

# Build Your Own Electric Vehicle

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**Popular Science** 1991-09 Popular Science gives our readers the information and tools to improve their technology and their world. The core belief that Popular Science and our readers share: The future is going to be better, and science and technology are the driving forces that will help make it better.

**Build Your Own Electric Motorcycle** Carl Vogel 2009-09-07 A step-by-step guide to building an electric motorcycle from the ground up Written by alternative fuel expert Carl Vogel, this hands-on guide gives you the latest technical information and easy-to-follow instructions for building a two-wheeled electric vehicle--from a streamlined scooter to a full-sized motorcycle. Build Your Own Electric Motorcycle puts you in hog heaven when it comes to hitting the road on a reliable, economical, and environmentally friendly bike. Inside, you'll find complete details on every component, including motor, batteries, and frame. The book covers electric motorcycles currently on the market and explains how to convert an existing vehicle. Pictures, diagrams, charts, and graphs illustrate each step along the way. Whether you want to get around town on a sleek ride or cruise the super slab on a tricked-out chopper, this is the book for you. Build Your Own Electric Motorcycle covers: Energy savings and environmental benefits Rake, trail, and fork angle Frame and design Batteries and chargers DC and AC motor types Motor controllers Accessories and converters Electrical system and wiring Conversion process Safety, maintenance, and troubleshooting

**Build Your Own Electric Bicycle** Matthew Slinn 2010-06-04 A Step-by-Step Guide to Building an Electric Bicycle From the Ground Up Filled with do-it-yourself project, this hands-on manual gives you all the technical information and easy-to-follow instructions you need to assemble and customize an electric bike. Build Your Own Electric Bicycle gets you on the road on a reliable, economical, environmentally friendly ride. Inside, you'll find complete coverage of every component, including motors, controllers, batteries, and frames, as well as details on soldering, electrical wiring, safety, and other essential skills. The book covers commercially available electric bicycles and shows you how to make modifications and upgrades for improved power, speed, range, and safety. Pictures, diagrams, and charts illustrate each step along the way. With this how-to guide on hand, you'll be riding your own tricked-out electric bike in no time! BUILD YOUR OWN ELECTRIC BICYCLE COVERS: Energy savings and environmental benefits Electrical, battery, and road safety Long-range, folding, and high-power bikes Hub motor kits Motors, controllers, and batteries Electrical connections and wiring Brakes Troubleshooting, maintenance, and repair Performance and safety modifications

**Build Your Own Electric Vehicle, Third Edition** Seth Leitman 2013-02-19 Discusses the benefits of electric vehicles, describing each component and including step-by-step instructions for assembling the parts.

**Electric Vehicles** Michael A. Hackleman 1977

### **Convert to EV:The Basics (Second Edition)**

**The EV Alternative** Y. EV 2009-05-26 Is it time to buy or lease an electric vehicle EV? Do I buy a new, pre-owned electric vehicle(EV) or should I rather convert my gas-guzzler to EV? Sooner or later you too will face this agonizing dilemma when the lease expires or a new car purchase is in order. Find out the best option in my comprehensive book. Humans have caused irreparable damage to the environment, animals and the balance in the eco system. What will our future generation do if there is no source of energy? Automobiles, industries and nuclear reactors which use fuel give out toxic chemicals which put us in serious risk of global warming and melting up of the poles. All these are mainly happening because of the human activities and the traditional energy sources we are using. In order to avoid further damage to the nature and life, we must focus our attention towards alternative energy sources.

**New Trends in Electrical Vehicle Powertrains** Luis Romeral Martinez 2019-01-30 The electric vehicle and plug-in hybrid electric vehicle play a fundamental role in the forthcoming new paradigms of mobility and energy models. The electrification of the transport sector would lead to advantages in terms of energy efficiency and reduction of greenhouse gas emissions, but would also be a great opportunity for the introduction of renewable sources in the electricity sector. The chapters in this book show a diversity of current and new developments in the electrification of the transport sector seen from the electric vehicle point of view: first, the related technologies with design, control and supervision, second, the powertrain electric motor efficiency and reliability and, third, the deployment issues regarding renewable sources integration and charging facilities. This is precisely the purpose of this book, that is, to contribute to the literature about current research and development activities related to new trends in electric vehicle power trains.

*Electric and Hybrid Cars* Curtis D. Anderson 2010-03-30 This illustrated history chronicles electric and hybrid cars from the late 19th century to today's fuel cell and plug-in automobiles. It describes the politics, technology, marketing strategies, and environmental issues that have impacted electric and hybrid cars' research and development. The important marketing shift from a "woman's car" to "going green" is discussed. Milestone projects and technologies such as early batteries, hydrogen and bio-mass fuel cells, the upsurge of hybrid vehicles, and the various regulations and market forces that have shaped the industry are also covered.

*Electric Vehicle Technology Explained* James Larminie 2012-09-17

**Build Your Own Plug-In Hybrid Electric Vehicle** Seth Leitman 2009-09-07 A Step-by-Step Guide to Building a Plug-In Hybrid Electric Vehicle from the Ground Up Written by clean energy guru and electric vehicle expert Seth Leitman, this hands-on guide gives you the latest technical information and easy-to-follow instructions for building a plug-in hybrid electric vehicle (PHEV). "Written by Seth Leitman, longtime green vehicle/sustainability expert and author of "Build Your Own Electric Vehicle," this 275-page book provides an overview of the

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technology and the issues in doing a conversion, and it works well as a different way in to the open source material that can be found at <http://www.eaa-phev.org> or the easier-to-remember <http://www.priusplus.org>." -- CalCars.org Build Your Own Plug-In Hybrid Electric Vehicle puts you in the driver's seat when it comes to hitting the road in a reliable, economical, and environmentally friendly ride. Inside, you'll find complete details on the hybrid powertrain and all the required components, including the motor, battery, and chassis. The book covers the plug-in hybrids currently on the market as well as hybrid conversion companies, conversion kits, and related resources. Pictures, diagrams, charts, and graphs illustrate each step along the way. With this how-to guide on hand, you'll be behind the wheel of your own plug-in hybrid electric automobile in no time! Build Your Own Plug-In Hybrid Electric Vehicle covers: Energy savings and environmental benefits PHEV background Drivetrain components and design Chassis selection DC and AC motor types Batteries and chargers The conversion process Licensing and insurance Safety, maintenance, troubleshooting, and warranties Clubs and associations Additional resources

Build Your Own Electric Vehicle Bob Brant 1994 Discusses the benefits of electric vehicles and includes step-by-step instructions for converting a Ford Ranger pickup into an electric vehicle

*DIY Lithium Batteries* Micah Toll 2017 An educational guide that covers all the existing types of lithium battery cells and how to assemble them into a custom lithium battery pack.

*Modeling and Simulation for Electric Vehicle Applications* Mohamed Amine Fakhfakh 2016-10-05 The book presents interesting topics from the area of modeling and simulation of electric vehicles application. The results presented by the authors of the book chapters are very interesting and inspiring. The book will familiarize the readers with the solutions and enable the readers to enlarge them by their own research. It will be useful for students of Electrical Engineering; it helps them solve practical problems.

What If? Randall Munroe 2014-09-02 The creator of the incredibly popular webcomic xkcd presents his heavily researched answers to his fans' oddest questions, including "What if I took a swim in a spent-nuclear-fuel pool?" and "Could you build a jetpack using downward-firing machine guns?" 100,000 first printing.

Electric Vehicles and the BMW i3 David Bricknell 2017-08-22 This is a book about Electric Vehicles and, in particular, the BMW i3. It covers the performance and technical information useful to the growing Electric Vehicle community that are different to those of an Internal Combustion Engine car, including: Dynamics, Battery, Charging, Motors and Drives, Cooling and Heating, and Range Extender.

*Build Your Own Sports Car for as Little as £250 - and Race It!* Ron Champion 2000 Build a roadworthy two-seater open sports car for a fraction of the cost of a kit car! Using standard tools, basic skills and low-cost materials, this volume shows you how to make the chassis, suspension and bodywork, and advises you on how to modify and use inexpensive but serviceable mechanical components. Contains sections on improving handling, information on how to get through the Single Vehicle Approval test, and builders' own stories.

The Electric Vehicle Conversion Handbook HP1568 Mark Warner 2011-06-07 A guide on how to convert any gas- or diesel-powered vehicle to electric power. Includes ownership advantages,

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basic EV operation, subsystems, components, basic EV operation, project vehicles, and conversion kits.

Build Your Own Electric Vehicle, Third Edition Seth Leitman 2013-02-08 BUILD, CONVERT, OR BUY A STATE-OF-THE-ART ELECTRIC VEHICLE Thoroughly revised and expanded, Build Your Own Electric Vehicle, Third Edition, is your go-to guide for converting an internal combustion engine vehicle to electric or building an EV from the ground up. You'll also find out about the wide variety of EVs available for purchase and how they're being built. This new edition details all the latest breakthroughs, including AC propulsion and regenerative braking systems, intelligent controllers, batteries, and charging technologies. Filled with updated photos, this cutting-edge resource fully describes each component--motor, battery, controller, charger, and chassis--and provides illustrated, step-by-step instructions on how to assemble all the parts. Exclusive web content features current supplier and dealer lists. Custom-built for environmentalists, engineers, students, hobbyists, and mechanics, this hands-on guide puts you in the fast lane toward a cost-effective, reliable green machine. Build Your Own Electric Vehicle, Third Edition, covers: Environmental impact and energy savings The best EV for you--purchase trade-offs, conversion trade-offs, and conversion costs Chassis and design Different types of electric motors and controllers Lithium EV batteries Chargers and electrical systems EV builds and conversions Licensing and insuring your EV Driving and maintenance List of manufacturers and dealers regularly updated on website

Electric Motors & Control Techniques Irving M. Gottlieb 1994

*Electric and Hybrid Vehicles* Amir Khajepour 2014-03-05 An advanced level introductory book covering fundamental aspects, design and dynamics of electric and hybrid electric vehicles There is significant demand for an understanding of the fundamentals, technologies, and design of electric and hybrid electric vehicles and their components from researchers, engineers, and graduate students. Although there is a good body of work in the literature, there is still a great need for electric and hybrid vehicle teaching materials. *Electric and Hybrid Vehicles: Technologies, Modeling and Control - A Mechatronic Approach* is based on the authors' current research in vehicle systems and will include chapters on vehicle propulsion systems, the fundamentals of vehicle dynamics, EV and HEV technologies, chassis systems, steering control systems, and state, parameter and force estimations. The book is highly illustrated, and examples will be given throughout the book based on real applications and challenges in the automotive industry. Designed to help a new generation of engineers needing to master the principles of and further advances in hybrid vehicle technology Includes examples of real applications and challenges in the automotive industry with problems and solutions Takes a mechatronics approach to the study of electric and hybrid electric vehicles, appealing to mechanical and electrical engineering interests Responds to the increase in demand of universities offering courses in newer electric vehicle technologies

**Overcoming Barriers to Deployment of Plug-in Electric Vehicles** National Research Council 2015-06-26 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.

**Electric and Hybrid Vehicles** Tom Denton 2020-06-17 Electric and hybrid vehicles are now the present, not the future. This straightforward and highly illustrated full colour textbook is endorsed by the Institute of the Motor Industry, and introduces the subject for further education and undergraduate students as well as technicians. This new edition includes a new section on diagnostics and completely updated case studies. It covers the different types of electric vehicle, costs and emissions, and the charging infrastructure, before moving on to explain how hybrid and electric vehicles work. A chapter on electrical technology introduces learners to subjects such as batteries, control systems and charging which are then covered in more detail within their own chapters. The book also covers the maintenance and repair procedures of these vehicles, including fault finding, servicing, repair and first-responder information. Clear diagrams, photos and flow charts outline the charging infrastructure, how EV technology works, and how to repair and maintain hybrid and electric vehicles. Optional IMI online eLearning materials enable students to study the subject further and test their knowledge. It is particularly suitable for students studying towards IMI Level 2 Award in Hybrid Electric Vehicle Operation and Maintenance, IMI Level 3 Award in Hybrid Electric Vehicle Repair and Replacement, IMI Accreditation, C&G and other EV/Hybrid courses.

Invention James Dyson 2021-09-07 Dyson has become a byword for high-performing products, technology, design, and invention. Now, James Dyson, the inventor and entrepreneur who made it all happen, tells his remarkable and inspirational story in *Invention: A Life*, “one of the year’s most relevant and revelatory business books” (The Wall Street Journal). Famously, over a four-year period, James Dyson made 5,127 prototypes of the cyclonic vacuum cleaner that would transform the way houses are cleaned around the world. In devoting all his resources to iteratively setbacks came hard-fought success. His products—including vacuum cleaners, hair dryer and hair stylers, and fans and purifiers—are not only revolutionary technologies, but design classics. This was a legacy of his time studying at the Royal College of Art in the 1960s, when he was inspired by some of the most famous artists, designers, and inventors of the era, as well as his engineering heroes such as Frank Whittle and Alex Issigonis. In *Invention: A Life*, Dyson reveals how he came to set up his own company and led it to become one of the most inventive technology companies in the world. It is a compelling and dramatic tale, with many obstacles overcome. Dyson has always looked to the future, even setting up his own university

to help provide the next generation of engineers and designers. For, as he says, “everything changes all the time, so experience is of little use.” Whether you are someone who has an idea for a better product, an aspiring entrepreneur, whether you appreciate great design or a page-turning read, *Invention: A Life* is an “entertaining and inspiring memoir” (Kirkus Reviews, starred review) that offers motivation, hope, and much more.

[Building an Electric Vehicle](#) Ken Watkins 2012-10-03 If you have the desire to build your own electric vehicle, "Building An Electric Vehicle" with clear instructions and more than 130 pictures in its 180 pages is the book for you. This book provides a step-by-step approach to converting an internal combustion engine automobile into an electric vehicle. You are taken through the design and construction of two electric vehicles, showing you pictures of every step. The illustrated principles will help you produce the most efficient vehicle possible. This book follows the design and construction of two electric vehicles from the funding stage to the final driving stage. Unlike most "How-To-Books" this book discusses what not to do, in addition to what to do. You can see how some decisions led to some not so desirable results. Included in this manual is useful information on how to acquire the needed funding to do the conversion as well as a complete cost breakdown for each vehicle. A cost spreadsheet was used for each vehicle construction to record every cost. A minimal cost estimate to produce your electric vehicle is also shown. Vehicle schematics are included, showing how to integrate the drive electronics to the original vehicle wiring. The large pictures in "Building An Electric Vehicle" gives you all the information you need to build your own clean-energy, electric vehicle. These full size pictures make the book cost more, but add so much more to the level of information included.

**Build Your Own Electric Vehicle** Seth Leitman 2008-07-31 Go Green-Go Electric! Faster, Cheaper, More Reliable While Saving Energy and the Environment “Empowering people with the tools to convert their own vehicles provides an immediate path away from petroleum dependence and should be part of the solutions portfolio.” – Chelsea Sexton, Co-founder, Plug In America and featured in *Who Killed the Electric Car?* “Create a superior driving experience, strengthen America, and restore the planet’s ecosystems...that’s the promise of this book and it’s well worth a read!” – Josh Dorfman, Founder & CEO – Vivavi, Modern Green Furniture Store; Author, *The Lazy Environmentalist: Your Guide to Easy, Stylish, Green Living*. This new, updated edition of *Build Your Own Electric Vehicle* contains everything that made the first edition so popular while adding all the technological advances and new parts that are readily available on the market today. *Build Your Own Electric Vehicle* gets on the expressway to a green, ecologically sound, cost-effective way that even can look cool, too! This comprehensive how-to goes through the process of transforming an internal combustion engine vehicle to electric or even building an EV from scratch for as much or even cheaper than purchasing a traditional car. The book describes each component in detail---motor, battery, controller, charger, and chassis---and provides step-by-step instructions on how to put them all together. *Build Your Own Electric Vehicle, Second Edition*, covers: EV vs. Combustible Engine Overview Environmental and Energy Savings EV Evolution since the First Electric Car Current Purchase and Conversion Costs Chassis and Design Today’s Best Motors Battery Discharging/Charging Styles Electrical Systems – Licensing and Insurance Issues Driving Maintenance Related Clubs and Associations Additional Resources

*Modern Electric, Hybrid Electric, and Fuel Cell Vehicles* Mehrdad Ehsani 2018-02-02 "This book is an introduction to automotive technology, with specific reference to battery electric, hybrid

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electric, and fuel cell electric vehicles. It could serve electrical engineers who need to know more about automobiles or automotive engineers who need to know about electrical propulsion systems. For example, this reviewer, who is a specialist in electric machinery, could use this book to better understand the automobiles for which the reviewer is designing electric drive motors. An automotive engineer, on the other hand, might use it to better understand the nature of motors and electric storage systems for application in automobiles, trucks or motorcycles. The early chapters of the book are accessible to technically literate people who need to know something about cars. While the first chapter is historical in nature, the second chapter is a good introduction to automobiles, including dynamics of propulsion and braking. The third chapter discusses, in some detail, spark ignition and compression ignition (Diesel) engines. The fourth chapter discusses the nature of transmission systems.” —James Kirtley, Massachusetts Institute of Technology, USA “The third edition covers extensive topics in modern electric, hybrid electric, and fuel cell vehicles, in which the profound knowledge, mathematical modeling, simulations, and control are clearly presented. Featured with design of various vehicle drivetrains, as well as a multi-objective optimization software, it is an estimable work to meet the needs of automotive industry.” —Haiyan Henry Zhang, Purdue University, USA “The extensive combined experience of the authors have produced an extensive volume covering a broad range but detailed topics on the principles, design and architectures of Modern Electric, Hybrid Electric, and Fuel Cell Vehicles in a well-structured, clear and concise manner. The volume offers a complete overview of technologies, their selection, integration & control, as well as an interesting Technical Overview of the Toyota Prius. The technical chapters are complemented with example problems and user guides to assist the reader in practical calculations through the use of common scientific computing packages. It will be of interest mainly to research postgraduates working in this field as well as established academic researchers, industrial R&D engineers and allied professionals.” —Christopher Donaghy-Sparg, Durham University, United Kingdom 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. All the chapters have been updated, and two new chapters on Mild Hybrids and Optimal Sizing and Dimensioning and Control are also included • Chapters updated throughout the text. • New homework problems, solutions, and examples. • Includes two new chapters. • Features accompanying MATLAB™ software.

**Convert It!** Ron L. Toms 2021-03-20 A simple step-by-step guide for converting any classic car into an Electric Vehicle.

**Electric Cars** Jennifer MacKay 2011-09-12 Author Jennifer MacKay focuses on the invention of electric cars, exploring how it was developed, how it works, its impact on society, and possible future uses.

The Great Race Levi Tillemann 2016-01-19 The Great Race recounts the exciting story of a century-long battle among automakers for market share, profit, and technological dominance—and the thrilling race to build the car of the future. The world’s great manufacturing juggernaut—the \$3 trillion automotive industry—is in the throes of a revolution. Its future will include cars Henry Ford and Karl Benz could scarcely imagine. They will drive

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themselves, won't consume oil, and will come in radical shapes and sizes. But the path to that future is fraught. The top contenders are two traditional manufacturing giants, the US and Japan, and a newcomer, China. Team America has a powerful and little-known weapon in its arsenal: a small group of technology buffs and regulators from California. The story of why and how these men and women could shape the future—how you move, how you work, how you live on Earth—is an unexpected tale filled with unforgettable characters: a scorned chemistry professor, a South African visionary who went for broke, an ambitious Chinese ex-pat, a quixotic Japanese nuclear engineer, and a string of billion-dollar wagers by governments and corporations. “To explain the scramble for the next-generation auto—and the roles played in that race by governments, auto makers, venture capitalists, environmentalists, and private inventors—comes Levi Tillemann’s *The Great Race*...Mr. Tillemann seems ideally cast to guide us through the big ideas percolating in the world’s far-flung workshops and labs” (*The Wall Street Journal*). His account is incisive and riveting, explaining how America bounced back in this global contest and what it will take to command the industrial future.

**Fact of the Day 1** Danny Sheridan 2020-12-22 A look inside the culture of Amazon, one of the most successful companies in the world, and of its relentless, brilliant founder, Jeff Bezos. When Amazon.com launched in 1995, it was with the mission "to be Earth's most customer-centric company." Through creating and sustaining a culture of innovation, the company has proven a track record of building and scaling new businesses. The "Day 1" mentality means that even though Amazon is 26 years old, the company approaches every day like it's the first day of their new startup - to make smart, fast decisions, stay nimble, innovate and invent, and focus on delighting customers. Preparing to interview at Amazon? Curious about Amazon's core principles? Inside this book are 250 bite-sized facts ranging from origin stories about Amazon, Jeff Bezos-isms, frameworks for decision making, emotional intelligence in leadership, applications of artificial intelligence, trends popular among Gen Z, and much more. Facts "tickle the brain" and "are bite-sized yet useful." Whether you read one fact each day or binge all 250 facts in one sitting, *Fact of the Day 1* (1st Edition) will deepen your knowledge about the world we live and operate in. Join 50,000 readers who subscribe to the email list at [www.factoftheday1.com](http://www.factoftheday1.com)

*Mother of Invention* Katrine Marçal 2021-10-19 An illuminating and maddening examination of how gender bias has skewed innovation, technology, and history—now in paperback It all starts with a rolling suitcase. Though the wheel was invented some 5,000 years ago, and the suitcase in the 19th century, it wasn't until the 1970s that someone successfully married the two. What was the holdup? For writer and journalist Katrine Marçal, the answer is both shocking and simple: because “real men” carried their bags, no matter how heavy. *Mother of Invention* is a fascinating and eye-opening examination of business, technology, and innovation through a feminist lens. Because it wasn't just the suitcase. Drawing on examples from electric cars to tech billionaires, Marçal shows how gender bias stifles the economy and holds us back, delaying innovations, sometimes by hundreds of years, and distorting our understanding of our history. While we talk about the Iron Age and the Bronze Age, we might as well talk about the Ceramic Age or the Flax Age, since these technologies were just as important. But inventions associated with women are not considered to be technology in the same way as those associated with men. *Mother of Invention* is a sweeping tour of the global economy with a powerful message: If we upend our biases, we can unleash our full potential.

[Electric Vehicle Engineering](#) Per Enge 2021-01-24 A complete guide to electric vehicle design,

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operation, and adoption This hands-on resource thoroughly explains the technologies and techniques involved in the design and operation of today's electric vehicles. Originally written for use in a course co-taught by the authors at Stanford University, *Electric Vehicle Engineering* discusses the physics of vehicle motion; the electrical principles on which motors rely; the chemistry, operation, and charging of lithium-ion batteries; the design and operation of motor controllers; the energy efficiency and environmental impact of electric vehicles; and the policy and economics affecting their adoption. After teaching you the theory, the authors will guide you through a hands-on project in which you will build a model electric car from the ground up with a hand-wound electric motor of your own design. Coverage includes: Introduction to electric vehicles Electric vehicle history Vehicle dynamics Electric motors Lithium-ion batteries Controllers Well-to-wheels energy and emissions analysis Electric vehicle policies and economics Future prospects

**The Electric Vehicle** Gijs Mom 2013-02-15 One hopes, as a new generation of electric vehicles becomes a reality, *The Electric Vehicle* offers a long-overdue reassessment of the place of this technology in the history of street transportation.

**Popular Mechanics** 1979-10 *Popular Mechanics* inspires, instructs and influences readers to help them master the modern world. Whether it's practical DIY home-improvement tips, gadgets and digital technology, information on the newest cars or the latest breakthroughs in science -- PM is the ultimate guide to our high-tech lifestyle.

**Automobile Mechanical and Electrical Systems** Tom Denton 2017-08-25 The second edition of *Automobile Mechanical and Electrical Systems* concentrates on core technologies to provide the essential information required to understand how different vehicle systems work. It gives a complete overview of the components and workings of a vehicle from the engine through to the chassis and electronics. It also explains the necessary tools and equipment needed in effective car maintenance and repair, and relevant safety procedures are included throughout. Designed to make learning easier, this book contains: Photographs, flow charts and quick reference tables Detailed diagrams and clear descriptions that simplify the more complicated topics and aid revision Useful features throughout, including definitions, key facts and 'safety first' considerations. In full colour and with support materials from the author's website ([www.automotive-technology.org](http://www.automotive-technology.org)), this is the guide no student enrolled on an automotive maintenance and repair course should be without.

**Advanced Battery Management Technologies for Electric Vehicles** Rui Xiong 2018-12-28 A comprehensive examination of advanced battery management technologies and practices in modern electric vehicles Policies surrounding energy sustainability and environmental impact have become of increasing interest to governments, industries, and the general public worldwide. Policies embracing strategies that reduce fossil fuel dependency and greenhouse gas emissions have driven the widespread adoption of electric vehicles (EVs), including hybrid electric vehicles (HEVs), pure electric vehicles (PEVs) and plug-in electric vehicles (PHEVs). Battery management systems (BMSs) are crucial components of such vehicles, protecting a battery system from operating outside its Safe Operating Area (SOA), monitoring its working conditions, calculating and reporting its states, and charging and balancing the battery system. *Advanced Battery Management Technologies for Electric Vehicles* is a compilation of contemporary model-based state estimation methods and battery charging and balancing techniques, providing readers with practical knowledge of both

fundamental concepts and practical applications. This timely and highly-relevant text covers essential areas such as battery modeling and battery state of charge, energy, health and power estimation methods. Clear and accurate background information, relevant case studies, chapter summaries, and reference citations help readers to fully comprehend each topic in a practical context. Offers up-to-date coverage of modern battery management technology and practice Provides case studies of real-world engineering applications Guides readers from electric vehicle fundamentals to advanced battery management topics Includes chapter introductions and summaries, case studies, and color charts, graphs, and illustrations Suitable for advanced undergraduate and graduate coursework, *Advanced Battery Management Technologies for Electric Vehicles* is equally valuable as a reference for professional researchers and engineers.

*Advances in Battery Technologies for Electric Vehicles* Bruno Scrosati 2015-05-25 *Advances in Battery Technologies for Electric Vehicles* provides an in-depth look into the research being conducted on the development of more efficient batteries capable of long distance travel. The text contains an introductory section on the market for battery and hybrid electric vehicles, then thoroughly presents the latest on lithium-ion battery technology. Readers will find sections on battery pack design and management, a discussion of the infrastructure required for the creation of a battery powered transport network, and coverage of the issues involved with end-of-life management for these types of batteries. Provides an in-depth look into new research on the development of more efficient, long distance travel batteries Contains an introductory section on the market for battery and hybrid electric vehicles Discusses battery pack design and management and the issues involved with end-of-life management for these types of batteries

**How Stuff Works** Marshall Brain 2003-12-29 HowStuffWorks.com explains the magic behind everyday items and processes. This guide includes hundreds of full colour illustrations and photos.

*The Electric Vehicle Conversion Handbook* Mark Warner 2011 Explains how to convert any gas- or diesel-powered vehicle to one that runs on electric power, including information on ownership advantages, basic EV operation, subsystems, components, project vehicles and conversion kits. Original.