

Superheated Steam Drying And Processing

Presents Drying Breakthroughs for an Array of Materials Despite being one of the oldest, most energy-intensive unit operations, industrial drying is perhaps the least scrutinized technique at the microscopic level. Yet in the wake of today's global energy crisis, drying research and development is on the rise. Following in the footsteps of the widely read first edition, *Advanced Drying Technologies, Second Edition* is the direct outcome of the recent phenomenal growth in drying literature and new drying hardware. This edition provides an evaluative overview of new and emerging drying technologies, while placing greater emphasis on making the drying process more energy efficient in the green age. Draws on the Authors' 60+ Years of Combined Experience Fueled by the current energy crisis and growing consumer demand for improved quality products, this thoroughly updated resource addresses cutting-edge drying technologies for numerous materials such as high-valued, heat-sensitive pharmaceuticals, nutraceuticals, and some foods. It also introduces innovative techniques, such as heat-pump drying of foods, which allow both industrial practice and research and development projects to save energy, reduce carbon footprints, and thus improve the bottom line. Four New Chapters: Spray-Freeze-Drying Fry Drying

Refractance Window Drying Mechanical Thermal Expression Requiring no prior knowledge of chemical engineering, this single-source reference should assist researchers in turning the laboratory curiosities of today into the revolutionary novel drying technologies of tomorrow.

This book contains selected papers presented during technical and plenary sessions at the World Renewable Energy Congress, the world's premier conference on renewable energy and sustainable development. All papers were rigorously peer reviewed. The Congress, held at Murdoch University in Perth, Western Australia from February 5 -9, 2017, with the theme of "Transition Towards 100% Renewable Energy", featured keynote speakers and parallel technical sessions highlighting technical, policy, and investment progress towards achieving 100% renewable energy ranging in scale from households to cities to large regions, with a focus on the challenges and opportunities transforming the global energy systems. The book highlights contributions from thought leaders involved in the supply, distribution, consumption, and development of sustainable energy sources.

Biomass pellets are a suitable fuel type for a wide range of applications, from stoves and central heating systems up to large-scale plants, and with practically complete automation in all these capacities. This handbook, written and edited by

experienced professionals from IEA Bioenergy Task 32 in cooperation with Bios Bioenergiesysteme GmbH, Graz, Austria, other IEA Tasks and external experts, is the first comprehensive guide in English language covering all pellet related issues, as illustrated by the following list of topics covered by the book:

- international overview of standards for pellets
- evaluation of raw materials and raw material potentials
- quality and properties of pellets
- technical evaluation of the pellet production process
- and logistic aspects of pellet supply
- safety and health aspects for pellets during storage, handling and transportation
- technological evaluation of pellet furnace technologies and future developments
- economic and ecological evaluation of the pellet production process
- economic and ecological evaluation of pellet use in small-scale furnaces in the residential sector
- overview of international pellet markets and market developments
- international case studies for the use of pellets for energy generation
- latest trends concerning research and development in the pellet sector.

Extensively illustrated and packed with practical knowledge, this is the ultimate reference for anyone involved in or affected by this burgeoning industry. It addresses all the players of the pellet market, ranging from raw material producers or suppliers, pellet producers and traders, manufacturers of pellet furnaces and pelletization systems, installers, engineering companies, energy consultants and end users.

This is the second publication stemming from the International Congress on Engineering in Food, the first being Food Engineering Interfaces, based on the last ICEF10. The theme of ICEF 11, held in Athens, Greece in May 2011, is “Food Process Engineering in a Changing World.” The conference explored the ways food engineering contributes to the solutions of vital problems in a world of increasing population and complexity that is under the severe constraints of limited resources of raw materials, energy, and environment. The book, comprised of 32 chapters, features an interdisciplinary focus, including food materials science, engineering properties of foods, advances in food process technology, novel food processes, functional foods, food waste engineering, food process design and economics, modeling food safety and quality, and innovation management.

This five-volume series provides a comprehensive overview of all important aspects of modern drying technology, concentrating on the transfer of cutting-edge research results to industrial use. Volume 5 is dedicated to process intensification by hybrid processes that combine convective or contact heat transfer with microwaves, ultrasound or radiation. Process intensification by more efficient choice, distribution, and flow of the drying medium - such as impinging jet drying, pulse combustion drying, superheated steam drying, drying in specially

designed spouted beds - are thoroughly discussed. Moreover, methods that favorably affect the process by changing the structure of the drying product, e.g. foaming, electroporation, are treated. Emphasis is placed on drying, including freeze-drying, of sensitive materials such as foods, biomaterials and pharmaceuticals. Released Volumes of Modern Drying Technology: * Volume 1: Computational Tools at Different Scales ISBN 978-3-527-31556-7 * Volume 2: Experimental Techniques ISBN 978-3-527-31557-4 * Volume 3: Product Quality and Formulation ISBN 978-3-527-31558-1 * Volume 4: Energy Savings ISBN 978-3-527-31559-8 * Set (Volume 1-5) ISBN 978-3-527-31554-3

Consumer-driven products have kept the food industry at the forefront of technological innovations. For example, the redefinition of the once accepted compromise between convenience and quality is just one of the current issues driving the development of new products. An overview of a range of solutions for these challenges, Innovation in Food Engineering: New Techniques and Products addresses not only new or alternative technologies but also new products, materials, and additives that have emerged as a response to current and emerging issues faced by the food industry. This book provides a comprehensive overview of modern processing technologies and their use to develop new or improved food products and ingredients that meet consumers

increased demands for quality and safety. Each chapter in the Innovative Techniques section begins with a critical review of the fundamentals of the new or modified technique, its advantages, and relevant results. They include a description of the actual industrial scenario where the technique can be applied, emphasizing benefits and economical relevance of this sector. The chapters in the New Materials, Products, and Additives section identify the potential of the new or modified product, discuss its production route, and compare it with traditional alternatives. While there are many books available on both topics, this is one of the first to cover processing technologies and their use to produce new and improved food products. Written by internationally recognized experts and pioneers and comprehensive in scope, the text highlights promising techniques and remaining challenges. In the constantly changing global marketplace, keeping up with new developments is important—keeping ahead of them is essential. This book keeps you up to date on the latest technology and paves the way for future developments.

One of the main concerns of the food industry is the need for high-quality fresh fruits and fruit products with good sensory quality, long shelf life, and high nutritional value. To meet these demands, new processing technologies are under investigation and development. Advances in Fruit Processing

Technologies incorporates fundamentals in food pro

Emerging Technologies for Food Processing presents a comprehensive review of innovations in food processing, stresses topics vital to the food industry today, and pinpoints the trends in future research and development. This volume contains 27 chapters and is divided into six parts covering topics such as the latest advances in non-thermal processing, alternative technologies and strategies for thermal processing, the latest developments in food refrigeration, and current topics in minimal processing of vegetables, fruits, juices and cook-chill ready meals and modified atmosphere packaging for minimally processed foods. * Each chapter is written by international experts presenting thorough research results and critical reviews * Includes a comprehensive list of recently published literature * Covers topics such as high pressure, pulsed electric fields, recent developments in microwave heating, and vacuum cooling

Shellfish is a broad term that covers various aquatic mollusks, crustaceans and echinoderms that are used as food. They have economic and ecological importance and have been consumed as food for centuries. Shellfish provide high quality protein with all the dietary amino acids essential for maintenance and growth of the human body. Shellfish are a major component of global seafood production, with shellfish aquaculture rapidly growing in recent years. There are many different processing methods used across the world. Shellfish are very perishable foods and must be

preserved just after catching or harvesting. This makes the preservation of seafood a critical issue in terms of quality and human health. To date there have been a number of books on seafood processing and preservation, but all of them have been mostly focused on fish. Shellfish Processing and Preservation is the first reference work to focus specifically on shellfish, providing comprehensive coverage of the production methods, biological makeups and preservation methods of all major shellfish species. Individual sections focus on crustaceans such as shrimps and prawns, crabs and lobsters plus molluscs including mussels, scallops and oysters. Cephalopods such as squid and octopus are also covered in depth. For each species processing and preservation methods such as chilling, freezing, canning and curing are examined, plus the important safety aspects specific to each shellfish type. Shellfish Processing and Preservation is an essential publication for any researchers or industry professionals in search of a singular and up-to-date source for the processing and preservation of shellfish.

The two-volume set IFIP AICT 392 and 393 constitutes the refereed post-conference proceedings of the 6th IFIP TC 5, SIG 5.1 International Conference on Computer and Computing Technologies in Agriculture, CCTA 2012, held in Zhangjiajie, China, in October 2012. The 108 revised papers presented were carefully selected from numerous submissions. They cover a wide range of interesting theories and applications of information technology in agriculture, including Internet of things and

cloud computing; simulation models and decision-support systems for agricultural production; smart sensor, monitoring, and control technology; traceability and e-commerce technology; computer vision, computer graphics, and virtual reality; the application of information and communication technology in agriculture; and universal information service technology and service systems development in rural areas. The 53 papers included in the first volume focus on decision support systems, intelligent systems, and artificial intelligence applications.

By far the most commonly encountered and energy-intensive unit operation in almost all industrial sectors, industrial drying continues to attract the interest of scientists, researchers, and engineers. The Handbook of Industrial Drying, Fourth Edition not only delivers a comprehensive treatment of the current state of the art, but also serves as a consultative reference for streamlining industrial drying operations. New to the Fourth Edition: Computational fluid dynamic simulation Solar, impingement, and pulse combustion drying Drying of fruits, vegetables, sugar, biomass, and coal Physicochemical aspects of sludge drying Life-cycle assessment of drying systems Covering commonly encountered dryers as well as innovative dryers with future potential, the Handbook of Industrial Drying, Fourth Edition not only details the latest developments in the field, but also explains how improvements in dryer design and operation can increase energy efficiency and cost-effectiveness.

It's been nearly 40 years since the last book on infrared heating for food processing

and cutting-edge (recent trends), making it ideal for industrial, academic and reference use. It consists of two sections, one covering conventional or well-established existing processes and the other covering emerging or novel process technologies that are expected to be employed in the near future for the processing of foods in the commercial sector. All are examined in great detail, considering their current and future applications with added examples and the very latest data. Conventional and Advanced Food Processing Technologies is a comprehensive treatment of the current state of knowledge on food processing technology. In its extensive coverage, and the selection of reputed research scientists who have contributed to each topic, this book will be a definitive text in this field for students, food professionals and researchers.

Vegetables are an important article of commerce both in developed and developing economies. Many studies point to importance of vegetables in our diet. Handbook of Vegetables and Vegetable Processing serves as a reference handbook on vegetables and vegetable processing containing the latest developments and advances in this fast growing field. The book can be considered as a companion to Y. H. Hui's popular Handbook of Fruits and Fruit Processing (2006). Handbook of Vegetables and Vegetable Processing is contemporary in scope, with in-depth coverage of new interdisciplinary developments and practices in the field of vegetables emphasizing processing,

preservation, packaging, and nutrition and food safety. Coverage includes chapters on the biology, horticultural biochemistry, microbiology, nutrient and bioactive properties of vegetables and their significant commercialization by the food industry worldwide. Full chapters are devoted to major vegetables describing aspects ranging from chemistry to processing and preservation. World-renowned editors and authors have contributed to this essential handbook on vegetables and their production, technology, storage, processing, packaging, safety and commercial product development. Special Features: Coverage includes biology and classification, physiology, biochemistry, flavor and sensory properties, microbial safety and HACCP principles, nutrient and bioactive properties In-depth descriptions of key processes including, minimal processing, freezing, pasteurization and aseptic processing, fermentation, drying, packaging, and application of new technologies Entire chapters devoted to important aspects of over 20 major commercial vegetables including avocado, table olives and textured vegetable proteins Unparalleled expertise on important topics from more than 50 respected authors

Food materials are processed prior to their consumption using different processing technologies that improve their shelf life and maintain their physicochemical, biological, and sensory qualities. Introduction to Advanced

Food Process Engineering provides a general reference on various aspects of processing, packaging, storage, and quality control and assessment systems, describing the basic principles and major applications of emerging food processing technologies. The book is divided into three sections, systematically examining processes from different areas of food process engineering. Section I covers a wide range of advanced food processing technologies including osmo-concentration of fruits and vegetables, membrane technology, nonthermal processing, emerging drying technologies, CA and MA storage of fruits and vegetables, nanotechnology in food processing, and computational fluid dynamics modeling in food processing. Section II describes food safety and various non-destructive quality assessment systems using machine vision systems, vibrational spectroscopy, biosensors, and chemosensors. Section III explores waste management, by-product utilization, and energy conservation in food processing industry. With an emphasis on novel food processes, each chapter contains case studies and examples to illustrate state-of-the-art applications of the technologies discussed.

The processing of food is no longer simple or straightforward, but is now a highly inter-disciplinary science. A number of new techniques have developed to extend shelf-life, minimize risk, protect the environment, and improve functional,

sensory, and nutritional properties. The ever-increasing number of food products and preservation techniques cr

This book focuses on Chemical Engineering and Processing, covering interdisciplinary innovation technologies and sciences closely related to chemical engineering, such as computer image analysis, modelling and IT. The book presents interdisciplinary aspects of chemical and biochemical engineering interconnected with process system engineering, process safety and computer science.

This collection of recent activities provides researchers and scientists with the latest trends in characterization and developments of composed materials and structures. Here, the expression 'composed materials' indicates a wider range than the expression 'composite material' which is many times limited to classical fibre reinforced plastics. The idea of composed structures and materials is to join different components in order to obtain in total better properties than one of the single constituents can provide. In this collection, well known experts present their research on composed materials such as textile composites, sandwich plates, hollow sphere structures, reinforced concrete as well as classical fibre reinforced materials.

This unique handbook presents both the theory and application of biomass

combustion and co-firing, from basic principles to industrial combustion and environmental impact, in a clear and comprehensive manner. It offers a solid grounding on biomass combustion, and advice on improving combustion systems. Written by leading international academics and industrial experts, and prepared under the auspices of the IEA Bioenergy Implementing Agreement, the handbook is an essential resource for anyone interested in biomass combustion and co-firing technologies varying from domestic woodstoves to utility-scale power generation. The book covers subjects including biomass fuel pre-treatment and logistics, modelling the combustion process and ash-related issues, as well as featuring an overview of the current R&D needs regarding biomass combustion.

This five-volume series provides a comprehensive overview of all important aspects of modern drying technology, concentrating on the transfer of cutting-edge research results to industrial use. Volume 4 deals with the reduction of energy demand in various drying processes and areas, highlighting the following topics: Energy analysis of dryers, efficient solid-liquid separation techniques, osmotic dehydration, heat pump assisted drying, zeolite usage, solar drying, drying and heat treatment for solid wood and other biomass sources, and sludge thermal processing.

Still the Most Complete, Up-To-Date, and Reliable Reference in the Field Drying is a highly energy-intensive operation and is encountered in nearly all industrial sectors. With rising energy costs and consumer demands for higher quality dried products, it is increasingly important to be aware of the latest developments in industrial drying technology.

A comprehensive summary of the state of the art in the reaction engineering approach to drying processes, including modelling, experimentation and applications.

Effective water and energy use in food processing is essential, not least for legislative compliance and cost reduction. This major volume reviews techniques for improvements in the efficiency of water and energy use as well as wastewater treatment in the food industry. Opening chapters provide an overview of key drivers for better management. Part two is concerned with assessing water and energy consumption and designing strategies for their reduction. These include auditing energy and water use, and modelling and optimisation tools for water minimisation. Part three reviews good housekeeping procedures, measurement and process control, and monitoring and intelligent support systems. Part four discusses methods to minimise energy consumption. Chapters focus on improvements in specific processes such as refrigeration, drying and heat

recovery. Part five discusses water reuse and wastewater treatment in the food industry. Chapters cover water recycling, disinfection techniques, aerobic and anaerobic systems for treatment of wastewater. The final section concentrates on particular industry sectors including fresh meat and poultry, cereals, sugar, soft drinks, brewing and winemaking. With its distinguished editors and international team of contributors, Handbook of water and energy management in food processing is a standard reference for the food industry. Provides an overview of key drivers for better management Reviews techniques for improvements in efficiency of water and energy use and waste water treatment Examines house keeping procedures and measurement and process control

With the world's growing population, the provision of a safe, nutritious and wholesome food supply for all has become a major challenge. To achieve this, effective risk management based on sound science and unbiased information is required by all stakeholders, including the food industry, governments and consumers themselves. In addition, the globalization of the food supply requires the harmonization of policies and standards based on a common understanding of food safety among authorities in countries around the world. With some 280 chapters, the Encyclopedia of Food Safety provides unbiased and concise overviews which form in total a comprehensive coverage of a broad range of food

safety topics, which may be grouped under the following general categories: History and basic sciences that support food safety; Foodborne diseases, including surveillance and investigation; Foodborne hazards, including microbiological and chemical agents; Substances added to food, both directly and indirectly; Food technologies, including the latest developments; Food commodities, including their potential hazards and controls; Food safety management systems, including their elements and the roles of stakeholders. The Encyclopedia provides a platform for experts from the field of food safety and related fields, such as nutrition, food science and technology and environment to share and learn from state-of-the art expertise with the rest of the food safety community. Assembled with the objective of facilitating the work of those working in the field of food safety and related fields, such as nutrition, food science and technology and environment - this work covers the entire spectrum of food safety topics into one comprehensive reference work The Editors have made every effort to ensure that this work meets strict quality and pedagogical thresholds such as: contributions by the foremost authorities in their fields; unbiased and concise overviews on a multitude of food safety subjects; references for further information, and specialized and general definitions for food safety terminology In maintaining confidence in the safety of the food supply, sound scientific

information is key to effectively and efficiently assessing, managing and communicating on food safety risks. Yet, professionals and other specialists working in this multidisciplinary field are finding it increasingly difficult to keep up with developments outside their immediate areas of expertise. This single source of concise, reliable and authoritative information on food safety has, more than ever, become a necessity

A comprehensive approach to selecting and understanding drying equipment for chemical and mechanical engineers A detailed reference of interest for engineers and energy specialists working in the process industry field, *Drying in the Process Industry* investigates the current state of the art of today's industrial drying practices, examines the factors influencing drying's high costs in both equipment and energy consumption, and summarizes key elements for keeping drying operations under budget and performing at peak capacity safely while respecting the environment. Extensive coverage of dryer basics as well as essential procedures concerning the selection of industrial dryers—such as how to gather results of relevant laboratory measurements, carry out small-scale tests, and correctly size equipment—help to inform readers on criteria for generating scalable specifications that greatly assist buying decisions. *Drying in the Process Industry*: Takes a practical approach to drying equipment, from an author with four

decades in the industry Describes a diverse array of drying equipment (convective, likeflash, spray, fluid-bed, and rotary; contact, like paddle andsteam; radiation) from an engineer's perspective Provides quick and ready access to drying technologies withreferences to more detailed literature Treats drying in the context of the entire productionprocess True of all process facilities where drying plays an importantrole, such as those in the chemical, pharmaceutical, plastics, andfood industries, the purchase of improper industrial dryingequipment can significantly affect a manufacturer's economic bottomline. With the guidance offered in this book, engineers will beable to confidently choose industrial drying equipment thatincreases profits, runs efficiently, and optimally suits theirneeds. Food Engineering Handbook, Two-Volume Set provides a stimulating and up-to-date review of food engineering phenomena. It also addresses the basic and applied principles of food engineering methods used in food processing operations around the world. Combining theory with a practical, hands-on approach, this set examines the thermophysical properties and modeling of selected processes such as chilling, freezing, and dehydration, and covers the key aspects of food engineering, from mass and heat transfer to steam and boilers, heat exchangers, diffusion, and absorption. Comprised of Food Engineering Handbook: Food Engineering Fundamentals and Food Engineering

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Handbook: Food Process Engineering, this comprehensive resource: Explains the interactions between different food constituents that might lead to changes in food properties Describes the characterization of the heating behavior of foods, their heat transfer, heat exchangers, and the equipment used in each food engineering method Discusses rheology, fluid flow, evaporation, distillation, size reduction, mixing, emulsion, and encapsulation Provides case studies of solid-liquid and supercritical fluid extraction and food behaviors Explores fermentation, enzymes, fluidized-bed drying, and more Presenting cutting-edge information on new and emerging food engineering processes, Food Engineering Handbook, Two-Volume Set offers a complete reference on the fundamental concepts, modeling, quality, safety, and technologies associated with food engineering and processing operations today.

Alternative green food processing technologies have gained much technical and industrial attention in recent years as a potential means of reducing costs and promoting consumer awareness of corporate environmental responsibility. However, utilizing green principles is now becoming an effective business approach to enhance vegetable oil processing profitability. Two years have passed since the first edition of Green Vegetable Oil Processing was published. The Revised First Edition includes much of the content of the first edition, but

incorporates updated data, details, images, figures, and captions. This book addresses alternative green technologies at various stages of oilseed and vegetable oil processing. This includes oil extraction technologies such as expeller, aqueous and supercritical methods, and green modifications of conventional unit operations such as degumming, refining, bleaching, hydrogenation, winterizing/dewaxing, fractionation, and deodorization. While most chapters describe soy oil processing, the techniques described equally applicable to oils and fats in general. Documents the current state of green oil processing technologies available today Addresses alternative green technologies at various stages of oilseed processing Includes technologies already in commercial use and some that are still in developmental stages The 1st World Conference and Technology Exhibition on Biomass for Energy and Industry, held in Sevilla in June 2000, brought together for the first time the traditional European Conference on Biomass for Energy and Industry and the Biomass Conference of the Americas, thus creating the largest and most outstanding event in the worldwide biomass sector. The conference elaborated innovative global strategies, projects and efficient practice rules for energy and the environment at a key stage in the industry's development. New concepts and projects were highlighted to increase the social and political awareness for a change in worldwide resource consumption and to promote economically, socially and environmentally sustainable development for the next millennium. In 2 volumes, the Proceedings include some

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470 papers essential to an understanding of current thinking, practice, research and global developments in the biomass sector - a vital reference source for researchers, manufacturers, and policy makers involved or interested in the use of biomass for energy and industry. Drying of pharmaceutical products, drying of biotechnological products, drying of peat and biofuels, drying of fibrous materials, drying of pulp and paper, of wood and wood products, drying in mineral processing, modeling, measurements, and efficiencies of infrared dryers for paper drying, drying of coal, drying of coated webs, drying of polymers, superheated steam drying, dryer feeder systems, dryer emission control systems, cost estimation methods for dryers, energy aspects in drying, safety aspects of industrial dryers, humidity measurements, control of industrial dryers.

There have been many developments in the science and technology of thermochemical biomass conversion since the previous conference on Advances in Thermochemical Biomass Conversion in Interlaken, Switzerland, in 1992. This fourth conference again covers all aspects of thermal biomass conversion systems from fundamental research through applied research and development to demonstration and commercial applications to reflect the progress made in the last four years. All aspects of bioenergy systems are covered from pretreatment through to end-user applications with increased consideration paid to the environmental benefits and problems of implementing bio-energy systems. There was an excellent response with over 200 papers offered and over 180 delegates from 29 countries attending the conference. The programme was divided into five main areas covering pyrolysis, pretreatment, gasification, combustion and system studies and this division is reflected in the structure of these conference proceedings. Each main section was preceded by a state-of-the-art review to

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provide a focus for the ensuing presentations and an authoritative reference. All the papers included have been subject to a full peer review process. As with any international conference, an important aim was to exchange ideas and discuss problems with fellow researchers, as well as to hear about the latest research and development and applications. A workshop programme was included to encourage this interaction in areas of interest selected by participants. The resultant workshop reports provide a summary of topical problems and opportunities.

Development of Direct Contact Superheated Steam Drying Process for Biomass
Final Report
Evaluation of the Superheated Steam Drying Process for Wool
Introduction to Advanced Food Process Engineering
CRC Press

Pinch analysis and related techniques are the key to design of inherently energy-efficient plants. This book shows engineers how to understand and optimize energy use in their processes, whether large or small. Energy savings go straight to the bottom line as increased profit, as well as reducing emissions. This is the key guide to process integration for both experienced and newly qualified engineers, as well as academics and students. It begins with an introduction to the main concepts of pinch analysis, the calculation of energy targets for a given process, the pinch temperature and the golden rules of pinch-based design to meet energy targets. The book shows how to extract the stream data necessary for a pinch analysis and describes the targeting process in depth. Other essential details include the design of heat exchanger networks, hot and cold utility systems, CHP (combined heat and power), refrigeration and optimization of system operating conditions. Many tips and techniques for practical application are covered, supported by several detailed case studies and other

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examples covering a wide range of industries, including buildings and other non-process situations. The only dedicated pinch analysis and process integration guide, fully revised and expanded supported by free downloadable energy targeting software The perfect guide and reference for chemical process, food and biochemical engineers, plant engineers and professionals concerned with energy optimisation, including building designers Covers the practical analysis of both new and existing systems, with full details of industrial applications and case studies

This book provides recent advances in research on drying of particulate and porous materials. It is based on a selection of papers presented at the XI Polish Drying Symposium 2005. The contributions cover theoretical, as well as experimental and modeling research on heat and mass transfer processes during drying of porous material and fluidized beds. The book is a pioneering contribution to the science and technology of drying of particulate solids. In this book, suitable examples of how to increase the shelf life of food materials while preserving their desirable original features are provided.

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