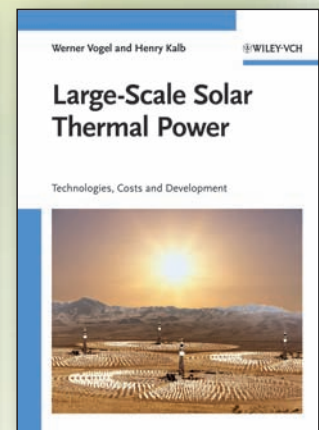
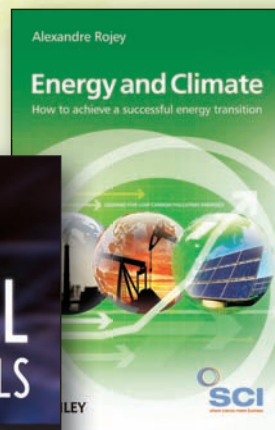
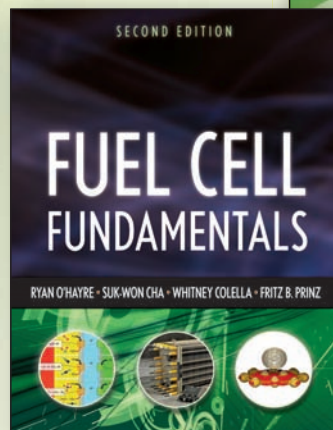
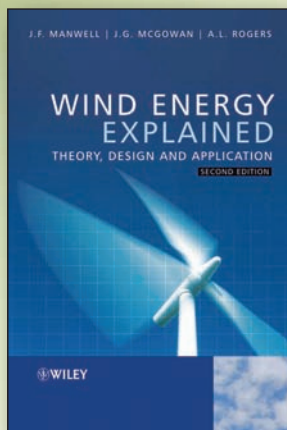
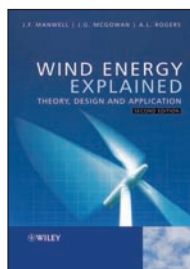


Renewable Energy & Power Engineering



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Wind Energy Explained

Theory, Design and Application

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James F. Manwell, Jon G. McGowan, Anthony L. Rogers, all of Univ. of Massachusetts, USA

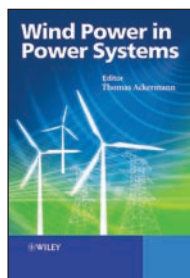
Now fully revised, this second edition builds on its highly successful predecessor, now the leading textbook for wind energy degree courses.

The author team draws on substantial practical

experience to provide a highly accessible introduction to the cross-disciplinary field of wind engineering.

Hardcover 640 pp 2010 ISBN 978-0-470-01500-1 USD \$100.00

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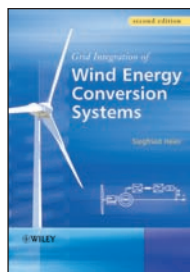


Wind Power in Power Systems

Thomas Ackermann, Royal Institute of Technology, Sweden; Editor

Containing contributions from global professional and academic experts, this book features extensive coverage of basic network interconnection issues, current research activities and the economic aspects of wind energy integration analyses of current wind turbine technology and related power quality issues, and much more.

Hardcover 742 pp 2005 ISBN 978-0-470-85508-9 USD \$170.00



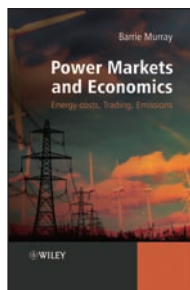
Grid Integration of Wind Energy Conversion Systems

SECOND EDITION

Siegfried Heier, Kassel Univ., Germany; Translated by Rachel Waddington, member of the Institute of Translation and Interpreting, UK

This revised and updated second edition of its critically acclaimed predecessor addresses the engineering challenges of cost-effective transmission and distribution of wind power, such as technical, economic, and safety issues.

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Power Markets and Economics

Energy Costs, Trading, Emissions

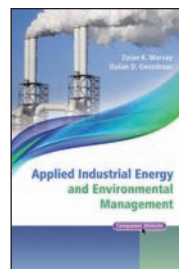
Barrie Murray, Electricity Market Services Limited

"Murray's overview of the link between engineering and economics in the energy sector provides a timely look at the big challenge for the global power industry. . .and provides a sound basis for anyone involved in the wider debate on how the

market should be shaped."—**Engineering and Technology, May 2009**

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Zoran Morvaj, UNDP Country Office, Croatia; Dušan Gvozdenac, Univ. of Novi Sad, Serbia

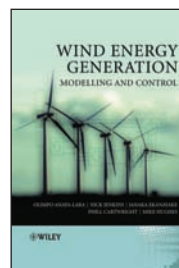
An integrated approach to industrial site energy systems management, with technological solutions for waste avoidance, this book provides both financial dividends and environmental protection. It presents a practical, application-oriented method for energy

performance assessment and improvement in industrial plants.

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Wind Energy Generation

Modelling and Control

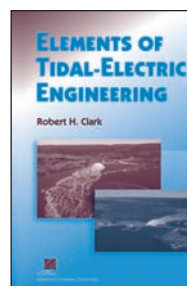
Olimpo Anaya-Lara, Univ. of Strathclyde, Glasgow, UK; Nick Jenkins, Janaka Ekanayake, both of Cardiff Univ., UK; Phillip Cartwright, Rolls-Royce plc, UK; Michael Cartwright, consultant, Imperial College London, UK

Wind Energy Generation examines mechanical and electrical systems, and the control philosophies and schemes that enable the reliable, secure, and cost-effective

operation of these systems. A step-by-step implementation of a generic network is also provided, including models of conventional synchronous generation and induction generator-based wind farms.

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Elements of Tidal-Electric Engineering

Robert H. Clark

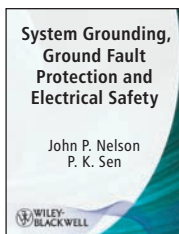
Covering all the stages of a tidal-electric feasibility study, this book includes selecting a site for preliminary assessment, tidal power schemes and modes, hydraulic and mathematical models of estuaries, civil works required for tidal power development, optimizing plant output, economic evaluation and risk assessment,

and environmental impact of construction and operation.

A WILEY-IEEE PRESS PUBLICATION

Hardcover 280 pages 2007 ISBN 978-0-470-10709-6 USD \$147.00

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System Grounding, Ground Fault Protection and Electrical Safety

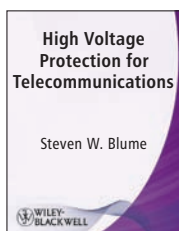
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John P. Nelson, *NEI Electric Power Engineering, Inc.*; P. K. Sen, *NSF Power Systems Engineering Research Center, Colorado School of Mines*

This is the only single-volume book to cover the subjects of grounding, ground fault protections, and safety entirely. Eighty years of experience in academia, research, and industry combine to provide the reader with comprehensive coverage of the topic enhanced by useful examples, short review questions, and problem sets.

A WILEY-IEEE PRESS PUBLICATION

Hardcover 500 pages 2010 ISBN 978-0-470-16766-3 USD TBA



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Steven W. Blume, *Applied Professional Training, Inc*

Featuring a practical, hands-on approach, *High Voltage Protection for Telecommunications* combines all the essential information and key issues surrounding proper protection of telecom-

munications circuits into one book. This guide leads readers through the process of planning, designing, installing, and maintaining safe and reliable data and voice communications circuits that are exposed to high voltage events.

A WILEY-IEEE PRESS PUBLICATION

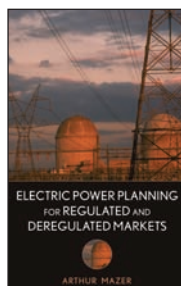
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ALSO available *Electric Power System Basics for the Nonelectrical Professional*

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Electric Power Planning for Regulated and Deregulated Markets

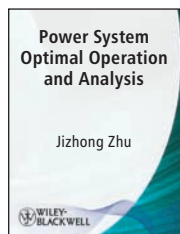
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Arthur Mazer, *Southern California Edison, USA*

Written to provide a broad, working knowledge of the industry, this book describes generation and transmission network equipment; provides an overview of the regulatory framework, system design, and systems operations for ensuring reliable delivery of power; and much more.

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Jizhong Zhu

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Handbook of Large Turbo-Generator Operation and Maintenance

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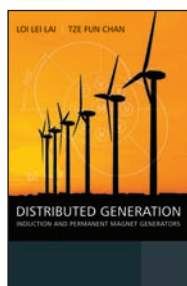
Geoff Klemptner, Isidor Kerszenbaum

This book provides the latest information regarding operation and maintenance of all types of turbine-driven generators built in the world, including actual machine operational problems and failure modes that occur in generating stations and other types of facilities.

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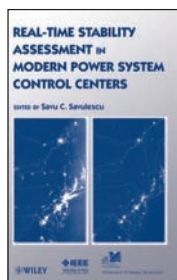
Distributed Generation

Induction and Permanent Magnet Generators

Loi Lei Lai, *City Univ., UK*; Tze Fun Chan, *Hong Kong Polytechnic Univ.*

This book presents a comprehensive exposition of induction and permanent magnet generators for distributed power generation. The authors examine in detail the theory behind these generators, as well as practical design aspects and implementation issues for the latest technologies.

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Real-Time Stability Assessment in Modern Power System Control Centers

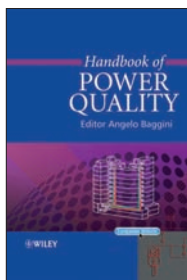
S. C. Savulescu, *Energy Consulting International, Inc*

Here is your practical, hands-on guide for assessing power stability in real time, rather than in offline simulations. Beginning with a SCADA/EMS primer, subsequent material is clustered along the lines traditionally recognized in the industry—from steady-state stability, to transient stability, to voltage stability.

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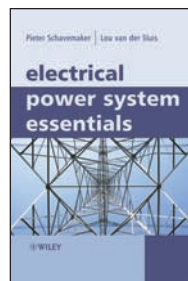


Handbook of Power Quality

Angelo Baggi, *Univ. of Bergamo, Italy*

This comprehensive analysis of power quality problems provides background theory and guidelines on measurement procedures and problem solving. With contributions from experts in all aspects of power quality, it gives a balanced presentation of both scientific and practical information.

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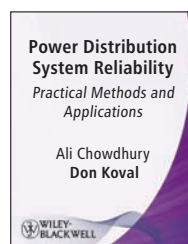
Electrical Power System Essentials

Pieter Schavemaker, Lou van der Sluis, *both of Delft Univ. of Technology, The Netherlands*

An interesting introduction to AC power systems, focusing on the system as a whole. It presents a steady-state analysis of three-phase power systems; the generation, transmission, distribution, and utilization of electric energy; the principles of thermal, nuclear, and renewable energy plants; and power system control and operation.

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Power Distribution System Reliability

Practical Methods and Applications

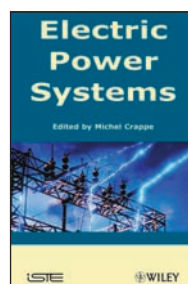
Ali Chowdhury, Don Koval

This practical, hands-on book covers the fundamentals of reliability analysis as they apply to the planning and design of utility, industrial, and commercial electric power distribution

systems using probability methods, fundamentals of power system reliability evaluation, economic evaluation, and equipment.

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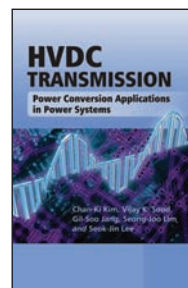


Electric Power Systems

Michel Crape, *Faculté Polytechnique, Belgium*; Editor

This book presents major aspects of and advanced tools for reducing greenhouse gas emissions. Covering the operation and control of electric power systems and the stability and defense of electric power systems, this book features contributions from well-known European specialists in academia and the electrical industry.

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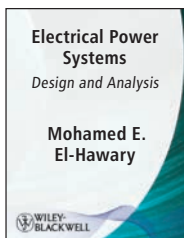
HVDC Transmission

Power Conversion Applications in Power Systems

Chan-Ki Kim, Vijay K. Sood, Gil-Soo Jan, Seong-Joo Lim, Seok-Jin Lee

This up-to-date, A-to-Z treatment features classroom-tested materials with research results and includes the insights of experts from power electronics, control, and simulation backgrounds. The authors walk readers through basic theory and practical applications, while also providing the broader historical context and future development of HVDC technology.

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Electrical Power Systems

Design and Analysis

Mohamed E. El-Hawary, *Dalhousie Univ.*

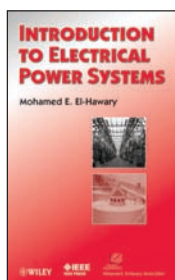
An updated classic, this comprehensive textbook introduces readers to the most relevant concepts and techniques in electric power systems engineering today. With an emphasis on practical motivations for choosing the best design

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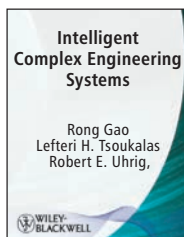
Introduction to Electrical Power Systems

Mohamed E. El-Hawary, *Dalhousie Univ.*

This concise, comprehensive text covers the concepts associated with electric power and energy systems. The author offers a practical treatment—focused on applications—of the major topics required for a solid background in the field, including synchronous machines, transformers, and electric motors.

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Intelligent Complex Engineering Systems

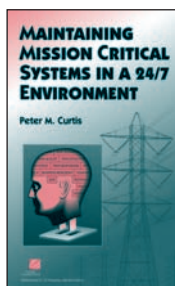
Rong Gao, Lefteri H. Tsoukalas, *both of Purdue Univ.*; Robert E. Uhrig, *Univ. of Tennessee and Oak Ridge National Laboratory*

This book provides a self-contained introduction to the various intelligent tools made available by intelligent systems, presenting a coherent

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Maintaining Mission Critical Systems in a 24/7 Environment

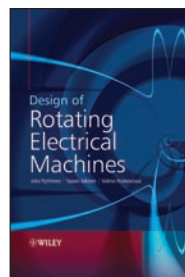
Peter M. Curtis

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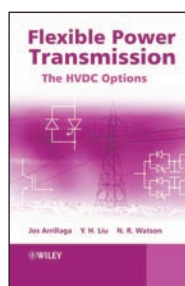


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Juha Pyrhonen, *Lappeenranta Univ. of Technology*; Tapani Jokinen, *Helsinki Univ. of Technology*; Valeria Hrabovcova, *Univ. of Zilina*

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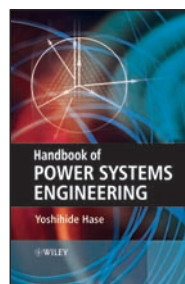
Jos Arrillaga, Y. H. Liu, Neville R. Watson, *both of Univ. of Canterbury, New Zealand*

A review of the flexible high voltage direct current (HVDC) options for efficient power transmission. It highlights the relative merits of both flexible AC transmission systems and HVDC, enabling readers to plan, design, and

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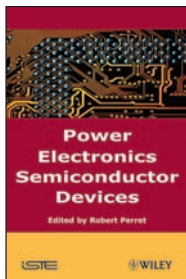
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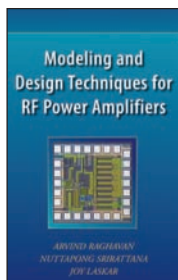
Power Electronics Semiconductor Devices

Robert Perret

This book relates the recent developments in several key electrical engineering R&D labs, concentrating on power electronics switches and their use. It discusses key power electronics technologies, MOSFETs, and IGBTs, and examines silicon carbide potentiality, the use of capacitors, and thermal behavior.

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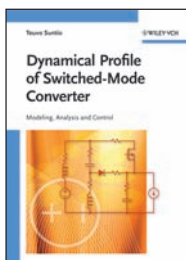
Modeling and Design Techniques for RF Power Amplifiers

Arvind Raghavan, *Intel Corporation*; Nattapong Srirattana, *RF Micro Devices*; Joy Laskar, *Georgia Institute of Technology*

Based on cutting-edge research at the Georgia Institute of Technology, the book covers RF power amplifier design, from device and modeling considerations to advanced circuit design architectures and techniques. It helps readers

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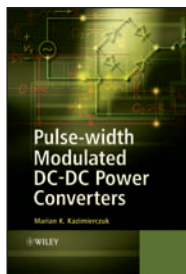
Dynamic Profile of Switched-Mode Converter

Modeling, Analysis and Control

Teuvo Suntio, *Tampere Univ. of Technology, Finland*

This is the first book to collate the data on this topic. It presents the basics and advances in average and small-signal modeling of switched-mode converters, before applying this information to a real canonical converter model. It is backed by examples and experimental evidence.

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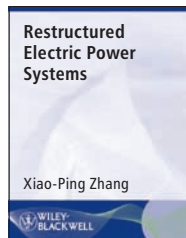


Pulse-width Modulated DC-DC Power Converters

Marian K. Kazimierzczuk, *Wright State Univ.*

With concept-orientated explanations, this book offers state-of-the-art SMPS technology and promotes an understanding of the principle operations of PWM converters. Design-orientated analysis and numerous real-world practical examples—including circuit models—demonstrate how to design these from scratch.

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Restructured Electric Power Systems

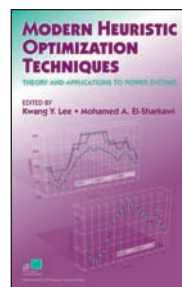
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This invaluable reference reviews the latest developments in analyzing and assessing electricity market behavior and market power and discusses the application of such models in the practical analysis of electricity markets.

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Modern Heuristic Optimization Techniques

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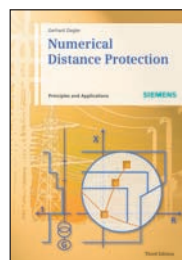
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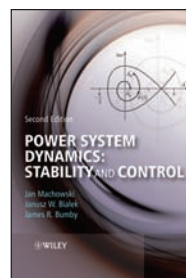
Principles and Applications

THIRD EDITION

Gerhard Ziegler

This updated third edition covers the fundamentals of distance protection and the special features of numerical technology and the application of numerical distance relays in distribution and transmission systems. For both the novice and experienced user, it serves as a reference guide for solving application problems.

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Power System Dynamics

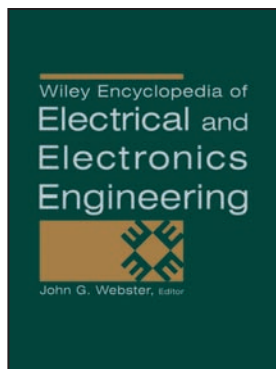
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Wiley Encyclopedia of Electrical and Electronics Engineering

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John G. Webster, Editor

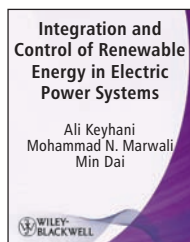
"Overall this is an excellent reference tool. It received the 1999 American Society for Engineering Education Engineering Libraries Division award for Best Reference Work of the Year."
—E-Streams

"... with over 1,400 articles spanning 24 volumes and 19,000 pages, this is the most comprehensive encyclopedia for electrical engineering in existence... an excellent resource."—Library Journal

This 24-volume set offers comprehensive coverage of the electrical and electronics engineering field. Covers a wide range of information from power systems and communications to advanced applications in neural networks and robotics.

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- All articles cross-referenced to related literature of further research.
- Covers history of electrical and electronics engineering, patents, computer engineering, and much more.

Hardcover 17616 pages 1999 ISBN 978-0-471-13946-1
USD \$11150.00



Integration and Control of Renewable Energy in Electric Power Systems

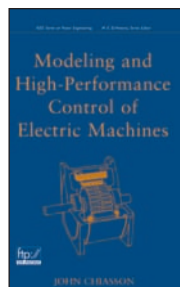
Ali Keyhani, Mohammad N. Marwali, Min Dai

Practical and application-oriented, this useful reference covers the principles, analysis, and synthesis of closed loop control of Pulse Width Modulated (PWM) converters in power electron-

ics systems, with special application emphasis on distributed generation systems and uninterruptible power supplies. Covering major power conversion applications that help professionals from a variety of industries, the text provides a practically oriented system analysis and synthesis that is instructional and inspiring.

Hardcover 600 pages 2010 ISBN 978-0-470-18776-0 USD \$125.00

coming soon

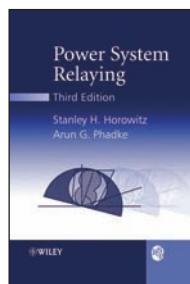


Modeling and High-Performance Control of Electric Machines

John Chiasson, Boise State Univ., USA

An introduction to the modeling and control of electric machines. DC and AC machines (induction, PM synchronous, and BLDC) are all covered in detail. Readers will discover how to derive mathematical models of the machines and how to use the resulting models to design control algorithms that achieve high performance.

Hardcover 736 pages 2005 ISBN 978-0-471-68449-7 USD \$130.00



Power System Relaying

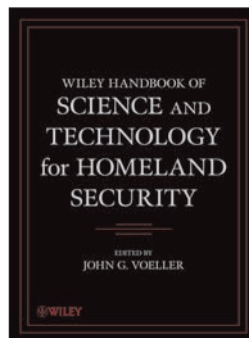
THIRD EDITION

Stanley H. Horowitz, formerly with American Electric Power Corporation, USA; Arun G. Phadke, Virginia Polytechnic Institute, USA

This book provides an understanding of power protection principles and an insight into the phenomena involved. Topics include stability, system protection concepts, and historic outages, along with emerging technologies of adaptive relaying, hidden failures, wide area measurement, global positioning satellites, and the specific application of digital devices.

Hardcover 348 pages 2008 ISBN 978-0-470-05712-4 USD \$130.00

best seller



Wiley Handbook of Science and Technology for Homeland Security

John G. Voeller

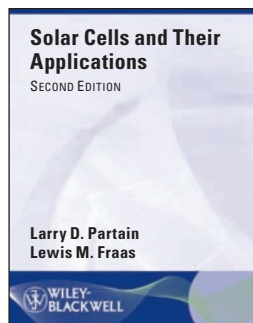
The *Wiley Handbook of Science and Technology for Homeland Security* is an essential and timely collection of resources on every area of homeland security. Edited by the biggest names in their respective fields, its topics include energy systems with special focus on

renewable energy, electricity transmission grids, and lessening dependence on fossil fuels.

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List Price: USD \$1600.00



Solar Cells and Their Applications

new
edition

SECOND EDITION

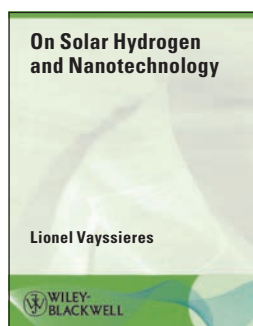
Larry D. Partain, *Edward L. Ginzton Research Center, USA*; Lewis M. Fraas, *JX Crystals*

Newly updated to reflect the advances that have taken place since the 1995 publication of the previous edition, this second draws upon basic physics and engineering principles coupled with

key economic, market, business, investment, and policy factors to explain the current status of solar cells and how their applications will expand over the next few decades.

WILEY SERIES IN MICROWAVE AND OPTICAL ENGINEERING

Hardcover 700 pp 2010 ISBN 978-0-470-44633-1 USD \$140.00



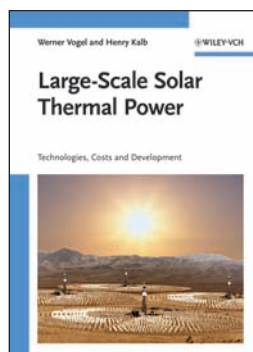
On Solar Hydrogen and Nanotechnology

Lionel Vayssieres, *National Institute for Materials Sciences, Japan*

Global solar electricity is an industry growing at more than 30% annually. Yet solar hydrogen—the direct generation of hydrogen by solar irradiation—is in its infancy. *Solar Hydrogen and Nanotechnology* is a state-of-the-art, comprehensive reference book encom-

passing all recent developments. Written by the foremost experts in the field, the book addresses both fundamentals and applications in a didactic manner; emphasizes materials and the impact of nanotechnology; and highlights societal, educational, environmental, and economic aspects of this growing industry.

Hardcover 544 pp 2010 ISBN 978-0-470-82397-2 USD \$280.00



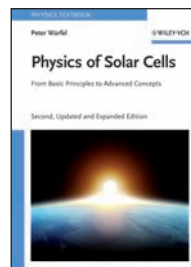
Large-Scale Solar Thermal Power Plants

Werner Vogel, Henry Kalb, *both of System-Innovation Karlsruhe*

This important contribution on renewable energy describes the economical and technical requirements of solar thermal power stations, from the different types of stations to the difficulties of transferring energy to consumers. The renowned expert authors show that this sustainable energy source can play a substantial role

in the substitution of fossil fuels.

Hardcover 250 pp 2010 ISBN 978-3-527-40515-2 USD \$145.00



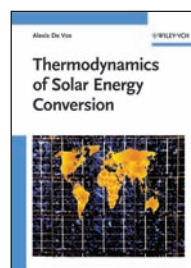
Physics of Solar Cells

From Basic Principles to Advanced Concepts

Peter Würfel, *Univ. Karlsruhe, Germany*; Uli Würfel, *FMF*

Based on the highly regarded first edition, this thoroughly revised and expanded edition describes in detail all aspects of solar cell function, the physics behind each step, as well as the issues to be considered when improving cells and their efficiency.

Paperback 256 pp 2009 ISBN 978-3-527-40857-3 USD \$95.00

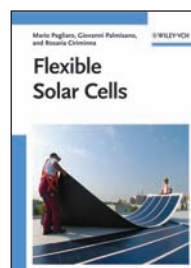


Thermodynamics of Solar Energy Conversion

Alexis De Vos, *Univ. Gent, Belgium*

An excellent generalized introduction into principles of solar energy conversion. De Vos describes situations that are not in equilibrium and in which entropy is continuously created, but are nevertheless stationary. It enables the reader to calculate the explicit values for a broad of processes.

Hardcover 205 pp 2008 ISBN 978-3-527-40841-2 USD \$100.00

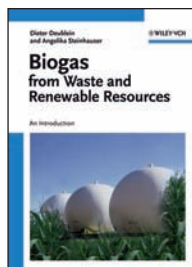


Flexible Solar Cells

Mario Pagliaro, Giovanni Palmisano, Rosaria Ciriminna, *all of Univ. of La Malfa, Italy*

This handy reference book has everything you need to know about new generation solar cells: from the microscopic basics of photovoltaic films to actual design issues of working devices, from engineering aspects to technology integration and market perspectives.

Hardcover 202 pp 2008 ISBN 978-3-527-32375-3 USD \$100.00



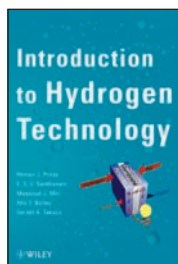
Biogas from Waste and Renewable Resources

An Introduction

Dieter Deublein, *Munich Univ. of Applied Sciences, Germany*; Angelika Steinhauser, *Singapore*

Written as a practical introduction to biogas plant design and operation, this book fills a huge gap by presenting a systematic guide to this emerging technology—information otherwise only available in poorly intelligible reports by US governmental and other official agencies.

Hardcover 472 pp 2008 ISBN 978-3-527-31841-4 USD \$160.00

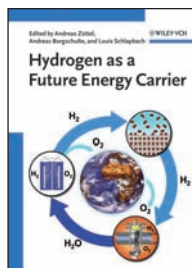


Introduction to Hydrogen Technology

Roman J. Press, K. S. V. Santhanam, Massoud J. Miri, Alla V. Bailey, Gerald A. Takacs

Stressing clean sources of energy, theory of fuel cell operations, hydrogen infrastructure, and devices that use hydrogen, *Chemistry for Hydrogen Technology* prepares readers for future challenges in the areas of energy generation, consumption, and commercialization of hydrogen-powered applications.

Hardcover 308 pp 2008 ISBN 978-0-471-77985-8 USD \$89.95

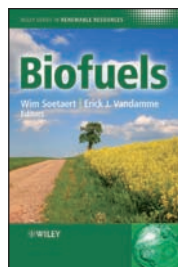


Hydrogen as a Future Energy Carrier

Andreas Züttel, *Univ. of Fribourg, Switzerland*; Andreas Borgschulte, Louis Schlapbach, *both of EMPA, USA*; Editors

Involving chemical, physical, biological, and engineering challenges, the authors present the entire view from fundamental research to viable devices and systems, including the latest scientific results and discoveries, practical approaches to design and engineering, functioning prototypes, and advanced systems.

Hardcover 441 pp 2008 ISBN 978-3-527-30817-0 USD \$215.00



Biofuels

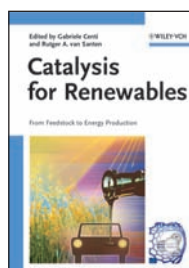
Wim Soetaert, *Ghent Univ., Belgium*, Editor

Erik Vandamme, *Ghent Univ., Belgium*, Co-Editor

Dealing specifically with liquid and gaseous biofuels that can be produced from renewable resources using different processes, *Biofuels* provides a broad overview of biofuel developments from both a technical angle and an economical angle. Trends on prices, markets, and growth are discussed in depth.

WILEY SERIES IN RENEWABLE RESOURCE

Hardcover 256 pp 2009 ISBN 978-0-470-02674-8 USD \$130.00



Catalysis for Renewables

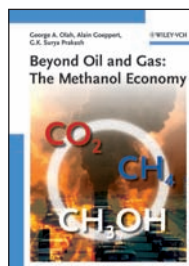
From Feedstock to Energy Production

Gabriele Centi, *Univ. Messina, Italy*; Rutger A. van Santen, *Eindhoven Univ. of Technology, The Netherlands*; Editors

With its focus on catalysis, this seminal work addresses two very hot and timely topics that have significant implications for our future.

The authority behind this practical work is the IDECAT Network of Excellence, and the authors here deftly explain how the use of catalysis will promote the more extensive use of renewable feedstocks in chemical and energy production.

Hardcover 448 pp 2007 ISBN 978-3-527-31788-2 USD \$200.00



Beyond Oil and Gas

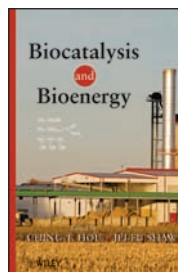
The Methanol Economy

George A. Olah, Alain Goeppert, G. K. Surya Prakash, *all of Univ. of Southern California*

"... I am pleased to recommend most enthusiastically this inexpensive, forward-looking, and inspiring book to anyone concerned with the major challenge of future energy and environmental problems—a central issue for our society."

—The Chemical Educator

Paperback 380 pp 2009 ISBN 978-3-527-32422-4 USD \$21.95

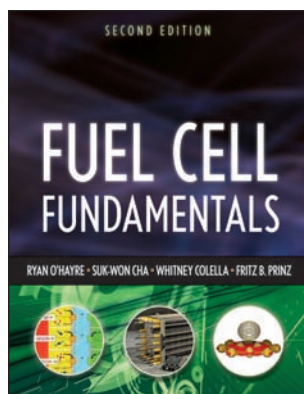


Biocatalysis and Bioenergy

C. T. Hou, Jei-Fu Shaw

Featuring contributions from internationally recognized experts from all sectors of academia, industry, and government research, this book brings together state-of-the-art advances as well as in-depth reviews of biocatalysis and bioenergy with emphasis on biodiesel, bioethanol, biohydrogen, and industrial products.

Hardcover 608 pp 2008 ISBN 978-0-470-13404-7 USD \$149.95



Fuel Cell Fundamentals

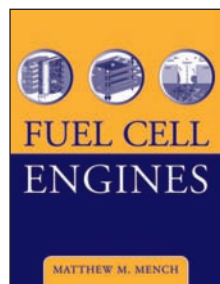
SECOND EDITION

Ryan O'Hayre, Colorado School of Mines, USA; Whitney Colella, Sandia National Laboratory, USA; Suk-Won Cha, Seoul National Univ., Republic of Korea; Fritz B. Prinz, Stanford Univ., USA

As the search for alternative fuels heats up, no topic is hotter than fuel cells. Filling a glaring gap in the literature, *Fuel Cell Fundamentals, Second Edition* gives readers an important intro-

duction to the basic science and engineering behind fuel cell technology. Emphasizing the foundational scientific principles that apply to any fuel cell type or technology, the text provides straightforward descriptions of how fuel cells work, why they offer the potential for high efficiency, and how their unique advantages can best be used. Designed to be accessible to fuel cell beginners, the text is suitable for any engineering or science major with a background in calculus, basic physics, and elementary thermodynamics.

Hardcover 576 pp 2008 ISBN 978-0-470-25843-9 USD \$129.95

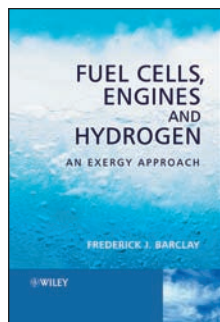


Fuel Cell Engines

Matthew M. Mench, Penn State Univ., USA

Providing an introduction to the fundamental principles of electrochemistry, thermodynamics, kinetics, material science, and transport applied specifically to fuel cells, *Fuel Cell Engines* covers scientific fundamentals and provides a basic understanding that enables proper technical decision-making.

Hardcover 528 pp 2008 ISBN 978-0-471-68958-4 USD \$124.95



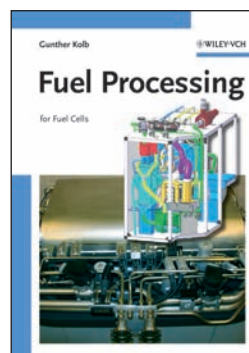
Fuel Cells, Engines and Hydrogen

An Exergy Approach

Frederick J. Barclay, consultant

In this excellent text, Fred Barclay challenges the accepted industry parameters for measuring fuel cell performance and efficiency—reviewing fuel cell technology from the outside.

Hardcover 200 pp 2006 ISBN 978-0-470-01904-7 USD \$120.00



Fuel Processing

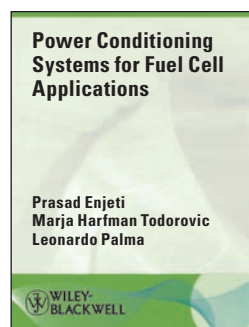
For Fuel Cells

Gunther Kolb, Institut für Mikrotechnik Mainz GmbH, Germany

Adopting a unique integrated engineering approach, this text covers all aspects of fuel processing: catalysts, reactors, chemical plant components, and integrated system design. While providing an introduction to the subject, it also contains recent research developments, making this an invaluable handbook for chemi-

cal, power, and process engineers; electrochemists; catalytic chemists; materials scientists; and engineers in power technology.

Hardcover 434 pp 2008 ISBN 978-3-527-31581-9 USD \$215.00



Power Conditioning Systems for Fuel Cell Applications

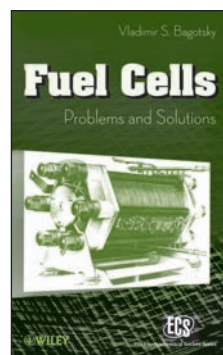
Prasad Enjeti, Marja Harfman Todorovic, both of Texas A & M Univ.; Leonardo Palma, Univ. de Concepcion, Chile

Fuel cell technology is developing at a rapid pace, thanks to the increasing awareness of the need for pollution-free power sources. An essential tool for understanding how to interface a fuel

cell power source to electric utility and to power stand-alone loads and portable electronics, *Power Conditioning Systems for Fuel Cell Applications* presents a detailed description of the analysis, design, and selection of a power conditioning system suitable for a particular fuel cell powered source.

IEEE PRESS SERIES ON POWER ENGINEERING

Hardcover 350 pp 2010 ISBN 978-0-470-27805-5 USD \$120.00



Fuel Cells

Problems and Solutions

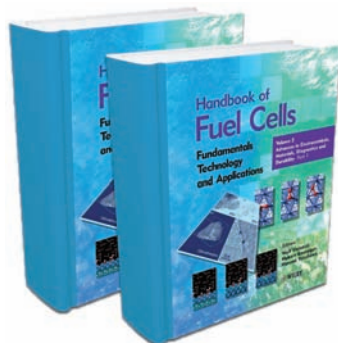
Vladimir S. Bagotsky, Russian Academy of Sciences, retired

With hundreds of new developments and applications in fuel cells reported every month, this publication could not be more timely. Written for a broad audience, the book enables you to understand what fuel cells do, how they do it, and their role in the global economy. You'll not only discover the great potential of fuel cells to solve a tre-

mendous array of problems, you'll also learn the key challenges in fuel cell development and commercialization that researchers are seeking to overcome.

THE ECS SERIES OF TEXTS AND MONOGRAPHS

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Handbook of Fuel Cells

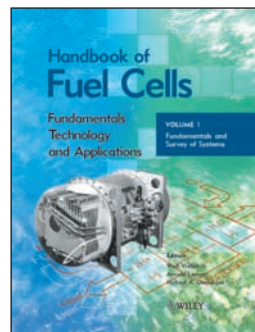
Advances in Electrocatalysis, Materials, Diagnostics and Durability

VOLUMES FIVE AND SIX

Wolf Vielstich, Univ. of Sao Paulo, Brazil; Hubert A. Gasteiger, GM Global R&D; Harumi Yokokawa, NIAST; Editors

Since the publication of the first four volumes of the *Handbook of Fuel Cells* in 2003, the focus of fuel cell research and development has shifted from optimizing fuel cell performance with well-known materials to developing new materials concepts, and to understanding the origins of materials and fuel cell degradation. This new two-volume set provides an authoritative and timely guide to these recent developments in fuel cell research—particularly in the fields of new materials, molecular modeling, and durability.

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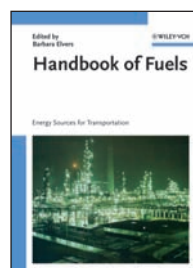
Handbook of Fuel Cells

Wolf Vielstich, Neubiberg, Germany

This six-volume set brings together for the first time in a single reference work the fundamentals, principles, and current state-of-the-art in fuel cells. Its publication reflects the increasing importance and the rapidly growing rate of research into alternative, clean sources of energy, and it guides the reader from the foundations and fundamental principles through

to the latest technology and cutting-edge applications, ensuring a logical, consistent approach to the subject.

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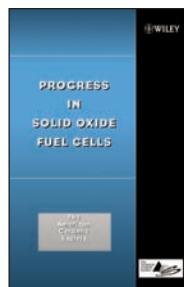
Handbook of Fuels

Energy Sources for Transportation

Barbara Elvers, Editor

This handbook gives a comprehensive overview of various types of fuels used to power vehicles of all kinds and the processes to produce these fuels. While the main focus is on automotive fuels, aviation and marine fuels are also described as well as alternative fuels.

Hardcover 371 pages 2008 ISBN 978-3-527-30740-1 USD \$190.00



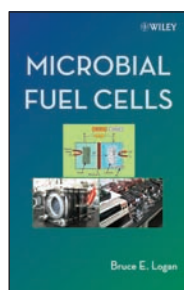
Progress in Solid Oxide Fuel Cells

The American Ceramic Society (ACerS)

This work provides a collection of current research papers including valuable insights on materials-related aspects of solid-oxide fuel cells: current status; processing and fabrication; various electrolytes, anodes, and cathodes; ceramic/metal interconnects; seal materials; mechanical properties; characterization; modeling; fuel reforming; component materials; materials processing; performance; stability; and more.

PROGRESS IN CERAMIC TECHNOLOGY

Hardcover/Interscience Book Online 531 pp 2006 ISBN 978-0-470-07274-5
USD \$129.95

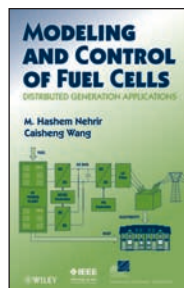


Microbial Fuel Cells

Bruce E. Logan, The Pennsylvania State Univ., USA

This timely and first book dedicated to MFCs not only serves as an introduction to development and functioning, but also serves as a manual for ongoing research. Author Bruce Logan, a leading pioneer in MFC R&D, provides practical guidance for the effective design and operation of MFCs, based on firsthand experience.

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Modeling and Control of Fuel Cells

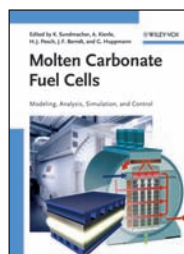
Distributed Generation Applications

M. H. Nehrir, Montana State Univ., USA; C. Wang, Wayne State Univ, USA

From small-scale portable electronics to large-scale power generation, this book gives readers an understanding of the FC dynamic modeling and response prediction necessary to be able to evaluate FC response and to design controllers to adapt FCs to particular applications.

IEEE PRESS SERIES ON POWER ENGINEERING

Hardcover w/Website 296 pp 2009 ISBN 978-0-470-23328-3 USD \$99.95



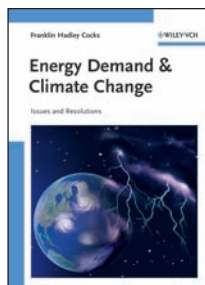
Molten Carbonate Fuel Cells

Modeling, Analysis, Simulation, and Control

Kai Sundmacher, Achim Kienle, both of Max-Planck-Institute, Germany; Hans Josef Pesch, Univ. of Bayreuth, Germany; Joachim F. Berndt, IPF Beteiligungsgesellschaft Berndt KG, Germany; Gerhard Huppmann, MTU CFC Solutions GmbH, Germany; Editors

Featuring recent developments of this innovative energy technology, this book focuses on operation, process analysis, monitoring, and control of MCFCs.

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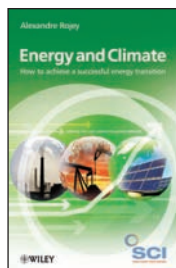
Energy Demand and Climate Change

Issues and Resolutions

Franklin Hadley Cocks, Duke Univ., USA

This scientifically sound, yet easily readable, book provides the fundamentals necessary to understand today's energy and climate problems and provides possible answers based on current technology. Moreover, it introduces new concepts that are already, or may soon be, realized.

Paperback 267 pp 2009 ISBN 978-3-527-32446-0 USD \$37.50



Energy and Climate

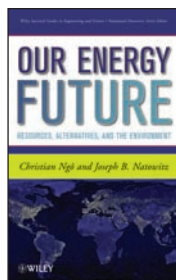
How To Achieve A Successful Energy Transition

Alexandre Rojey, IFP, France

Transitioning from fossil fuels to other more sustainable, cleaner fuel sources is the most important challenge facing developed nations today. This seminal work covers all the technology options currently available to effect this shift and summarizes key information from the

International Energy Agency and other leading organizations to provide a detailed roadmap for this transition.

Paperback 168 pp 2009 ISBN 978-0-470-74427-7 USD \$55.00



Our Energy Future

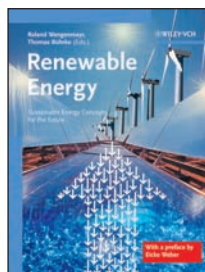
Resources, Alternatives, and the Environment

Christian Ngo, ECRIN; Joseph Natowitz, Texas A&M Univ., USA

This provocative title provides a global vision of available and potential energy sources, discusses their particular advantages and drawbacks, and helps prepare current and future generations to use energy differently and exploit new energy sources.

WILEY SURVIVAL GUIDES IN ENGINEERING AND SCIENCE

Hardcover 512 pp 2009 ISBN 978-0-470-11660-9 USD \$109.95



Renewable Energy

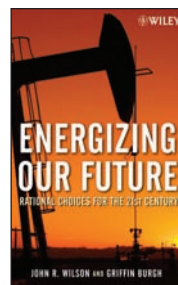
Sustainable Energy Concepts for the Future

Roland Wengenmayr, Frankfurt; Thomas Bührke, Schwetzingen; Editors

In an easily accessible, straight-forward way, this essential new book affords a solid overview of the possibilities offered by environmentally friendly techniques, energy conversion, storage, and transportation—approaching

these topics with no ideological agenda.

Hardcover 120 pp 2008 ISBN 978-3-527-40804-7 USD \$37.50



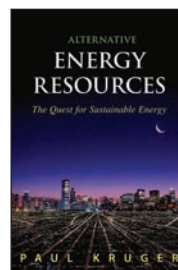
Energizing Our Future

Rational Choices for the 21st Century

John Wilson, TMG/Energy; Griffin Burgh

Energizing Our Future surveys and analyzes in considerable depth the present and future economic and technical viability of oil, natural gas, coal, synthetic fuel, nuclear, hydrogen, solar, biomass, wind, and less well-known potential energy sources in the context of real-world production, distribution, and environmental constraints.

Hardcover 390 pp 2007 ISBN 978-0-471-79053-2 USD \$100.95



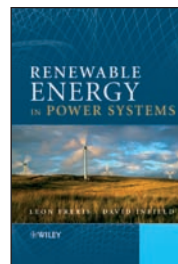
Alternative Energy Resources

The Quest for Sustainable Energy

Paul Kruger, Stanford Univ., USA

This excellent text explores humanity's increasing need for energy and the various energy sources that might provide for our needs into the future, given the need to move away from petroleum. It deftly analyzes humanity's energy usage in the past versus our projected need in the near and distant future.

Hardcover 272 pp 2006 ISBN 978-0-471-77208-8 USD \$79.95

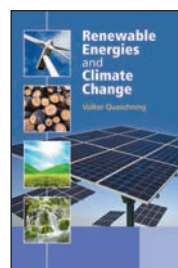


Renewable Energy in Power Systems

Leon Freris, Loughborough Univ., UK; David Infield, Univ. of Strathclyde, UK

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