

## 2010 Hyundai Ix35 Engine Compartment Sysevo

This journal notebook is Lined for writing your good ideas. Design of the cover with inspiration quote Size 8.5"x11" (Large) 120 pages Wonderful as a gift, present, or personal notebook

This book comprises select proceedings of the International Conference on Design, Materials, Cryogenics and Constructions (ICDMC 2019). The chapters cover latest research in different areas of mechanical engineering such as additive manufacturing, automation in industry and agriculture, combustion and emission control, CFD, finite element analysis, and engineering design. The book also focuses on cryogenic systems and low-temperature materials for cost-effective and energy-efficient solutions to current challenges in the manufacturing sector. Given its contents, the book can be useful for students, academics, and practitioners.

This book consists of the nine sections: i) the first three sections are related to polymeric electrolyte composites; ii) the next two sections relate to gas diffusion layers (GDLs); iii) the next two sections relate to membrane-electrode assembly (MEA); iv) and the final two sections deal with the numerical simulation of flow fields for polymer electrolyte fuel cells (PEFCs). All sections describe recent results of the study of the main components of PEFC stacks. The studies provide the underlying material, electrochemical, and/or mechanical aspects that enhance the mass transport of gas, ions (liquid), and electrons for a better performance of PEFCs and the electrochemical reactions at the triple-phase boundary in electrodes. Each study offers the fundamentals, a comprehensive background, and cutting-edge technology on the aforementioned materials and mass transport phenomena.

These seminar proceedings contain selected papers from the prestigious Autotech event. This highly regarded key meeting for engineers from the international automotive industry is organised by engineers for engineers. It brings together representatives from many of the industry's main innovating companies, creating a forum in which the technology that will be seen in vehicles of the future is considered and debated. A wide range of topics across the whole field of automotive technology are discussed. These include: Automotive Electronics, Manufacturing, Powertrain, Refinement, and Safety. A selection of papers dealing with Automotive Powertrains is presented in this volume. Topics covered include: Hybrid powertrains Engine developments Driveline developments Transmissions Emissions Mechanical developments This volume is one of a number published as a result of this important and influential event.

Every century is marked by a few men and women whose efforts influence a nation, and even the world. In Korea, Chung Ju-yung is among such people. He shaped the destiny of his country by founding Hyundai Motor Company, and his legacy continues today through the spirit of this global company. In 2004, Hyundai ranked second on the J. D. Power and Associates Initial Quality Survey, and continues to be recognized in this and other top automotive rankings. Today, Hyundai has come to embody the spirit of "modern premium," by emphasizing the values of being simple, creative, and caring in its conception. Hyundai celebrates this legacy of imagination and innovation with images that evoke the strength, elegance, and speed of Hyundai's cars. For lovers of speed and design, Hyundai is the ultimate addition to any collection.

Auto Repair For Dummies, 2nd Edition (9781119543619) was previously published as Auto Repair For Dummies, 2nd Edition (9780764599026). While this version features a new Dummies cover and design, the content is the same as the prior release and should not be considered a new or updated product. The top-selling auto repair guide--400,000 copies sold--now extensively reorganized and updated Forty-eight percent of U.S. households perform at least some automobile maintenance on their own, with women now accounting for one third of this \$34 billion automotive do-it-yourself market. For new or would-be do-it-yourself mechanics, this illustrated how-to guide has long been a must and now it's even better. A complete reorganization now puts relevant repair and maintenance information directly after each automotive system overview, making it much easier to find hands-on fix-it instructions. Author Deanna Sclar has updated systems and repair information throughout, eliminating discussions of carburetors and adding coverage of hybrid and alternative fuel vehicles. She's also revised schedules for tune-ups and oil changes, included driving tips that can save on maintenance and repair costs, and added new advice on troubleshooting problems and determining when to call in a professional mechanic. For anyone who wants to save money on car repairs and maintenance, this book is the place to start. Deanna Sclar (Long Beach, CA), an acclaimed auto repair expert and consumer advocate, has contributed to the Los Angeles Times and has been interviewed on the Today show, NBC Nightly News, and other television programs.

This ready reference is unique in collating in one scientifically precise and comprehensive handbook the widespread data on what is feasible and realistic in modern fuel cell technology. Edited by one of the leading scientists in this exciting area, the short, uniformly written chapters provide economic data for cost considerations and a full overview of demonstration data, covering such topics as fuel cells for transportation, fuel provision, codes and standards. The result is highly reliable facts and figures for engineers, researchers and decision makers working in the field of fuel cells.

Volume 1 of a 4-volume series is a concise, authoritative and an eminently readable and enjoyable experience related to hydrogen production, storage and usage for portable and stationary power. Although the major focus is on hydrogen, discussion of fossil fuels and nuclear power is also presented where appropriate. This monograph is written by recognized experts in the field, and is both timely and appropriate as this decade will see application of hydrogen as an energy carrier, for example in transportation sector. The world's reliance on fossil fuels is due to the ever growing need for energy to sustain life and on-going progress; however exploitation also brings consequences such as emission of carbon, nitrogen and sulfur dioxides into the atmosphere. The collective influence of these photochemical gases is production of acid rain and an alternation of global temperatures, leading to record high temperatures in many parts of the world. The fossil fuel is unsustainable and thus there is a critical need for alternative sustainable energy resources. One universal energy carrier is hydrogen, which is the focus of this volume. This book is suitable for those who work in the energy field as technical experts, including engineers and scientists, as well as managers, policy and decision-makers, environmentalists and consultants. Students and practitioners such as lectures, teachers, legislators and their aids in the field of energy will find this book invaluable and a practical handbook or guide in the field of sustainable energy with emphasis on hydrogen as an energy carrier.

This volume of "Encyclopedia of Sustainability Science and Technology, Second Edition," covers the electrification of vehicles, which is key to a sustainable future of transportation in both light-duty and heavy-duty vehicle sectors to address global concerns of climate change, air pollutant emissions, energy efficiency and energy security. Vehicle electrification includes several existing and emerging technologies and powertrain architectures such as conventional hybrid electric vehicles (HEVs), plug-in hybrids with various electric driving range, short- and long-range battery electric vehicles, as well as hydrogen fuel cell electric vehicles (FCEVs). Electrification will be key to connected autonomous vehicles, which are perceived to improve mobility, increase safety, reduce energy consumption and infrastructure costs, improve productivity, decrease traffic congestion and increase customer satisfaction. While electrification of vehicle technologies is relatively mature, technology improvement and economies of scale are needed to compete against incumbent technologies and to realize their benefits in the marketplace. Significant infrastructure development is needed in the case of hydrogen fuel cell

vehicles and to a lesser extent for plug-in electric vehicles. Vehicle efficiency improvement is sought through a combination of several approaches, including weight reduction, engine downsizing, increased engine compression ratio with high octane fuels, and the use of compression ignition engines with low octane fuels. Liquid hydrocarbon fuels are needed in applications where high storage energy density is required such as long-haul class-8 combination heavy-duty trucks. Shared mobility is another emerging concept that enables access to transportation services on an as-needed basis. This approach can enhance accessibility to transportation, decrease number of vehicles on the road, reduce energy use and impact on the environment, reduce cost of transportation and the need for parking, and reduce transportation time between origin and destination. In all, the reader will receive a comprehensive introduction to electric vehicles and technology trends, including energy storage, in light-, medium-, and heavy-duty sectors, as well as the infrastructure development that will be required to realize these benefits for society.

This contributed volume contains the results of the research program "Agreement for Hybrid and Electric Vehicles", developed in the framework of the Energy Technology Network of the International Energy Agency. The topical focus lies on technology options for the system optimization of hybrid and electric vehicle components and drive train configurations which enhance the energy efficiency of the vehicle. The approach to the topic is genuinely interdisciplinary, covering insights from fields. The target audience primarily comprises researchers and industry experts in the field of automotive engineering, but the book may also be beneficial for graduate students.

This important book lays bare the dangers of global warming caused by carbon dioxide emissions stemming from fossil fuel use, and proposes pathways toward mitigation. A discussion of the current main uses of fossil fuels acts as a basis for presenting viable, economically sound alternatives. The author outlines a clear, practical strategy for establishing a carbon-free future by deploying proven policy structures and technologies that are already commercially available.

Plug-in electric vehicles are coming. Major automakers plan to commercialize their first models soon, while Israel and Denmark have ambitious plans to electrify large portions of their vehicle fleets. No technology has greater potential to end the United States' crippling dependence on oil, which leaves the nation vulnerable to price shocks, supply disruptions, environmental degradation, and national security threats including terrorism. What does the future hold for this critical technology, and what should the U.S. government do to promote it? Hybrid vehicles now number more than one million on America's roads, and they are in high demand from consumers. The next major technological step is the plug-in electric vehicle. It combines an internal combustion engine and electric motor, just as hybrids do. But unlike their precursors, PEVs can be recharged from standard electric outlets, meaning the vehicles would no longer be dependent on oil. Widespread growth in the use of PEVs would dramatically reduce oil dependence, cut driving costs and reduce pollution from vehicles. National security would be enhanced, as reduced oil dependence decreases the leverage and resources of petroleum exporters. Brookings fellow David Sandalow heads up an authoritative team of experts including former government officials, private-sector analysts, academic experts, and nongovernmental advocates. Together they explain the current landscape for PEVs: the technology, the economics, and the implications for national security and the environment. They examine how the national interest could be served by federal promotion and investment in PEVs. For example, can tax or procurement policy advance the cause of PEVs? Should the public sector contribute to greater research and development? Should the government insist on PEVs to replenish its huge fleet of official vehicles? Plug-in electric vehicles are coming. But how soon, in what numbers, and to what effect? Federal policies in the years ahead will go a long way toward answering those questions. David Sandalow and his colleagues examine what could be done in that regard, as well as what should be done.

In the past few years, interest in plug-in electric vehicles (PEVs) has grown. Advances in battery and other technologies, new federal standards for carbon-dioxide emissions and fuel economy, state zero-emission-vehicle requirements, and the current administration's goal of putting millions of alternative-fuel vehicles on the road have all highlighted PEVs as a transportation alternative. Consumers are also beginning to recognize the advantages of PEVs over conventional vehicles, such as lower operating costs, smoother operation, and better acceleration; the ability to fuel up at home; and zero tailpipe emissions when the vehicle operates solely on its battery. There are, however, barriers to PEV deployment, including the vehicle cost, the short all-electric driving range, the long battery charging time, uncertainties about battery life, the few choices of vehicle models, and the need for a charging infrastructure to support PEVs. What should industry do to improve the performance of PEVs and make them more attractive to consumers? At the request of Congress, *Overcoming Barriers to Deployment of Plug-in Electric Vehicles* identifies barriers to the introduction of electric vehicles and recommends ways to mitigate these barriers. This report examines the characteristics and capabilities of electric vehicle technologies, such as cost, performance, range, safety, and durability, and assesses how these factors might create barriers to widespread deployment. *Overcoming Barriers to Deployment of Plug-in Electric Vehicles* provides an overview of the current status of PEVs and makes recommendations to spur the industry and increase the attractiveness of this promising technology for consumers. Through consideration of consumer behaviors, tax incentives, business models, incentive programs, and infrastructure needs, this book studies the state of the industry and makes recommendations to further its development and acceptance.

Discover a straightforward and holistic look at energy conversion and conservation processes using the exergy concept with this thorough text. Explains the fundamental energy conversion processes in numerous diverse systems, ranging from jet engines and nuclear reactors to human bodies. Provides examples for applications to practical energy conversion processes and systems that use our naturally occurring energy resources, such as fossil fuels, solar energy, wind, geothermal, and nuclear fuels. With more than one-hundred diverse cases and solved examples, readers will be able to perform optimizations for a cleaner environment, a sustainable energy future, and affordable energy

generation. An essential tool for practicing scientists and engineers who work or do research in the area of energy and exergy, as well as graduate students and faculty in chemical engineering, mechanical engineering and physics.

Buying a car is never easy. Besides spending a sizeable amount of money on this investment, your liveliness probably relies on this vehicle. You need to know that your car will get you from point A to point B in a timely and safe manner—so buying a lemon is not something you can afford to do. *Buying A Car For Dummies* is for you if you need to find out how to buy, sell, insure, drive, protect, or rent a vehicle. It doesn't matter how old you are (as long as you can legally drive and have a license), this book can make your experience with cars a smooth ride. *Buying A Car For Dummies* can help you save a truckload of money over the life of your vehicle as you find out all you need to know about new and used car ownership in this entertaining and informative reference guide. This dependable book covers all avenues of buying and owning a car, from negotiating a fair price to finding reliable insurance to saving money on routine servicing. You'll stay in the driver's seat as you discover how to: Calculate how much your current car really costs you Weigh the pros and cons of buying new or used Get the best trade-in, resale, or donation value for your vehicle Pick out a cherry and avoid lemons—expert advice for buying a reliable used car Determine what features and options you really need in a new car Get the straight scoop on financing or leasing your car Find an insurance policy and company you can trust Protect your automotive assets—from steering wheel locks to full-blown security systems With *Buying A Car For Dummies* as your guide, you can park your fears, frustrations, and anxieties as you discover how to decide between buying or leasing new wheels, how to negotiate with car dealers, how to foil car thieves and carjackers, how to protect yourself in a breakdown or accident, and how to protect your automotive assets with insurance, warranties, and service contracts. Plus, the book features a list of ten great automotive Web sites for pricing information, ratings, industry news, diagnostic troubleshooting, and more.

Turn dull meetings into dynamic group experiences! Chances are that you spend a lot of time at meetings - some are focused and productive, while others are not. This ebook, written by a professional facilitator, contains 77 tips for both meeting leaders and participants. Implementing one or more of these tips can produce dramatic results at your meetings. Learn how to strengthen your leadership abilities, plan effectively, use structure to get more from your meetings, manage group dynamics, empower yourself and others to become strong contributors to the meeting, and more. Inside this ebook there is even a helpful checklist that you can use to assess what you need to do to make your meetings more effective.

Early Australian policing had its roots on the streets of Dublin and London, where many of Australia's first law and order enforcers hailed from. Intrigued by this connection, historian Anastasia Dukova has researched and recreated the lives of colonial police officers and criminals in her adopted home city of Brisbane. Through exploring their personal stories, Dukova highlights how biography and history are inextricably linked and reveals the differences between metropolitan aspirations and colonial reality. *To Preserve and Protect* exposes political power abuse, corruption, mismanagement, professional burnout, and gendered justice, issues which continue to challenge police forces.

This book is the outcome of a Bioenergetics workshop held at Nanyang Technological University (NTU), Singapore in April 2018 to honour Professor Bertil Andersson for his outstanding contributions to scientific research and administration, particularly his very successful 11 years at NTU as Provost (2007-2011) and President (2011-2018). The main focus of the book is on the mechanisms of photosynthetic oxygen production by water splitting and the reverse respiratory reaction of oxygen reduction to water. Also discussed is how these reactions can be used for the development of artificial photosynthesis for the generation of sustainable solar fuel. The various chapters are written by international experts including Nobel Laureates Rudolph Marcus and John Walker. They provide the very latest knowledge of how the flow of energy in biology is driven by sunlight and efficiently utilized to power life. This book is suitable for students and researchers who are interested in molecular details of energy flow on our planet and also concerned about sustainability of humankind.

This topical volume covers the intersection between transport and climate change, with papers from the 'Transport & Climate Change' session of the RGS-IBG conference in London, September 2010. It considers the role of transport modes at varying spatial dimensions and a range of perspectives on the relationship between transport and climate change.

*Graphene-Based Nanotechnologies for Energy and Environmental Applications* explores how graphene-based materials are being used to make more efficient, reliable products and devices for energy storage and harvesting and environmental monitoring and purification. The book outlines the major sustainable, recyclable, and eco-friendly methods for using a range of graphene-based materials in innovative ways. It represents an important information source for materials scientists and engineers who want to learn more about the use of graphene-based nanomaterials to create the next generation of products and devices in energy and environmental science. Graphene-based nanotechnologies are at the heart of some of the most exciting developments in the fields of energy and environmental research. Graphene has exceptional properties, which are being used to create more effective products for electronic systems, environmental sensing devices, energy storage, electrode materials, fuel cell, novel nano-sorbents, membrane and photocatalytic degradation of environmental pollutants especially in the field of water and wastewater treatment. Covers synthesis, preparation and application of graphene based nanomaterials from different sources Demonstrates systematic approaches to the design, synthesis, characterization and applications of graphene-based nanocomposites in order to establish their important relationship with end-user applications Discusses the challenges in ensuring reliability and scalability of graphene-based nanotechnologies This book examines the dramatic increase in automotive assembly plants in the former Socialist Central European (CE) nations of Czechia, East Germany, Hungary, Poland, and

Slovakia from 1989 onwards. Enticed by relatively lower-wage labour and significant government incentives, the world's largest automakers have launched more than 20 passenger car assembly complexes in CE nations, with production accelerating dramatically since 2001. As a result, the annual passenger car production in Western Europe declined by more than 20% between 2001 and 2015, and alternatively in the CEE it increased by nearly 170% during this period. Drawing on case studies of 25 current and former foreign-run assembly plants, the author presents a rare historical account of automotive foreign assembly plants in the CE following this dramatic geographic shift. This book will expand the knowledge of policy-makers in Europe in relation to their pursuits of FDI and will be of great interest to scholars and students of business, economic history, political science, and development.

The volume is dedicated to the electric car. It examines the extent to which the electric car can contribute to sustainable transport development as part of a new mobility culture. The technical, cultural, political, social and aesthetic dimensions are considered. It will be shown how the general social framework has to change in order to make the electric car a success. This book is a translation of the original German edition "Das Elektroauto" by "Marcus Keichel", published by Springer Fachmedien Wiesbaden in 2013. The translation was done with the help of artificial intelligence (machine translation by the service DeepL.com). A subsequent human revision was done primarily in terms of content, so that the book will read stylistically differently from a conventional translation. Springer Nature works continuously to further the development of tools for the production of books and on the related technologies to support the authors.

Erhaps even more attractive is the idea to use the sun's heat for splitting water into hydrogen and oxygen and storing them in two separate vessels. The high temperature produced by recombining oxygen and hydrogen is known to be the most intense heat available to mankind. Moreover, one could use the hydrogen for lighting, and inexpensively produced oxygen would also close a longstanding gap. But how can one use the sun's energy to split water? In my opinion, thermopiles, which have already accomplished excellent performance, could solve this problem ..."--The Back Cover.

American business folklore is awash with the adventures of successful entrepreneurs. Still, most of these stories are about Americans, neglecting important and courageous entrepreneurs from other countries. Made in Korea recounts the story of how Chung Ju Yung rose from poverty to build one of the world's largest and most successful building empires - Hyundai - through a combination of creative thinking, tenacity, timing, political skills, and a business strategy that few competitors ever understood. Chung entered the shipbuilding business with no experience and went on to create the world's largest shipyard. He began making automobiles when foreign experts unanimously predicted he would fail, and he started a global construction company that has built some of today's greatest architectural wonders. He even convinced the International Olympic Committee to select South Korea over Japan as the site for the highly successful 1988 Olympics. Unlike most CEO's of major firms, Chung has always preferred the company of his workers to that of the global executive elite. Hard work, creativity and a capacity to never give up - this is the essence of Chung's life. In each of his ventures, he exhibited a sheer determination to succeed, regardless of the obstacles, and he worked tirelessly to instil this drive in all of his employees. Even today, in the midst of Korea's worst economic crisis in over four decades, Chung's company is busy implementing plans to emerge as an even stronger contender in the world economy. Illustrated with 32 pages of colour photographs not previously seen in the West, including photos of Chung's recent historic visit to North Korea in 1998, Made in Korea takes stock of Chung's entire life, highlighting both his contributions to society and the lessons his work can teach to aspiring entrepreneurs.

The book deals with the fundamentals, theoretical bases, and design methodologies of conventional internal combustion engine (ICE) vehicles, electric vehicles (EVs), hybrid electric vehicles (HEVs), and fuel cell vehicles (FCVs). The design methodology is described in mathematical terms, step-by-step, and the topics are approached from the overall drive train system, not just individual components. Furthermore, in explaining the design methodology of each drive train, design examples are presented with simulation results. You read about it every day: How can we create a sustainable, reliable and affordable energy supply? Does a local water supply play a role in this? Why don't we drive hydrogen cars that are powered by the sun and rain? The availability of cheap green energy is increasing. . We have solar and wind power, and even energy derived from ambient heat. At the same time we have very diverse energy needs: fuel for cars, electricity, heat for buildings, feedstock for industrial processes, to name just a few. Energy supply and demand do not match, which means that we have to match resources, storage and consumption in an intelligent way. Solar Power to the People casts a thoughtful vision on sustainable energy. We have to bring the power of the sun to the people. That is what sustainable energy and water is all about. The authors believe we have to act quickly. The matter is urgent.

This unique book concerning fuel cells and their applications fills the gap which currently exists between the theoretical aspects and the detailed practical data available. It describes a technology that dates from the early classical discoveries of the 1850s which predicted that direct energy conversion of chemical energy into electricity with fuel cells would be far more efficient at lower temperatures than with combustion processes. The importance of fuel cells for energy saving purposes is emphasised. Their applications are wide-ranging with use found in local stations and power plants, in industry for the highly efficient conversion of waste and biomass materials and in carbon dioxide reduction in all fossil-fuel-burning processes. Unique features highlighted include their importance in spacecrafts and their development for affordable implementation in electric cars. The most recent scientific publications and manufacturer's brochures have been screened in order to bring together the state- of-the-art technology of fuel cells. Readers at all levels including chemists, physicists, chemical engineers ry technologists and students will appreciate this comprehensive overvie ind the clarity of numerous graphs and tables highly

valuable.

This book describes the challenges and solutions the energy sector faces by shifting towards a hydrogen based fuel economy. The most current and up-to-date efforts of countries and leaders in the automotive sector are reviewed as they strive to develop technology and find solutions to production, storage, and distribution challenges. Hydrogen fuel is a zero-emission fuel when burned with oxygen and is often used with electrochemical cells, or combustion in internal engines, to power vehicles and electric devices. This book offers unique solutions to integrating renewable sources of energy like wind or solar power into the production of hydrogen fuel, making it a cost effective, efficient and truly renewable alternative fuel.

Discusses choosing the correct vehicle, setting a price, shopping for the vehicle, closing the deal, buying a used car, and making a great deal

This book is for anyone interested in renewable energy for a sustainable future of mankind. Batteries, fuel cells, capacitors, electrolyzers and solar cells are explained at the molecular level and at the power plant level, in their historical development, in their economical and political impact, and social change. Cases from geophysics and astronomy show that electrochemistry is not confined to the small scale. Examples are shown and exercised.

Craving the Future provides radically new perspectives and useful tools for anyone seeking to create a better future. Author and Innovation Executive Michael Perman provides insights from extensive research on how to transform our deepest desires into new, bold, innovative realities. His research reveals fascinating new dimensions to the way culture shapes the concept of craving. Specifically, he has discovered that what people crave in their lives is changing from urgent demands for things like cigarettes, coffee, or even tacos, to more meaningful quests for new sensations and purpose. Craving the Future offers imaginative ideas, methodical tools, and inspiring profiles of innovation luminaries—all mindfully crafted to help you shape what is coming next. The book also features a unique design that makes it delightful to experience, easy to digest, and fun to share.

This book offers a mid-career retrospective of the work of Diana Thater, one of the most important and innovative artists working today. For more than two decades, Diana Thater has been creating groundbreaking installations that build upon the basic visual language of film and video by integrating architecture, applied color, and artificial and natural light.

Depicting a range of natural phenomena, her work is largely organized around an exploration of the subjectivity of animals. This lavishly illustrated overview shows how Thater has radically re-envisioned both the ways in which film and video are deployed in site-related installations and the relationship between subject and object. Luminous images of eighteen projects such as China, Abyss of Light, knots + surfaces, and gorillagorillagorilla are accompanied by quotes and fictional writings that have long served as Thater's touchstones. Also included are an interview with the artist and essays on a wide range of topics that Thater addresses in her work--from the history and politics of the Chernobyl disaster to beauty and Baroque architecture. This publication also gives readers exclusive access to a moving image supplement, featuring a film conceived and created by Thater in collaboration with production designer Patti Podesta, as well as an illustrated checklist with short video clips.

As the case for Climate Change mitigation becomes ever more pressing, hydrogen has the potential to play a major role in a low-carbon energy future. Hydrogen can drive the vehicles of tomorrow and also heat homes and supply energy to businesses. Much recent discussion in energy policy circles has considered ways in which greatly expanded electrification can meet the demand for low-carbon mobility and heating. Such narratives centre on the widespread use of renewable energy sources with occasionally surplus renewable electricity being used to produce hydrogen, for example by electrolysis. While such developments have a beneficial role to play, this book focuses on an alternative paradigm. This book considers a more evolutionary path involving the continued extraction and use of fossil fuels, most notably natural gas, but in ways that greatly reduce greenhouse gas emissions. In this way much established industrial capacity and know how might be transitioned to help deliver the low carbon future that the world so desperately requires. Presenting up-to-date energy policy recommendations with a focus on hydrogen from fossil fuels, the book will be of considerable interest to policymakers and energy researchers in academia, industry and government labs, while also offering a valuable reference guide for business developers in low-carbon energy, and for oil and gas industry analysts.

Race car technology has come a long way from the early days of auto racing. Today's cars rely on sleek, aerodynamic shapes and powerful engines to give drivers more speed and control than ever before. In this book, readers will find out how engineers and other creative, forward-thinking people work to push race car technology to the limit. They will also learn about the history of auto racing, what it is like to be a race car driver, and much more.

Lead-Acid Batteries for Future Automobiles provides an overview on the innovations that were recently introduced in automotive lead-acid batteries and other aspects of current research. Innovative concepts are presented, some of which aim to make lead-acid technology a candidate for higher levels of powertrain hybridization, namely 48-volt mild or high-volt full hybrids. Lead-acid batteries continue to dominate the market as storage devices for automotive starting and power supply systems, but are facing competition from alternative storage technologies and being challenged by new application requirements, particularly related to new electric vehicle functions and powertrain electrification.

Presents an overview of development trends for future automobiles and the demands that they place on the battery Describes how to adapt LABs for use in micro and mild hybrid EVs via collector construction and materials, via carbon additives, via new cell construction (bipolar), and via LAB hybrids with Li-ion and supercap systems System integration of LABs into vehicle power-supply and hybridization concepts Short description of competitive battery technologies

This book explores the factors that make digital disruption possible and the effects this has on existing business models. It takes a look at the industries that are most susceptible

to disruption and highlights what executives can do to take advantage of disruption to re-invent their business model. It also examines the pivotal role that technology plays in creating new dynamics to business operations and forcing business model changes. Adoption of digital technology has caused process disruptions in a number of industries and led to new business models (e.g., Über, AirBnb) and new products. In addition to covering some of the more popular and well known examples, this book targets not so obvious disruptions in the education sector and in services and changing business models. Phantom Ex Machina: Digital Disruption's Role in Business Model Transformation is divided into six parts. The book begins with an introduction to digital disruption and why it matters. The next part of the book focuses on business strategy which includes case studies on the impact of social media and how digital disruption changes pricing strategies and price models. For part three, the authors observe technology's role in digital disruptions. Chapters cover how 3D printing is challenging existing business models and how the automotive industry is innovating with new perspectives. Part four covers higher education, recognizing digital disruption's transformation in graduate management education. Part five centers upon the service industry with a look at virtual teams and the emergence of virtual think tanks. Finally the book concludes with a look to the future, embracing disruptions.

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