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The global warming phenomenon as a significant sustainability issue is gaining worldwide support for development of renewable energy technologies. The term “polygeneration” is referred to as “an energy supply system, which delivers more than one form of energy to the final user.” For example, electricity, cooling and desalination can be delivered from a polygeneration process. The polygeneration process in a hybrid solar thermal power plant can deliver electricity with less impact on the environment

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compared to a conventional fossil fuel-based power generating system. It is also THE next generation energy production technique with the potential to overcome the undesirable intermittence of renewable energy systems. In this study, the polygeneration process simultaneous production of power, vapor absorption refrigeration (VAR) cooling and multi-effect humidification and dehumidification (MEHD) desalination system from different heat sources in hybrid solar-biomass (HSB) system with higher energy efficiencies (energy and exergy), primary energy savings (PES) and payback period are investigated, focusing on several aspects associated with hybrid solar-biomass power generation installations, such as wide availability of biomass resources and solar direct normal

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irradiance (DNI), and other technologies. Thermodynamic evaluation (energy and exergy) of HSB power has also been investigated, along with the VAR cooling system, the modelling, simulation, optimization and cost analysis of the polygeneration hybrid solar biomass system, all accompanied by multiple case studies and examples for practical applications. This volume provides the researcher, student and engineer with the intellectual tool needed for understanding new ideas in this rapidly emerging field. The book is also intended to serve as a general source and reference book for the professional (consultant, designer, contractor etc.) who is working in the field of solar thermal, biomass, power plant, polygeneration, cooling and process heat. It is a must-have for

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anyone working in this field.

Gathering some 30 entries from the Encyclopedia of Sustainability Science and Technology, this book presents fundamental principles and technologies for sustainably harnessing solar energy. Covers photovoltaics, solar thermal energy, solar radiation and more.

The bible of solar engineering that translates solar energy theory to practice, revised and updated The updated Fifth Edition of Solar Engineering of Thermal Processes, Photovoltaics and Wind contains the fundamentals of solar energy and explains how we get energy from the sun. The authors—noted experts on the topic—provide an introduction to the technologies that harvest, store, and deliver solar energy,

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such as photovoltaics, solar heaters, and cells. The book also explores the applications of solar technologies and shows how they are applied in various sectors of the marketplace. The revised Fifth Edition offers guidance for using two key engineering software applications, Engineering Equation Solver (EES) and System Advisor Model (SAM). These applications aid in solving complex equations quickly and help with performing long-term or annual simulations. The new edition includes all-new examples, performance data, and photos of current solar energy applications. In addition, the chapter on concentrating solar power is updated and expanded. The practice problems in the Appendix are also updated, and instructors have access to an updated print Solutions Manual.

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This important book:

- Covers all aspects of solar engineering from basic theory to the design of solar technology
- Offers in-depth guidance and demonstrations of Engineering Equation Solver (EES) and System Advisor Model (SAM) software
- Contains all-new examples, performance data, and photos of solar energy systems today
- Includes updated simulation problems and a solutions manual for instructors

Written for students and practicing professionals in power and energy industries as well as those in research and government labs, *Solar Engineering of Thermal Processes, Fifth Edition* continues to be the leading solar engineering text and reference.

Principles and Applications of Solar Energy

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Emerging Technologies in Agricultural Engineering

Energy Security for India : Role of Renewables

Principles of Solar Engineering

Fundamentals and Innovations in Solar Energy

This book focuses on latent heat storage, which is one of the most efficient ways of storing thermal energy. Unlike the sensible heat storage method, the latent heat storage method provides much higher storage density with a smaller difference between storing and releasing temperatures. Thermal Energy Storage with Phase Change Materials

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is structured into four chapters that cover many aspects of thermal energy storage and their practical applications. Chapter 1 reviews selection, performance, and applications of phase change materials. Chapter 2 investigates mathematical analyses of phase change processes. Chapters 3 and 4 present passive and active applications for energy saving, peak load shifting, and price-based control heating using phase change materials. These chapters explore the hot topic of energy

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saving in an overarching way, and so they are relevant to all courses. This book is an ideal research reference for students at the postgraduate level. It also serves as a useful reference for electrical, mechanical, and chemical engineers and students throughout their work. FEATURES Explains the technical principles of thermal energy storage, including materials and applications in different classifications Provides fundamental calculations of heat transfer with phase change Discusses the benefits and limitations

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of different types of phase change materials (PCM) in both micro- and macroencapsulations Reviews the mechanisms and applications of available thermal energy storage systems Introduces innovative solutions in hot and cold storage applications

PHYSICS OF Solar Energy

Science/Physics/Energy The definitive guide to the science of solar energy You hold in your hands the first, and only, truly comprehensive guide to the most abundant

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and most promising source of alternative energy—solar power. In recent years, all major countries in the world have been calling for an energy revolution. The renewable energy industry will drive a vigorous expansion of the global economy and create more “green” jobs. The use of fossil fuels to power our way of living is moving toward an inevitable end, with sources of coal, petroleum, and natural gas being fiercely depleted. Solar energy offers a ubiquitous, inexhaustible, clean, and highly

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efficient way of meeting the energy needs of the twenty-first century. This book is designed to give the reader a solid footing in the general and basic physics of solar energy, which will be the basis of research and development in new solar engineering technologies in the years to come. As solar technologies like solar cells, solar thermal power generators, solar water heaters, solar photochemistry applications, and solar space heating-cooling systems become more and more prominent, it has become essential that

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the next generation of energy experts—both in academia and industry—have a one-stop resource for learning the basics behind the science, applications, and technologies afforded by solar energy. This book fills that need by laying the groundwork for the projected rapid expansion of future solar projects.

The updated, cornerstone engineering resource of solar energy theory and applications. Solar technologies already provide energy for heat, light, hot water,

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electricity, and cooling for homes, businesses, and industry. Because solar energy only accounts for one-tenth of a percent of primary energy demand, relatively small increases in market penetration can lead to very rapid growth rates in the industry???which is exactly what has been projected for coming years as the world moves away from carbon-based energy production. **Solar Engineering of Thermal Processes, Third Edition provides the latest thinking and practices for engineering solar**

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technologies and using them in various markets. This Third Edition of the acknowledged leading book on solar engineering features: Complete coverage of basic theory, systems design, and applications Updated material on such cutting-edge topics as photovoltaics and wind power systems New homework problems and exercises

**Principles of Sustainable Energy Systems,
Second Edition
Solar Energy**

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Solar Energy Engineering Simulation, Modelling, and Optimization Principles and Applications

Low-Temperature Energy Systems with Applications of Renewable Energy investigates a wide variety of low-temperature energy applications in residential, commercial, institutional, and industrial areas. It addresses the basic principles that form the groundwork for more efficient energy conversion processes and includes detailed practical methods for carrying out these critical processes. This work considers new

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directions in the engineering use of technical thermodynamics and energy, including more in-depth studies of the use of renewable sources, and includes worked numerical examples, review questions, and practice problems to allow readers to test their own comprehension of the material. With detailed explanations, methods, models, and algorithms, Low-Temperature Energy Systems with Applications of Renewable Energy is a valuable reference for engineers and scientists in the field of renewable energy, as well as energy researchers and academics. Features end-of chapter review sections with

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questions and exercises for practical study and utilization. Presents methods for a great variety of energy applications to improve their energy operations. Applies real-world data to demonstrate the impact of low-temperature energy systems on renewable energy use today.

This book covers an array of issues on emerging agricultural engineering and technology, featuring new research and studies. The volume is broken into three parts: emerging technologies, energy management in agriculture, and management of natural resources, in which particular

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attention is paid to water management, a necessary consideration for successful crop production, especially in water-scarce regions. Topics include: alleviating drainage congestion solar energy for agriculture anaerobic digestion by inoculation with compost self-propelled inter-cultivators agrobiodiversity watershed development and management This volume offers academia, engineers, technologists, students, and others from different disciplines information to gain knowledge on the breadth and depth of this multifaceted field of agricultural engineering. There is an urgent need to

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explore and investigate the current shortcomings and challenges of the current innovations and challenges.

This book focuses on solar-energy-based renewable energy systems and discusses the generation of electric power using solar photovoltaics, as well as some new techniques, such as solar towers, for both residential and commercial needs. Such systems have played an important role in the move towards low-emission and sustainable energy sources. The book covers a variety of applications, such as solar water heaters, solar air heaters, solar drying, nanoparticle-

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based direct absorption solar systems, solar volumetric receivers, solar-based cooling systems, solar-based food processing and cooking, efficient buildings using solar energy, and energy storage for solar thermal systems. Given its breadth of coverage, the book offers a valuable resource for researchers, students, and professionals alike.

*Renewable Energy Engineering and Technology
Concentrating Solar Power and Fuels
Atmosphere, Environment, Climate Change and
Renewable Energy*

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Principles of Solar Engineering, Second Edition

As perhaps the most promising of all the renewable energy sources available today, solar energy is becoming increasingly important in the drive to achieve energy independence and climate balance. This new book is the masterwork from world-renowned expert Dr. Soteris Kalogirou, who has championed solar energy for decades. The book includes all areas of solar energy engineering, from the fundamentals to the highest level of current research. The author includes pivotal subjects such as solar collectors, solar water heating, solar space heating

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and cooling, industrial process heat, solar desalination, photovoltaics, solar thermal power systems, and modeling of solar systems, including the use of artificial intelligence systems in solar energy systems, modeling and performance prediction. *Written by one of the world's most renowned experts in solar energy *Covers the hottest new developments in solar technology, such as solar cooling and desalination *Packed with quick look up tables and schematic diagrams for the most commonly used systems today'

The book details sources of thermal energy, methods of capture, and applications. It describes the basics of

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thermal energy, including measuring thermal energy, laws of thermodynamics that govern its use and transformation, modes of thermal energy, conventional processes, devices and materials, and the methods by which it is transferred. It covers 8 sources of thermal energy: combustion, fusion (solar) fission (nuclear), geothermal, microwave, plasma, waste heat, and thermal energy storage. In each case, the methods of production and capture and its uses are described in detail. It also discusses novel processes and devices used to improve transfer and transformation processes.

"The three-volume handbook showcases the state of the

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art in the use of concentrated sunlight to produce electricity, renewable fuel, including hydrogen and low-carbon synthesis gas, and valuable chemical commodities such as ammonia and cement. The handbook illustrates the value and diversity of applications for concentrating solar power to contribute to the expanding decarbonization of multiple cross-cutting energy sectors. Volume 1: Concentrating Solar Thermal Power, provides an overview of key technologies, principles, and challenges of concentrating solar power (CSP) as well as the use of concentrating solar thermal for process heating and district markets. The ten chapters of this volume

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provide the reader with the technical background on the solar resource for concentrating solar thermal, the principles and design of concentrating optics, and descriptions of state-of-the-art and emerging solar collector and receiver technologies, thermal storage and thermal-to-electric conversion and power cycles for CSP. It also contains a comprehensive summary of operations and maintenance requirements for CSP plants, and commercial CSP plants and markets around the world. Volume 2, Solar Thermochemical Processes and Products, covers the use of concentrated solar radiation as the heat source to drive endothermic chemical reactions to produce

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renewable fuels and valuable chemical commodities, equivalently storing solar energy in chemical bonds. The thermodynamic underpinnings of a number of approaches to produce fuel and results of demonstrations of solar thermochemical reactors for these processes at prototype scale are presented. Processes presented include thermochemical metal oxide reduction/oxidation cycles to split water and carbon dioxide solar chemical looping reformation of methane to produce synthesis gas, high temperature electrochemistry, and gasification of biomass. Research on the thermochemical storage for CSP and high temperature production of cement and ammonia to

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illustrate the use concentrated solar energy to produce valuable chemical products are also included. Volume 3 contains reprinted archival papers to support and supplement the material in Volumes 1 and 2. These papers provide background information on the economics and alternative use cases of CSP not covered in Volume 1, and expand on the material related to the chapter topics presented in Volume 2. Potential commercialization, such as prototype and demonstration projects, are highlighted. The papers are intended as a starting point for a more in-depth study of the topics"--

Principles of Renewable Energy Engineering with

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Worked Examples

Thermal Energy Storage with Phase Change Materials
Solar Energy Principles of Thermal Collection and Storage

Design and Performance Optimization of Renewable Energy Systems

Principles of High Temperature Solar Thermal Technology

Renewable Energy Engineering and Technology: Principles and Practice - covers major renewable energy resources and technologies for various applications. The

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book is conceived as a standard reference book for students, experts, and policy-makers. It has been designed to meet the needs of these diverse groups. While covering the basics of scientific and engineering principles of thermal engineering, heat and mass transfer, fluid dynamics, and renewable energy resource assessments, the book further deals with the basics of applied technologies and design practices for following renewable energy resources.- Solar (thermal and photovoltaic)- Wind - Bio-energy including

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liquid biofuels and municipal solid waste- Other renewables such as tidal, wave, and geothermalThe book is designed to fulfil the much-awaited need for a handy, scientific, and easy-to-understand comprehensive handbook for design professionals and students of renewable energy engineering courses. Besides the sheer breadth of the topics covered, what makes this well-researched book different from earlier attempts is the fact that this is based on extensive practical experiences of the editor and the authors. Thus, a lot of emphasis has

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been placed on system sizing and integration. Ample solved examples using data for India make this book a relevant and an authentic reference.

In this volume, engineering principles of renewable energy are presented as extensions of the various subjects covered in regular engineering courses. Topics include solar thermal and solar PV power, wind power, energy storage, tidal power, wave power, and ocean thermal energy, and hydroelectric, geothermal and biomass systems. The comprehensive textbook brings

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the principles of renewable energy engineering together in a single book equivalent to that of a standard engineering title. A novel feature of this unique reference is the 30 worked examples and problems highlighted at the end of each chapter. Numerical answers are provided for all the problems. Readers should be able to avoid the need to refer to several books on individual energy sources to develop a course on renewable energy. This book presents the methods of quantitative determination of solar

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irradiation incident amount on a surface on the Earth. It brings together information not found elsewhere in a single source, and includes an innovative exposition of expert system methodologies used in the domain of solar irradiation and energy. The book provides a background to the underlying physical principles of solar irradiation and energy, with explanations as to how these can be modelled and applied.

***Fundamentals, Technology, Systems,
Economics***

Physics of Solar Energy

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Basic Principles, Thermal Modeling, and Its Application

Solar Energy Fundamentals and Modeling Techniques

Principles, Design, and Applications

This second edition of Principles of Solar Engineering covers the latest developments in a broad range of topics of interest to students and professionals interested in solar energy applications. With the scientific fundamentals included, the book covers important areas such as heating and cooling, passive solar applications, detoxification and biomass energy conversion. This comprehensive textbook provides examples of methods of solar engineering from around the world and

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includes examples, solutions and data applicable to international solar energy issues. A solutions manual is available to qualified instructors.

This book provides recent trends and innovation in solar energy. It covers the basic principles and applications of solar energy systems. Various topics covered in this book include introduction and overview of solar energy, solar PV generation, solar thermal generation, innovative applications of solar energy, smart energy system, smart grid and sustainability, solar energy forecasting, advances in solar battery, thermal storage of solar energy, solar energy pricing, advances in hybrid solar system, solar system tracking for maximum power generation, phase change materials and its application, sensitivity analysis in solar systems,

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environmental feasibility of solar hybrid systems, regulatory implications of solar energy integration with grid, impact of the photovoltaic integration on the hydrothermal dispatch on power systems and potential and financial evaluation of floating solar PV in Thailand—a case study. This book will be useful for the students, academicians, researchers, policymakers, economists and professionals working in the area of solar energy.

New section on Wind Energy. Coverage on Solar thermal-electric power, Scheffler cooker and Spherical bowl.

Applications of Phase change materials and Telecommunication Sheds described. Enhanced coverage on Solar Cells. Discussion on Bio-diesel, and up.

Thermal Energy

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Photovoltaic/Thermal (PV/T) Systems

SOLAR ENERGY.

Sources, Recovery, and Applications

Advanced Solar-Distillation Systems

The information in this book can be used to teach advanced undergraduate or beginning graduate students the fundamental science and engineering of solar energy technologies. It is written in a way that will allow the reader to generalize the information presented in the book rather than

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present a compendium of facts. A concise and detailed review of solar energy and its interaction with materials is first given followed by discussion of photovoltaic devices and solar thermal technologies like the solar chimney, solar (power) tower, flat plate water heater, and electricity generation. This is a broad and detailed presentation of information that can be used by the reader to understand existing solar

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energy related technologies or to design their own.

This book provides the most up-to-date information on hybrid solar cell and solar thermal collectors, which are commonly referred to as Photovoltaic/Thermal (PV/T) systems. PV/T systems convert solar radiation into thermal and electrical energy to produce electricity, utilize more of the solar spectrum, and save space by combining the two structures to cover

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lesser area than two systems separately. Research in this area is growing rapidly and is highlighted within this book. The most current methods and techniques available to aid in overall efficiency, reduce cost and improve modeling and system maintenance are all covered. In-depth chapters present the background and basic principles of the technology along with a detailed review of the most current literature. Moreover, the book details

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design criteria for PV/T systems including residential, commercial, and industrial applications. Provides an objective and decisive source for the supporters of green and renewable source of energy Discusses and evaluates state-of-the-art PV/T system designs Proposes and recommends potential designs for future research on this topic

This second edition of Concentrating Solar Power Technology edited by Keith

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Lovegrove and Wes Stein presents a fully updated comprehensive review of the latest technologies and knowledge, from the fundamental science to systems design, development, and applications. Part one introduces the fundamental principles of CSP systems, including site selection and feasibility analysis, alongside socio-economic and environmental assessments. Part two focuses on technologies including linear Fresnel reflector technology,

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parabolic-trough, central tower, and parabolic dish CSP systems, and concentrating photovoltaic systems. Thermal energy storage, hybridization with fossil fuel power plants, and the long-term market potential of CSP technology are also explored. Part three goes on to discuss optimization, improvements, and applications, such as absorber materials for solar thermal receivers, design optimization through integrated techno-economic modelling,

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and heliostat size optimization. With its distinguished editors and international team of expert contributors, Concentrating Solar Power Technology, 2nd Edition is an essential guide for all those involved or interested in the design, production, development, optimization, and application of CSP technology, including renewable energy engineers and consultants, environmental governmental departments, solar thermal

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equipment manufacturers, researchers, and academics. Provides a comprehensive review of concentrating solar power (CSP) technology, from the fundamental science to systems design, development and applications Reviews fundamental principles of CSP systems, including site selection and feasibility analysis and socio-economic and environmental assessments Includes an overview of the key technologies of parabolic-trough, central tower linear Fresnel reflector,

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and parabolic dish CSP systems, and
concentrating photovoltaic systems

Solar Energy in Agriculture

principles and practice, Revised
International Edition

Principles, Developments, and
Applications

Concentrating Solar Power Technology

Solar Energy Principles of Thermal
Collection and Strong

**An Engineering-Based Survey of Modern
Solar Energy Concepts and Practical**

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Applications Reflecting major developments in solar energy since the publication of the last edition, **Principles of Solar Engineering, Third Edition** follows the changes in energy policies that have led to the rapid growth of solar energy systems. This latest edition focuses on

Many of the newest developments in solar energy science and technology are covered in this **Second Edition**. There is a thorough up-to-date review of solar

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energy principles and the functioning, design and economics of solar thermal processes. Convection and radiation, properties of materials, components, systems and applications to active space and water heating are discussed. Includes examples and problems of tabulated radiation data and conversion factors.

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Thermal Collection and Storage Tata
McGraw-Hill Education **SOLAR ENERGY.**
Applications of Solar Energy
Solar Engineering of Thermal Processes
A Polygeneration Process Concept for
Hybrid Solar and Biomass Power Plant
Low-Temperature Energy Systems with
Applications of Renewable Energy
Solar Engineering of Thermal Processes,
Photovoltaics and Wind, 5th Edition
Solar Energy Desalination Technology explains how
to obtain clean water from sea water using solar

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energy. Special methods and types used in solar desalination are introduced, providing new thoughts, concepts, and feasible solutions in the desalination field, along with the thermal and economic efficiency relating to current technology. Many places in the world are suffering from fresh water shortage. However, those places are often rich with solar resources, sea water, and/or brackish water resources that could dramatically benefit from solar energy as a viable solution for the production of fresh water. Explains the principles of solar thermal energy usage to produce clean water from sea water Introduces and explains new kinds of solar

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desalination systems, including their technical level and working principle Provides fundamental knowledge on water treatment and solar collection Design and Performance Optimization of Renewable Energy Systems provides an integrated discussion of issues relating to renewable energy performance design and optimization using advanced thermodynamic analysis with modern methods to configure major renewable energy plant configurations (solar, geothermal, wind, hydro, PV). Vectors of performance enhancement reviewed include thermodynamics, heat transfer, exergoeconomics and neural network techniques.

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Source technologies studied range across geothermal power plants, hydroelectric power, solar power towers, linear concentrating PV, parabolic trough solar collectors, grid-tied hybrid solar PV/Fuel cell for freshwater production, and wind energy systems. Finally, nanofluids in renewable energy systems are reviewed and discussed from the heat transfer enhancement perspective. Reviews the fundamentals of thermodynamics and heat transfer concepts to help engineers overcome design challenges for performance maximization Explores advanced design and operating principles for solar, geothermal and wind energy systems with

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diagrams and examples Combines detailed mathematical modeling with relevant computational analyses, focusing on novel techniques such as artificial neural network analyses Demonstrates how to maximize overall system performance by achieving synergies in equipment and component efficiency

Completely revised and updated, Principles of Sustainable Energy Systems, Second Edition presents broad-based coverage of sustainable energy sources and systems. The book is designed as a text for undergraduate seniors and first-year graduate students. It focuses on renewable energy

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technologies, but also treats current trends such as the expanding use of natural gas from fracking and development of nuclear power. It covers the economics of sustainable energy, both from a traditional monetary as well as from an energy return on energy invested (EROI) perspective. The book provides complete and up-to-date coverage of all renewable technologies, including solar and wind power, biological processes such as anaerobic digestion and geothermal energy. The new edition also examines social issues such as food, water, population, global warming, and public policies of engineering concern. It discusses energy

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transition—the process by which renewable energy forms can effectively be introduced into existing energy systems to replace fossil fuels. See What's New in the Second Edition: Extended treatment of the energy and social issues related to sustainable energy Analytic models of all energy systems in the current and future economy Thoroughly updated chapters on biomass, wind, transportation, and all types of solar power Treatment of energy return on energy invested (EROI) as a tool for understanding the sustainability of different types of resource conversion and efficiency projects Introduction of the System Advisor Model (SAM) software program,

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available from National Renewable Energy Lab (NREL), with examples and homework problems Coverage of current issues in transition engineering providing analytic tools that can reduce the risk of unsustainable fossil resource use Updates to all chapters on renewable energy technology engineering, in particular the chapters dealing with transportation, passive design, energy storage, ocean energy, and bioconversion Written by Frank Kreith and Susan Krumdieck, this updated version of a successful textbook takes a balanced approach that looks not only at sustainable energy sources, but also provides examples of energy storage,

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industrial process heat, and modern transportation. The authors take an analytical systems approach to energy engineering, rather than the more general and descriptive approach usually found in textbooks on this topic.

Processes and Systems

Solar Power Plants

Handbook of Solar Thermal Technologies

Solar Energy Desalination Technology

An Introduction

This book is primarily intended to serve as a textbook and reference work for graduate and professional training

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coursework on solar desalination of water. The book begins with an introduction to the increasing demand for potable water, various types of water pollution and its impacts on human health, and goes on to cover basics of desalination technologies. It covers all aspects of solar-energy based distillation and desalination for producing potable water resources, including radiation and heat transfer concepts, a history of solar distillation systems, and background on solar collectors. The contents include thermal

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modeling and parametric study of solar distillation. Energy and exergy aspects are analyzed in detail, including energy matrices of solar distillation. A special chapter on exeroeconomics introduces fundamental equations which include the general balance equation, thermodynamic balance equations, and economic balance equations. A chapter on Economic Analysis of Solar Distillation completes the coverage. The book includes solved examples and end-of-chapter exercises in the form of both problems and objective-

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type questions. The contents of this book are useful to students, researchers, professionals, and policymakers looking for a comprehensive resource on solar desalination.

In the introductory and concluding chapters this book strive to satisfy the needs of the interested lay reader by addressing the potential, advantages, and costs of solar power plants. For the interested student, scientist, or technically oriented lay person the physical principles of insolation, its

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variability, concentration, and most efficient use are developed in some detail. Finally, experimental and theoretical developments in the recently created field of solar driven chemistry (via thermal, quantum, or electrical excitation) are described. The contributions in this book are written by leading solar scientists and engineering experts whose extensive background and experience in solar energy lend authenticity and completeness to the book. Design aspects of, and results from large

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experimental and demonstration plants are described by individuals who were directly involved in the design and testing of many of these plants. Consideration of the viability and future economics of large-scale solar power generation provides an outlook on the energy contributions which can be expected from an optional future supply of abundant and renewable energy, having little impact on the environment. This provides the rationale for the continued commitment to the development of solar power technologies by researchers,

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engineers, and industry. The eventual depletion of, or future political attacks on our energy supply will have less serious impact once this renewable option is in place.

The book focuses on all the possible options of solar energy use and generation in agriculture sector. The book covers basic fundamentals of solar energy resources and technologies are discussed in detail. Overall, the book contains 23 chapters. Out of these, first two chapters focus on solar energy use pattern in

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agriculture sector in India at present time along with future scopes. The next eight chapters (Chapter No. 3-10) give a basic knowledge on fundamental principles of solar photovoltaic and thermal technologies. Last 13 chapters (Chapter No. 11-23) presents the applications of solar thermal and photovoltaic technology in different farm operations and postharvest processing in agriculture sector. Note: T& F does not sell or distribute the Hardback in India, Pakistan, Nepal, Bhutan, Bangladesh and

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Sri Lanka. The title is co-published with New India Publishing Agency.

Power from the Sun

Principles of Thermal Collection and Storage