumer level in the form of smartphone attachments—a breakthrough not yet accomplished by any other analytical technique. A growing diversity in the related methods and applications has led to a dispersion of these contributions among disparate scientific communities. The aim of this Special Issue was to bring together the communities that may perceive NIR spectroscopy from different perspectives. It resulted in 30 contributions presenting the latest advances in the methodologies essential in near-infrared spectroscopy in a variety of applications.

This reference gives food science professionals a working understanding of near-infrared spectroscopy (NIRS) and its role in maximizing food potential. It explains the technical aspects of NIRS, including: basic principles; characteristics of the NIR spectra; instrumentation; sampling techniques; and chemometrics. The book details applications of NIRS in agricultural and marine products, foodstuffs and processed foods, engineering and process monitoring, and food safety and disease diagnosis.

Infants and children are regularly fed with processed foods, yet despite their importance in human development, these foods are rarely studied. This important book provides an exhaustive analysis of key technologies in the development of foods for babies and children, as well as the regulation and marketing of these products. Contributors cover different aspects of food science and technology in development of baby foods, making this text an unique source of information on the subject. Food Science, Technology, and Nutrition for Babies and Children includes relevant chapters on infant milk formulas, essential fatty acids in baby foods, baby food-based cereals and macro- and micronutrients. This book also offers alternatives from the point of view of food technology for babies and children with special diet regimes associated to metabolic or enzymatic diseases such as allergy to casein, phenylalanine (phenylketonuria or commonly known as PKU) and gluten (celiac disease), or lactose intolerance. This book also addresses some nutritional aspects of babies and children in terms of the childhood obesity, child’s appetite and parental feeding. With its comprehensive scope and up-to-date coverage of issues and trends in baby and children’s foods, this is an outstanding book for food scientists and technologists, food industry professionals, researchers and nutritionists working with babies and children.

*Written by an international panel of professional and academic peers, the book provides the engineer and technologist working in research, development and operations in the food industry with critical and readily accessible information on the art and science of infrared spectroscopy technology. The book should also serve as an essential reference source to undergraduate and postgraduate students and researchers in universities and research institutions. Infrared (IR) Spectroscopy deals with the infrared part of the electromagnetic spectrum. It measure the absorption of different IR frequencies by a sample positioned in the path of an IR beam. Currently, infrared spectroscopy is one of the most common spectroscopic techniques used in the food industry. With the rapid development in infrared spectroscopic instrumentation software and hardware, the application of this technique has expanded into many areas of food research. It has become a powerful, fast, and non-destructive tool for food quality analysis and control. Infrared Spectroscopy for Food Quality Analysis and Control reflects this rapid technology development. The book is divided into two parts. Part I addresses principles and instruments, including theory, data treatment techniques, and infrared spectroscopy instruments. Part II covers the application of IRs in quality analysis and control for various foods including meat and meat products, fish and related products, and others. *Explores this rapidly developing, powerful and fast non-destructive tool for food quality analysis and control *Presented in two Parts -- Principles and Instruments, including theory, data treatment techniques, and instruments, and Application in Quality Analysis and Control for various foods making it valuable for understanding and application *Fills a need for a comprehensive resource on this area that includes coverage of NIR and MVA*

The New Maudsley Method

Operations Management

7th International Conference, Jerusalem, Israel, January 10-12, 1999, Proceedings

Postharvest Biology and Technology of Tropical and Subtropical Fruits

Advances in Near Infrared Spectroscopy and Related Computational Methods

Future Foods: Global Trends, Opportunities, and Sustainability Challenges highlights trends and sustainability challenges along the entire agri-food supply chain. Using an interdisciplinary approach, this book addresses innovations, technological developments, state-of-the-art based research, value chain analysis, and a summary of future sustainability challenges. The book is written for food scientists, researchers, engineers, producers, and policy makers and will be a welcomed reference. Provides practical solutions for overcoming recurring sustainability challenges along the supply chain Highlights potential industrial opportunities and supports circular economy concepts Proposes novel concepts to address various sustainability challenges that can affect and have an impact on the future generations Finally, an operations management book to get excited about, Operations Management: A Supply Chain Process Approach exposes students to the exciting and ever-changing world of operations management through dynamic writing, application, and cutting-edge examples that will keep students interested and instructors inspired! Author Dr. Joel Wisner understands that today’s students will be entering a highly competitive global marketplace where two things are crucial: a solid knowledge of operations management and an understanding of the importance for organizations to integrate their operations and supply chain processes. With this in mind, Wisner not only provides a clear and comprehensive introduction to operations management, but also gives attention to the important processes involved in linking firms’ operations in a supply chain environment.

While products such as bananas, pineapples, kiwifruit and citrus have long been available to consumers in temperate zones, new fruits such as lychee, longan, carambola, and mangosteen are now also entering the market. Confirmation of the health benefits of tropical and subtropical fruit may also promote consumption further. Tropical and subtropical fruits are particularly vulnerable to postharvest losses, and are also transported long distances for sale. Therefore maximising their quality postharvest is essential and there have been many recent advances in this area. Many tropical fruits are processed further into purees, juices and other value-added products, so quality optimization of processed products is also important. The books cover current state-of-the-art and emerging post-harvest and processing technologies. Volume 1 contains chapters on particular production stages and issues, whereas Volumes 2, 3 and 4 contain chapters focused on particular fruit. Chapters in Volume 3 of this important collection review factors affecting the quality of different tropical and subtropical fruits, concentrating on postharvest biology and technology. Important issues relevant to each specific product are discussed, such as postharvest physiology, preharvest factors affecting postharvest quality, quality maintenance postharvest, pests and diseases and value-added processed products, among other topics. Along with the other volumes in the collection, Volume 3 is an essential reference for professionals involved in the postharvest handling and processing of tropical and subtropical fruits and for academics and researchers working in the area Covers current state-of-the-art and emerging post-harvest and processing technologies Important issues relevant to each particular fruit are discussed, such as postharvest physiology, preharvest factors affecting postharvest quality and pests and diseases

Unlike other American astronauts, Virgil I. “Gus” Grissom never had the chance to publish his memoirs—save for an account of his role in the Gemini program—before the tragic launch pad fire on January 27, 1967, which took his life and those of Edward White and Roger Chaffee. The international prestige of winning the Moon Race cannot be understated, and Grissom played a pivotal and enduring role in securing that legacy for the United States. Indeed, Grissom was first and foremost a Cold Warrior, a member of the first group of Mercury astronauts whose goal it was to beat the Soviet Union to the moon. Drawing on extensive interviews with fellow astronauts, NASA engineers, family members, and friends of Gus Grissom, George Leopold delivers a comprehensive survey of Grissom’s life that places his career in the context of the Cold War and the history of human spaceflight. Calculated Risk: The Supersonic Life and Times of Gus Grissom adds significantly to our understanding of that tumultuous period in American history. —Publisher

New Methods of Financing Your Business in the United States

OCM 2019 - Optical Characterization of Materials : Conference Proceedings

Advances and Applications: Volume 3

Internet of Things and Analytics for Agriculture, Volume 3

Food Authentication

Materials World

Conventional medicine treats symptoms with surgery and drugs rather than healing the root causes of illness. Complementary therapies attempt to address the whole self, which can raise awareness of and even counteract the imbalances that create disease. This book attempts to relate inner causes with our "four bodies" in order to affect healing. "Astrology and the Art of Healing" approaches healing and astrology in a new and revolutionary way. Physical, emotional, mental, and spiritual therapies relate to stages of your life process, from conception through birth, and from childhood to old age and death. Many horoscopes show how to understand the origins of health imbalances in your life. Correlations to appropriate therapies can support the expertise of your doctors. A free astro-chart is included.

This book is about general infrared (IR) engineering, technology, practices, and principles as they apply to modern imaging systems. An alternative title to this book with appeal to managers and marketing personnel might be "Everything You Always Wanted to Know about Infrared Sensors, but Couldn't Get Answers on from Engineers." This book is not meant to be a comprehensive compendium of IR (like the Infrared and Electro Optical Systems Handbook). Rather, it is intend ed to complement such texts by providing up to date information and pragmatic knowledge that is difficult to locate outside of periodicals. The information contained in this book is critical in the day-to-day life of en gineering practitioners, proposal writers, and those on the periphery of an IR pro gram. It serves as a guide for engineers wishing to "catch up," engineers new to the field, managers, students, administrators, and technicians. It is also useful for seasoned IR engineers who want to review recent technological developments.

Provides a complete and up-to-date introduction to the technique, taking account of developments in instrumentation for remote and non-invasive measurements and significant advances in calibration and mathematical methods. The clear explanation of practical and theoretical aspects of the techniques and mathematical treatments available will be essential reading for those working in the food industry and for anyone approaching NIR for the first time.

Skills-based Caring equips carers with the skills and knowledge needed to support those suffering from an eating disorder, and to help them to break free from the traps that prevent recovery. Through a coordinated approach, it offers detailed techniques and strategies, which aim to improve professionals' and carers' ability to build continuity of support for their loved ones. Using evidence-based research and personal experience, the authors advise the reader on a number of difficult areas in caring for someone with an eating disorder. This new and updated edition is essential reading for both professionals and families involved in the care and support of anyone with an eating disorder.

Food Rhetorics and Social Production

Near-Infrared Spectroscopy in Food Science and Technology

Practical NIR Spectroscopy with Applications in Food and Beverage Analysis

Trends and Future Prospects

Calculated Risk

OCM 2021 - Optical Characterization of Materials : Conference Proceedings

Optical Characterization of Materials: Conference Proceedings

Food Science and Technology: Trends and Future Prospects presents different aspects of food science i.e., food microbiology, food chemistry, nutrition, process engineering that should be applied for selection, preservation, processing, packaging, and distribution of quality food. The authors focus on the fundamental aspects of food and also highlight emerging technology and innovations that are changing the food industry. The chapters are written by leading researchers, lecturers, and experts in food chemistry, food microbiology, biotechnology, nutrition, and management. This book is valuable for researchers and students in food science and technology and it is also useful for food industry professionals, food entrepreneurs, and farmers.

Combating bacterial infections calls for a multidisciplinary approach and this is what is on offer here. Written by an experienced international team of researchers from various fields ranging from biotechnology to traditional medicine, the book provides complete and comprehensive coverage of topics relevant to new antibacterial drugs. This ready reference and handbook adopts a novel approach, focusing on combating multi-drug resistance in bacteria by developing antibacterials with new target sites, using new advances in drug discovery as well as natural products. Divided into three sections, the first describes the problem of drug resistance and the need for new drugs, while the second treats recent trends and new classes of drugs, including relevant developments in transcriptomics and proteomics leading to new antimicrobial drug discovery, and a new generation of antibiotics and non-antibiotics. The third section on natural products discusses the antibacterial action of phytochemicals, plant extracts, essential oils and honey as well as the role of probiotics in bacterial infections. Invaluable to students of medicine, pharmaceutical sciences, phytochemistry and microbiology and all those wanting to know about the possibilities and limitations of new antibacterial drugs. Furthermore, its coverage of plants and other natural products makes this relevant to the pharmaceutical and herbal industries.

Bachelorarbeit aus dem Jahr 2016 im Fachbereich Informatik - Angewandte Informatik, Note: 1,3, Hochschule für angewandte Wissenschaften Würzburg-Schweinfurt, Sprache: Deutsch, Abstract: Diese Bachelorarbeit beschäftigt sich mit der Frage, ob die Technik der Nahinfrarotspektroskopie einen Mehrwert bzw. neue Funktionalitäten im Fitnessbereich bietet. Dabei wird die Fragestellung konkret mit der Aufgabenstellung, nämlich das Analysieren der Protein- und Fettbestandteile von verschiedenen Nahrungsmitteln und das Entwickeln einer Applikation beantwortet. Resultat für diese wissenschaftliche Arbeit ist ein Basiskonzept, welche als Grundlage für künftige Entwicklungen dienen kann. Die Applikation, welche zum fernsteuern eines Nahinfrarotspektrometers dient, soll darüber hinaus für den einzelnen Athleten nützliche Funktionalitäten wie: - Schnelle Protein-/Fettbestandteilanalyse, - Einfache Verzehrempfehlung, - Persistente Datenhaltung der personenbezogenen Daten, - Einfach zu bedienende Oberfläche besitzen.

У меня на это аллергия. Первая научно доказанная программа против пищевой аллергии

Near Infrared Spectroscopy

Management, Analysis and Regulation

Nanoscience and Nanotechnology in Security and Protection against CBRN Threats

Portable Spectroscopy and Spectrometry, Applications

Near-infrared Technology in the Agricultural and Food Industries

Databasesearchchisatoldofcomputersciencewheretheorymeetsapplications. Many concepts and methods, that were regarded as issues of theoretical interest when initially proposed, are now included in implemented database systems and related products. Examples abound in the ?elds of database design, query languages, query optimization, concurrency control, statistical databases, and many others. The papers contained in this volume were presented at ICDT'99, the 7th - ternationalConferenceonDatabaseTheory,inJerusalem,Israel,January10–12, 1999. ICDT is an international forum for research on the principles of database systems. It is a biennial conference, and has a tradition of being held in beau- ful European sites: Rome in 1986, Bruges in 1988, Paris in 1990, Berlin in 1992, Prague in 1995, and Delphi in 1997. From 1992, ICDT has been merged with another series of conferences on theoretical aspects of database systems, the Symposium on Mathematical Fundamentals of Database Systems (MFDBS), that was initiated in Dresden (1987), and continued in Visegrád (1989) and Rostock (1991). ICDT aims to enhance the exchange of ideas and cooperation in database research both within united Europe, and between Europe and the other continents. ICDT'99 was organized in cooperation with: ACM Special Interest Group on Management of Data (SIGmod) IEEE Israel Chapter IIA — The Israel Association for Information Processing EDBT Foundation ICDT'99 was sponsored by: The Hebrew University of Jerusalem Tel Aviv University Tandem Labs Israel, a Compaq Company This volume contains 26 technical papers selected from 89 submissions.

This book provides the basic theory, spectral analysis methods, chemometrics, instrumentation, and applications of near-infrared (NIR) spectroscopy—not as a handbook but rather as a sourcebook of NIR spectroscopy. Thus, some emphasis is placed on the description of basic knowledge that is important in learning and using NIR spectroscopy. The book also deals with applications for a variety of research fields that are very useful for a wide range of readers from graduate students to scientists and engineers in both academia and industry. For readers who are novices in NIR spectroscopy, this book provides a good introduction, and for those who already are familiar with the field it affords an excellent means of strengthening their knowledge about NIR spectroscopy and keeping abreast of recent developments.

United States (US) has one of the deepest pools of potential investors of any country. It has more than 33 million total investors, both accredited and non-accredited. It has been reported that over 9 million US households qualify as accredited investors, with a net worth of over \$1 million (exclusive of primary residence). It has also been reported that, in US, there are over 700,000 ‘angel investors’ who are willing to invest their own money in ranges of \$150,000 to \$2 million. This book will describe three new methods of raising capital from US investors which have recently been approved. It also analyzes strategies for successfully implementing these finance methods. This book is interesting for entrepreneurs (both US and international) who are thinking of growing their business with outside capital from US. It will be of importance for all start-up and middle-market companies who are in need of additional capital to grow their businesses.”--Provided by publisher.

Molecular and Laser Spectroscopy, Advances and Applications: Volume 3 gives students and researchers an up-to-date understanding of the fast-developing area of molecular and laser spectroscopy. This book covers basic principles and advances in several conventional as well as new and upcoming areas of molecular and laser spectroscopy. This third volume is an extension of the two previous volumes of the same title and includes all-new topics. Each chapter is devoted to a particular fast-growing area of research and fills the gap between elementary texts and advanced material found in research articles. Some of the topics covered include: terahertz spectroscopy and its applications in health care- linear and non-linear vibrational optical activity spectroscopy; cascade laser IR-spectroscopy and frequency comb techniques; step-scan infrared spectroscopy (absorption and emission) for detecting reaction intermediates- surface-enhanced (SERS) and tip-enhanced (TERS) Raman scattering; infrared and Raman micro-spectroscopy; time-resolved linear and non-linear infrared spectroscopy using pico-second and femtosecond lasers. The spectroscopic techniques have been applied to medical sciences, forensics, security, material science, agriculture, food, chemical, pharmaceutical and petrochemical industries and used to study molecular vibrational dynamics, and hydrogen bonding in ground and excited states. This book serves as a valuable resource for students, teachers, and beginning researchers engaged in the area of molecular and laser spectroscopy. On account of the wide range of applications, researchers and scientific personnel in many industries will find this book useful for learning about the latest techniques and putting them to practical use. Written by eminent research scientists having an intricate knowledge of the latest activities in the field Includes exhaustive lists of research articles, reviews, and books at the end of each chapter to aid in further pursuit of research activity Uses illustrative examples of the varied applications to provide a practical guide to those interested in using molecular and laser spectroscopy tools in their research Each chapter is written in simple, clear language and develops its topic systematically, from basics to the latest developments and future projections

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Global Trends, Opportunities, and Sustainability Challenges

10th International Conference, ICSR 2018, Qingdao, China, November 28 - 30, 2018, Proceedings

Managing the Game-Changing Trends that Will Transform Your World

Future Smart

The Supersonic Life and Times of Gus Grissom

Vols. for 1964- have guides and journal lists.

This book reviews the application of nanosensors in food and agriculture. Nanotechnology has the potential to become transformative technology that will impact almost all sectors. Tools like nanosensors, which detect specific molecular interactions, can be used for on-site, in-situ and online measurements of various parameters in clinical diagnostics, environmental and food monitoring, and quality control. Due to their unprecedented performance and sensitivity, nanobiosensors are gaining importance in precision farming. The book examines the use of nanobiosensors in the monitoring of food additives, toxins and mycotoxins, microbial contamination, food allergens, nutritional constituents, pesticides, environmental parameters, plant diseases and genetically modified organisms. It also discusses the role of biosensors in increasing crop productivity in sustainable agriculture, and nanosensor-based smart delivery systems to optimize the use of natural resources such as water, nutrients and agrochemicals in precision farming.

This book constitutes the refereed proceedings of the 10th International Conference on Social Robotics, ICSR 2018, held in Qingdao, China, in November 2018. The 60 full papers presented were carefully reviewed and selected from 79 submissions. The theme of the 2018 conference is: Social Robotics and AI. In addition to the technical sessions, ICSR 2018 included 2 workshops: Smart Sensing Systems: Towards Safe Navigation and Social Human-Robot Interaction of Service Robots.

The state of the art in the optical characterization of materials is advancing rapidly. New insights have been gained into the theoretical foundations of this research and exciting developments have been made in practice, driven by new applications and innovative sensor technologies that are constantly evolving. The great success of past conferences proves the necessity of a platform for presentation, discussion and evaluation of the latest research results in this interdisciplinary field. По данным ВОЗ, пищевая аллергия – одно из самых быстрорастущих заболеваний в мире. Молоко, яйца, рыба и главный враг – арахис: заставляет вздрагивать миллионы человек в США, Китае, Австралии и Африке. А в России число пациентов с пищевой непереносимостью глютена увеличивается с каждым годом в геометрической прогрессии. Если вы не страдаете пищевой аллергией, вам сложно понять, каким катастрофическим оказывается на деле это состояние: вы не можете спокойно заказать себе еду в ресторане, боитесь за своего ребенка в школьной столовой, читаете этикетки абсолютно любого продукта питания, приобретаемого в магазине, и рискуете попросту умереть, если не будете слухком внимательны и осторожны. Ваша жизнь превращается в борьбу за существование! Долгие годы считалось, что победить пищевую аллергию невозможно, и единственный способ – просто избежать аллергенов. Сегодня концепция полностью поменялась. Новейшие исследования в аллергологии продемонстрировали, что иммунитет можно «научить» воспринимать бывшие аллергены не как «врагов», а как друзей.

Social Robotics

スタンフォード大学発

A Supply Chain Process Approach

Near-Infrared Spectroscopy

Cephalopods of the World: Chambered nautiluses and sepoids (Nautiidae, Sepiidae, Sepiolidae, Sepiadiariidae, Idiosepiidae, and Spirulidae)

The Future Waves

This book is based on the lectures and contributions of the NATO Advanced Study Institute on “Nanoscience and Nanotechnology in Security and Protection Against CBRN Threats” held in Sozopol, Bulgaria, September 2019. It gives a broad overview on this topic as it combines articles addressing the preparation and characterization of different nanoscaled materials (metals, oxides, glasses, polymers, carbon-based, etc.) in the form of nanowires, nanoparticles, nanocomposites, nanodots, thin films, etc. and contributions on their applications in diverse security and safety related fields. In addition, it presents an interdisciplinary approach drawing on the Nanoscience and Nanotechnology know-how of authors from Physics, Chemistry, Engineering, Materials Science and Biology. A further plus-point of the book, which represents the knowledge of experts from over 20 countries, is the combination of longer papers introducing the background on a certain topic, and brief contributions highlighting specific applications in different security areas.

The most comprehensive resource available on the many applications of portable spectrometers, including material not found in any other published work Portable Spectroscopy and Spectrometry: Volume Two is an authoritative and up-to-date compendium of the diverse applications for portable spectrometers across numerous disciplines. Whereas Volume One focuses on the specific technologies of the portable spectrometers themselves, Volume Two explores the use of portable instruments in wide range of fields, including pharmaceutical development, clinical research, food analysis, forensic science, geology, astrobology, cultural heritage and archaeology. Volume Two features contributions by a multidisciplinary team of experts with hands-on experience using portable instruments in their respective areas of expertise. Organized both by instrumentation type and by scientific or technical discipline, 21 detailed chapters cover various applications of portable ion mobility spectrometry (IMS), infrared and near-infrared (NIR) spectroscopy, Raman and x-ray fluorescence (XRF) spectroscopy, smartphone spectroscopy, and many others. Filling a significant gap in literature on the subject, the second volume of Portable Spectroscopy and Spectrometry: Features a significant amount of content published for the first time, or not available in existing literature Brings together work by authors with assorted backgrounds and fields of study Discusses the central role of applications in portable instrument development Covers the algorithms, calibrations, and libraries that are of critical importance to successful applications of portable instruments Includes chapters on portable spectroscopy applications in areas such as the military, agriculture and feed, hazardous materials (HazMat), art conservation, and environmental science Portable Spectroscopy and Spectrometry: Volume Two is an indispensable resource for developers of portable instruments in research, security institutes, instrument companies, civilian and government purchasers, trainers, operators of portable instruments, and educators and students in portable spectroscopy courses.

The state of the art in the optical characterization of materials is advancing rapidly. New insights have been gained into the theoretical foundations of this research and exciting developments have been made in practice, driven by new applications and innovative sensor technologies that are constantly evolving. The great success of past conferences proves the necessity of a platform for presentation, discussion and evaluation of the latest research results in this interdisciplinary field.

По данным ВОЗ, пищевая аллергия – одно из самых быстрорастущих заболеваний в мире. Молоко, яйца, рыба и главный враг – арахис: заставляет вздрагивать миллионы человек в США, Китае, Австралии и Африке. А в России число пациентов с пищевой непереносимостью глютена увеличивается с каждым годом в геометрической прогрессии. Если вы не страдаете пищевой аллергией, вам сложно понять, каким катастрофическим оказывается на деле это состояние: вы не можете спокойно заказать себе еду в ресторане, боитесь за своего ребенка в школьной столовой, читаете этикетки абсолютно любого продукта питания, приобретаемого в магазине, и рискуете попросту умереть, если не будете слухком внимательны и осторожны. Ваша жизнь превращается в борьбу за существование! Долгие годы считалось, что победить пищевую аллергию невозможно, и единственный способ – просто избежать аллергенов. Сегодня концепция полностью поменялась. Новейшие исследования в аллергологии продемонстрировали, что иммунитет можно «научить» воспринимать бывшие аллергены не как «врагов», а как друзей.

Theory, Spectral Analysis, Instrumentation, and Applications

A Practical Guide to the State of the Art

Science Citation Index

Near Infrared Spectroscopy in Food Analysis

Future Foods

New Strategies Combating Bacterial Infection

From the Chairman of the Institute for Global Futures, a forecast of game-changing trendsNand how to manage and profit from them to better your life

HEALTH, SAFETY, AND NUTRITION FOR THE YOUNG CHILD, 9th Edition, covers contemporary health, safety, and nutrition needs of infant through school-age children—and guides teachers in implementing effective classroom practices—in one comprehensive, full-color volume. Concepts are backed by the latest research findings and linked to NAEYC standards. The book emphasizes the importance of respecting and partnering with families to help children establish healthy lifestyles and achieve their learning potential. Early childhood educators, professionals, and families will find the latest research and information on many topics of significant concern, including food safety, child abuse, disaster preparedness, childhood obesity, children’s mental health, bullying, resilience, chronic and acute health conditions, environmental quality, and children with special medical needs. Also provided are easy-to-access checklists, guidelines, and activities that no early childhood student or professional should be without. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

The rhetoric of contemporary food production and consumption with a focus on social boundaries The rhetoric of food is more than just words about food, and food is more than just edible matter. Cookery: Food Rhetorics and Social Production explores how food mediates both rhetorical influence and material life through the overlapping concepts of invention and production. The classical canon of rhetorical invention entails the process of discovering one’s persuasive appeals, whereas the contemporary landscape of agricultural production touches virtually everyone on the planet. Together, rhetoric and food shape the boundaries of shared living. The essays in this volume probe the many ways that food informs contemporary social life through its mediation of bodies—human and extra-human alike—in the forms of intoxication, addiction, estrangement, identification, repulsion, and eroticism. Our bodies, in turn, shape the boundaries of food through research, technology, cultural trends, and, of course, by talking about it. Each chapter explores food’s persuasive nature through a unique prism that includes intoxication, dirt, “food porn,” strange foods, and political “invisibility.” In each case readers gain new insights about the relations between rhetorical influence and embodied practice through food. As a whole Cookery articulates new ways of viewing food’s powers of persuasion, as well as the inherent role of mediation in agricultural production. The purpose of Cookery, then, is to demonstrate the deep rhetoricity of our modern industrial food system through critical examinations of concepts, practices, and tendencies endemic to this system. Food has become an essential topic for discussions concerned with the larger social dynamics of production, distribution, access, reception, consumption, influence, and the fraught question of choice. These questions about food and rhetoric are equally questions about the assumptions, values, and practices of contemporary public life.

Food-scanners are novel, portable and miniaturized devices, which operate on the principle of near-infrared spectroscopy (NIRS). According to the manufacturers, these devices are suitable for measuring a wide range of important quality parameters on fresh produce. This research evaluated the suitability of food-scanners for determining fruit quality along the supply chain of fruit and vegetables. Using the qualitative research approach, the first step of this research comprised interviews of experts at different positions along the fresh produce value chain in Germany. Thereby, preferences and concerns regarding the utilization and implementation of this technology for fresh produce were investigated. Based on these findings, non-destructive prediction models for various important quality characteristics and secondary plant constituents were developed using the model fruit tomato. In addition, food-scanner predictions of relevant quality traits on a wide range of produce from the fruit and vegetable assortment were examined. The evaluations showed a high degree of conformity between the results of non-destructive food-scanner predictions and conventional destructive measurement methods. The results illustrate the great potential of these novel devices for the application in everyday practice of fruit quality control along the fresh produce supply chain.

Database Theory - ICDT99

Cocona to Mango

Konzeption und Entwicklung einer Android-Fitness-App in Kombination mit Nahinfrarotspektroskopie

Principles, Instruments, Applications

Infrared Spectroscopy for Food Quality Analysis and Control

The Journal of the Institute of Materials