

The New Net Zero Leading Edge Design And Construction Of Homes And Buildings For A Renewable Energy Future

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Net Zero Energy Building - Ming Hu 2019-03-25

What do we mean by net zero energy? Zero operating energy? Zero energy costs? Zero emissions? There is no one answer: approaches to net zero building vary widely across the globe and are influenced by different environmental and cultural contexts. *Net Zero Energy Building: Predicted and Unintended Consequences* presents a comprehensive overview of variations in 'net zero' building practices. Drawing on examples from countries such as the United States, United Kingdom, Germany, Japan, Hong Kong, and China, Ming Hu examines diverse approaches to net zero and reveals their intended and unintended consequences. Existing approaches often focus on operating energy: how to make buildings more efficient by reducing the energy consumed by climate control, lighting, and appliances. Hu goes beyond this by analyzing overall energy consumption and environmental impact across the entire life cycle of a building—ranging from the manufacture of building materials to transportation, renovation, and demolition. Is net zero building still achievable once we look at these factors? With clear implications for future practice, this is key reading for professionals in

building design, architecture, and construction, as well as students on sustainable and green architecture courses.

Introduction to Digital Filters - Julius Orion Smith 2007

A digital filter can be pictured as a "black box" that accepts a sequence of numbers and emits a new sequence of numbers. In digital audio signal processing applications, such number sequences usually represent sounds. For example, digital filters are used to implement graphic equalizers and other digital audio effects. This book is a gentle introduction to digital filters, including mathematical theory, illustrative examples, some audio applications, and useful software starting points. The theory treatment begins at the high-school level, and covers fundamental concepts in linear systems theory and digital filter analysis. Various "small" digital filters are analyzed as examples, particularly those commonly used in audio applications. Matlab programming examples are emphasized for illustrating the use and development of digital filters in practice.

Toward a Zero Energy Home - David Johnston 2010

The authors of "Green from the Ground Up" explore the design and construction of self-

sufficient houses. With unequalled knowledge and a passion for the subject, the authors walk readers through the process of building and living in a truly green home.

Net Zero Energy Buildings (NZEB) - Shady Attia
2018-03-26

Net Zero Energy Buildings (NZEB): Concepts, Frameworks and Roadmap for Project Analysis and Implementation provides readers with the elements they need to understand, combine and contextualize design decisions on Net Zero Energy Buildings. The book is based on learned lessons from NZEB design, construction, operation that are integrated to bring the most relevant topics, such as multidisciplinary, climate sensitivity, comfort requirements, carbon footprints, construction quality and evidence-based design. Chapters introduce the context of high performance buildings, present overviews of NZEB, cover the performance thresholds for efficient buildings, cover materials, micro-grid and smart grids, construction quality, performance monitoring, post occupancy evaluation, and more. Offers a roadmap for engaging in energy efficiency in high performance buildings projects Combines solid grounding in core concepts, such as energy efficiency, with a wider context that includes the technical, socio-cultural and environmental dimensions Covers key areas for decision-making Provides a logical framework to analyze projects in the context of environmental change Presents worldwide examples and cases for different climates and societies

Democratizing Innovation - Eric Von Hippel
2006-02-17

The process of user-centered innovation: how it can benefit both users and manufacturers and how its emergence will bring changes in business models and in public policy. Innovation is rapidly becoming democratized. Users, aided by improvements in computer and communications technology, increasingly can develop their own new products and services. These innovating users—both individuals and firms—often freely share their innovations with others, creating user-innovation communities and a rich intellectual commons. In Democratizing Innovation, Eric von Hippel looks closely at this emerging system of user-centered innovation. He explains why and when users find

it profitable to develop new products and services for themselves, and why it often pays users to reveal their innovations freely for the use of all. The trend toward democratized innovation can be seen in software and information products—most notably in the free and open-source software movement—but also in physical products. Von Hippel's many examples of user innovation in action range from surgical equipment to surfboards to software security features. He shows that product and service development is concentrated among "lead users," who are ahead on marketplace trends and whose innovations are often commercially attractive. Von Hippel argues that manufacturers should redesign their innovation processes and that they should systematically seek out innovations developed by users. He points to businesses—the custom semiconductor industry is one example—that have learned to assist user-innovators by providing them with toolkits for developing new products. User innovation has a positive impact on social welfare, and von Hippel proposes that government policies, including R&D subsidies and tax credits, should be realigned to eliminate biases against it. The goal of a democratized user-centered innovation system, says von Hippel, is well worth striving for. An electronic version of this book is available under a Creative Commons license.

New Carbon Architecture - Bruce King
2017-11-27

"Green buildings" that slash energy use and carbon emissions are all the rage, but they aren't enough. The hidden culprit is embodied carbon—the carbon emitted when materials are mined, manufactured, and transported—comprising some ten percent of global emissions. With the built environment doubling by 2030, buildings are a carbon juggernaut threatening to overwhelm the climate. It doesn't have to be this way. Like never before in history, buildings can become part of the climate solution. With biomimicry and innovation, we can pull huge amounts of carbon out of the atmosphere and lock it up as walls, roofs, foundations, and insulation. We can literally make buildings out of the sky with a massive positive impact. The New Carbon Architecture is a paradigm-shifting tour of the

innovations in architecture and construction that are making this happen. Office towers built from advanced wood products; affordable, low-carbon concrete alternatives; plastic cleaned from the oceans and turned into building blocks. We can even grow insulation from mycelium. A tour de force by the leaders in the field, *The New Carbon Architecture* will fire the imagination of architects, engineers, builders, policy makers, and everyone else captivated by the possibility of architecture to heal the climate and produce safer, healthier, and more beautiful buildings. Bruce King, a structural engineer for thirty-five years, is Founder and Director of the Ecological Building Network (EBNet) and author of *Buildings of Earth and Straw*, *Making Better Concrete*, and *Design of Straw Bale Buildings*. He lives in San Rafael, California.

The Brain That Changes Itself - Norman Doidge 2007-03-15

"Fascinating. Doidge's book is a remarkable and hopeful portrait of the endless adaptability of the human brain."—Oliver Sacks, MD, author of *The Man Who Mistook His Wife for a Hat* What is neuroplasticity? Is it possible to change your brain? Norman Doidge's inspiring guide to the new brain science explains all of this and more. An astonishing new science called neuroplasticity is overthrowing the centuries-old notion that the human brain is immutable, and proving that it is, in fact, possible to change your brain. Psychoanalyst, Norman Doidge, M.D., traveled the country to meet both the brilliant scientists championing neuroplasticity, its healing powers, and the people whose lives they've transformed—people whose mental limitations, brain damage or brain trauma were seen as unalterable. We see a woman born with half a brain that rewired itself to work as a whole, blind people who learn to see, learning disorders cured, IQs raised, aging brains rejuvenated, stroke patients learning to speak, children with cerebral palsy learning to move with more grace, depression and anxiety disorders successfully treated, and lifelong character traits changed. Using these marvelous stories to probe mysteries of the body, emotion, love, sex, culture, and education, Dr. Doidge has written an immensely moving, inspiring book that will permanently alter the way we look at our brains, human nature, and human potential.

The World Is Flat [Further Updated and Expanded; Release 3.0] - Thomas L. Friedman 2007-08-07

This new edition of Friedman's landmark book explains the flattening of the world better than ever- and takes a new measure of the effects of this change on each of us.

Net Positive - Paul Polman 2021-10-05

A Financial Times Best Business Book of the Year Named one of 10 Best New Management Books for 2022 by Thinkers50 "An advocate of sustainable capitalism explains how it's done" — The Economist "Polman's new book with the sustainable business expert Andrew Winston...argues that it's profitable to do business with the goal of making the world better." — The New York Times Named as recommended reading by Fortune's CEO Daily "...Polman has been one of the most significant chief executives of his era and that his approach to business and its role in society has been both valuable and path-breaking." — Financial Times The ex-Unilever CEO who increased his shareholders' returns by 300% while ensuring the company ranked #1 in the world for sustainability for eleven years running has, for the first time, revealed how to do it. Teaming up with Andrew Winston, one of the world's most authoritative voices on corporate sustainability, Paul Polman shows business leaders how to take on humanity's greatest and most urgent challenges—climate change and inequality—and build a thriving business as a result. In this candid and straight-talking handbook, Polman and Winston reveal the secrets of Unilever's success and pull back the curtain on some of the world's most powerful c-suites. *Net Positive* boldly argues that the companies of the future will profit by fixing the world's problems, not creating them. Together the authors explode our most prevalent corporate myths: from the idea that business' only function is to maximise profits, to the naïve hope that Corporate Social Responsibility will save our species from disaster. These approaches, they argue, are destined for the graveyard. Instead, they show corporate leaders how to make their companies "Net Positive"—thriving by giving back more to the world than they take. *Net Positive* companies unleash innovation, build trust, attract the best people, thrill customers, and secure lasting

success, all by helping create stronger, more inclusive societies and a healthier planet. Heal the world first, they argue, and you'll satisfy your investors as a result. With ambitious vision and compelling stories, Net Positive will teach you how to find the inner purpose and courage you need to embrace the only business model that will matter in the years ahead. You will learn how to lead others and unlock your company's soul, while setting and delivering big and aggressive goals, and taking responsibility for all of your company's impacts. You'll find out the secrets to partnering with others, including your competition and critics, to drive transformative change from which you will prosper. You'll build a company that serves your people, your customers, your communities, your shareholders—and your children and grandchildren will thank you for it. Is this win-win for business and humanity too good to be true? Don't believe it. The world's smartest CEOs are already taking their companies on the Net Positive journey and benefitting as a result. Will you be left behind? Join the movement at netpositive.world

Heating, Cooling, Lighting - Norbert M. Lechner
2021-10-26

The essential guide to environmental control systems in building design For over 25 years Heating, Cooling, Lighting: Sustainable Design Strategies Towards Net Zero Architecture has provided architects and design professionals the knowledge and tools required to design a sustainable built environment at the schematic design stage. This Fifth Edition offers cutting-edge research in the field of sustainable architecture and design and has been completely restructured based on net zero design strategies. Reflecting the latest developments in codes, standards, and rating systems for energy efficiency, Heating, Cooling, Lighting: Sustainable Design Strategies Towards Net Zero Architecture includes three new chapters: Retrofits: Best practices for efficient energy optimization in existing buildings Integrated Design: Strategies for synergizing passive and active design Design Tools: How to utilize the best tools to benchmark a building's sustainability and net zero potential Heating, Cooling, Lighting: Sustainable Design Strategies Towards Net Zero Architecture is a go-to

resource for practicing professionals and students in the fields of environmental systems technology or design, environmental design systems, construction technology, and sustainability technology.

Ending Fossil Fuels - Holly Jean Buck
2021-11-02

Ending the fossil fuel industry is the only credible path for climate policy Around the world, countries and companies are setting net-zero carbon emissions targets. But what will it mean if those targets are achieved? One possibility is that fossil fuel companies will continue to produce billions of tons of atmospheric CO2 while relying on a symbiotic industry to scrub the air clean. Focusing on emissions draws our attention away from the real problem: the point of production. The fossil fuel industry must come to an end but will not depart willingly; governments must intervene. By embracing a politics of rural-urban coalitions and platform governance, climate advocates can build the political power needed to nationalize the fossil fuel industry and use its resources to draw carbon out of the atmosphere.

The Passivhaus Designer's Manual - Christina J. Hopfe
2015-10-05

Passivhaus is the fastest growing energy performance standard in the world, with almost 50,000 buildings realised to date. Applicable to both domestic and non-domestic building types, the strength of Passivhaus lies in the simplicity of the concept. As European and global energy directives move ever closer towards Zero (fossil) Energy standards, Passivhaus provides a robust 'fabric first' approach from which to make the next step. The Passivhaus Designers Manual is the most comprehensive technical guide available to those wishing to design and build Passivhaus and Zero Energy Buildings. As a technical reference for architects, engineers and construction professionals The Passivhaus Designers Manual provides: State of the art guidance for anyone designing or working on a Passivhaus project; In depth information on building services, including high performance ventilation systems and ultra-low energy heating and cooling systems; Holistic design guidance encompassing: daylight design, ecological materials, thermal comfort, indoor air quality and economics; Practical advice on procurement

methods, project management and quality assurance; Renewable energy systems suitable for Passivhaus and Zero Energy Buildings; Practical case studies from the UK, USA, and Germany amongst others; Detailed worked examples to show you how it's done and what to look out for; Expert advice from 20 world renowned Passivhaus designers, architects, building physicists and engineers. Lavishly illustrated with nearly 200 full colour illustrations, and presented by two highly experienced specialists, this is your one-stop shop for comprehensive practical information on Passivhaus and Zero Energy buildings.

Design Professional's Guide to Zero Net Energy Buildings - Charles Eley 2016-11-15

In the Design Professional's Guide to Zero Net Energy Buildings, Charles Eley draws from over 40 years of his own experience, and interviews with other industry experts, to lay out the principles for achieving zero net energy (ZNE) buildings, which produce as much energy as they use over the course of a year. Eley emphasizes the importance of building energy use in achieving a sustainable future; describes how building energy use can be minimized through smart design and energy efficiency technologies; and presents practical information on how to incorporate renewable energy technologies to meet the lowered energy needs. The book shows the reader through examples and explanations that these solutions are viable and cost effective.

The Image of the City - Kevin Lynch
1964-06-15

The classic work on the evaluation of city form. What does the city's form actually mean to the people who live there? What can the city planner do to make the city's image more vivid and memorable to the city dweller? To answer these questions, Mr. Lynch, supported by studies of Los Angeles, Boston, and Jersey City, formulates a new criterion—imageability—and shows its potential value as a guide for the building and rebuilding of cities. The wide scope of this study leads to an original and vital method for the evaluation of city form. The architect, the planner, and certainly the city dweller will all want to read this book.

Passive Solar Architecture - David Bainbridge
2011-08-18

New buildings can be designed to be solar oriented, naturally heated and cooled, naturally lit and ventilated, and made with renewable, sustainable materials—no matter the location or climate. In this comprehensive overview of passive solar design, two of America's solar pioneers give homeowners, architects, designers, and builders the keys to successfully harnessing the sun and maximizing climate resources for heating, cooling, ventilation, and daylighting. Bainbridge and Haggard draw upon examples from their own experiences, as well as those of others, of more than three decades to offer both overarching principles as well as the details and formulas needed to successfully design a more comfortable, healthy, and secure place in which to live, laugh, dance, and be comfortable. Even if the power goes off. Passive Solar Architecture also discusses “greener” and more-sustainable building materials and how to use them, and explores the historical roots of green design that have made possible buildings that produce more energy and other resources than they use.

Building the Timber Frame House - Tedd Benson
1981-09-01

For centuries, post-and-beam construction has proved to be one of the most durable building techniques. It is being enthusiastically revived today not only for its sturdiness but because it can be easily insulated, it is attractive, and it offers the builder the unique satisfaction of working with timbers. Building the Timber Frame House is the most comprehensive manual available on the technique. In it you will find a short history, of timber framing and a fully illustrated discussion of the different kinds of joinery, assembly of timbers, and raising of the frame. There are also detailed sections on present-day design and materials, house plans, site development, foundation laying, insulation, tools, and methods.

Essential Building Science - Jacob Deva
Racusin 2016-11-28

Down and dirty - a complete step-by-step guide to making, installing and living with beautiful, all-natural earthen floors Poor heat and moisture management are the enemies of durable, comfortable, and efficient housing, and good building design and construction starts with a solid understanding of good building science.

Essential Building Science provides a highly visual and accessible introduction to the fundamentals of building science for residential construction. Part one covers the rationale behind high-performance design and the fundamentals of building physics, including thermal dynamics, moisture transfer, and hygro-thermal dynamics such as vapor drive and condensation. Part two teaches the vital critical thinking skills needed to consider buildings as whole systems and to develop thermal and moisture control strategies regardless of the specifics of the design. Case studies and examples from across North American climatic zones illuminate real-life problems and offer builders, designers, and DIYers the insights and tools required for creating better new buildings and dramatically improving old ones. Good science plus critical thinking equals high performance buildings.

Material Revolution - Sascha Peters 2011-01
'Material Revolution' offers a systematic overview of the currently available sustainable materials and provides the reader with all the information he needs to assess a new material's suitability and potential for a given project.

Passive Houses - Chris van Uffelen 2012
The new generation of ecological architecture building owners today are increasingly confronted with the question of energy efficiency. Depending on the climatic zone, passive houses require very different technologies, interventions and steps to be taken by the architects. This volume portrays 60 single family passive houses.

How to Avoid a Climate Disaster - Bill Gates
2021-02-16

#1 NEW YORK TIMES BEST SELLER • In this urgent, authoritative book, Bill Gates sets out a wide-ranging, practical—and accessible—plan for how the world can get to zero greenhouse gas emissions in time to avoid a climate catastrophe. Bill Gates has spent a decade investigating the causes and effects of climate change. With the help of experts in the fields of physics, chemistry, biology, engineering, political science, and finance, he has focused on what must be done in order to stop the planet's slide to certain environmental disaster. In this book, he not only explains why we need to work toward net-zero emissions of greenhouse gases,

but also details what we need to do to achieve this profoundly important goal. He gives us a clear-eyed description of the challenges we face. Drawing on his understanding of innovation and what it takes to get new ideas into the market, he describes the areas in which technology is already helping to reduce emissions, where and how the current technology can be made to function more effectively, where breakthrough technologies are needed, and who is working on these essential innovations. Finally, he lays out a concrete, practical plan for achieving the goal of zero emissions—suggesting not only policies that governments should adopt, but what we as individuals can do to keep our government, our employers, and ourselves accountable in this crucial enterprise. As Bill Gates makes clear, achieving zero emissions will not be simple or easy to do, but if we follow the plan he sets out here, it is a goal firmly within our reach.

Net Zero Energy Buildings - Linda Reeder
2016-03-31

This book presents 18 in-depth case studies of net zero energy buildings—low-energy building that generate as much energy as they consume over the course of a year—for a range of project types, sizes, and U.S. climate zones. Each case study describes the owner's goals, the design and construction process, design strategies, measurement and verification activities and results, and project costs. With a year or more of post-occupancy performance data and other project information, as well as lessons learned by project owners and developers, architects, engineers, energy modelers, constructors, and operators, each case study answers the questions: What were the challenges to achieving net zero energy performance, and how were these challenges overcome? How would stakeholders address these issues on future projects? Are the occupants satisfied with the building? Do they find it comfortable? Is it easy to operate? How can other projects benefit from the lessons learned on each project? What would the owners, designers, and constructors do differently knowing what they know now? A final chapter aggregates processes to engage in and pitfalls to avoid when approaching the challenges peculiar to designing, constructing, and owning a net zero energy building. By providing a wealth of comparable information,

this book which will flatten the learning curve for designing, constructing, and owning this emerging building type and improve the effectiveness of architectural design and construction.

Sustainability at the Cutting Edge - Peter Frederick Smith 2007

"Buildings are currently a major part of the carbon emissions problem. Sustainability at the Cutting Edge indicates how they may become part of the solution. This fully updated new edition deals not only with current best practice and state-of-the-art case studies, but also with the very latest emerging technologies which will transform the relationship between buildings and energy. Professor Peter Smith describes how buildings can be made to significantly reduce their reliance on fossil-based energy by the use of solar and geothermal resources."

"Packed with useful diagrams, charts and full colour photographs, this immensely practical book is a great reference for professionals in the design and construction industry."--BOOK JACKET.

Home Sweet Zero Energy Home - Barry Rehfeld 2012-01-03

This practical guidebook to zero energy homes focuses on real costs and savings, exploring such topics as site selection and passive design, heating and cooling, and financial resources and incentives. Original.

Structural Principles - Irving Engel 1984

The Philosophy of Sustainable Design - Jason F. McLennan 2004

The author outlines the major ideas and issues that have emerged in the growing movement of green architecture and sustainable design over the last thirty years. The book asks individuals to understand how the philosophy of sustainable design can affect their own work.

Designing Your Life - Bill Burnett 2016-09-20

#1 NEW YORK TIMES BEST SELLER • At last, a book that shows you how to build—design—a life you can thrive in, at any age or stage. Designers create worlds and solve problems using design thinking. Look around your office or home—at the tablet or smartphone you may be holding or the chair you are sitting in. Everything in our lives was designed by someone. And every design starts with a problem that a designer or

team of designers seeks to solve. In this book, Bill Burnett and Dave Evans show us how design thinking can help us create a life that is both meaningful and fulfilling, regardless of who or where we are, what we do or have done for a living, or how young or old we are. The same design thinking responsible for amazing technology, products, and spaces can be used to design and build your career and your life, a life of fulfillment and joy, constantly creative and productive, one that always holds the possibility of surprise.

Passive House Details - Donald B. Corner 2017-08-09

Passive House Details introduces the concepts, principles, and design processes of building ultralow-energy buildings. The objective of this book is to provide design goals, research, analysis, systems, details, and inspiring images of some of the most energy-efficient, carbon-neutral, healthy, and satisfying buildings currently built in the region. Other topics included: heat transfer, moisture management, performance targets, and climatic zones.

Illustrated with more than 375 color images, the book is a visual catalog of construction details, materials, and systems drawn from projects contributed from forty firms. Fourteen in-depth case studies demonstrate the most energy-efficient systems for foundations, walls, floors, roofs, windows, doors, and more.

The Second Media Age - Mark Poster 2018-03-08

This book examines the implications of new communication technologies in the light of the most recent work in social and cultural theory and argues that new developments in electronic media, such as the Internet and Virtual Reality, justify the designation of a "second media age".

Powertrain Systems for Net-Zero Transport - Institution of Mechanical Engineers (IME) 2021-12-21

The transport sector continues to shift towards alternative powertrains, particularly with the UK Government's announcement to end the sale of petrol and diesel passenger cars by 2030 and increasing support for alternatives. Despite this announcement, the internal combustion continues to play a significant role both in the passenger car market through the use of hybrids and sustainable low carbon fuels, as well as a key role in other sectors such as heavy-duty

vehicles and off-highway applications across the globe. Building on the industry-leading IC Engines conference, the 2021 Powertrain Systems for Net-Zero Transport conference (7-8 December 2021, London, UK) focussed on the internal combustion engine's role in Net-Zero transport as well as covered developments in the wide range of propulsion systems available (electric, fuel cell, sustainable fuels etc) and their associated powertrains. To achieve the net-zero transport across the globe, the life-cycle analysis of future powertrain and energy was also discussed. Powertrain Systems for Net-Zero Transport provided a forum for engine, fuels, e-machine, fuel cell and powertrain experts to look closely at developments in powertrain technology required, to meet the demands of the net-zero future and global competition in all sectors of the road transportation, off-highway and stationary power industries.

Making Better Buildings - Chris Magwood
2014-03-25

Sustainable building from the ground up - the pros and cons of the latest green and natural materials and technologies

Design, When Everybody Designs - Ezio Manzini
2015-03-06

The role of design, both expert and nonexpert, in the ongoing wave of social innovation toward sustainability. In a changing world everyone designs: each individual person and each collective subject, from enterprises to institutions, from communities to cities and regions, must define and enhance a life project. Sometimes these projects generate unprecedented solutions; sometimes they converge on common goals and realize larger transformations. As Ezio Manzini describes in this book, we are witnessing a wave of social innovations as these changes unfold—an expansive open co-design process in which new solutions are suggested and new meanings are created. Manzini distinguishes between diffuse design (performed by everybody) and expert design (performed by those who have been trained as designers) and describes how they interact. He maps what design experts can do to trigger and support meaningful social changes, focusing on emerging forms of collaboration. These range from community-supported agriculture in China to digital platforms for

medical care in Canada; from interactive storytelling in India to collaborative housing in Milan. These cases illustrate how expert designers can support these collaborations—making their existence more probable, their practice easier, their diffusion and their convergence in larger projects more effective. Manzini draws the first comprehensive picture of design for social innovation: the most dynamic field of action for both expert and nonexpert designers in the coming decades.

Building a Sustainable Home - Melissa Rappaport Schiffman
2018-08-07

The green building movement has produced hundreds of “how-to” books and websites that are filled with tips about green building and what homeowners should do to go green. While helpful and informative, when it comes to making actual purchasing and installation decisions, these books do not make it any easier for a homeowner to prioritize against a budget. Here, Schiffman shares her knowledge and experience for others to use in their journey toward a greener way of living. Whether the reader is building a new home or doing a minor remodel, a homeowner needs a framework by which to guide their decisions. These decisions are based on values, and the author posits that there are really only three reasons to go green: For Our Health: By building more sustainably, we reduce our exposure to harmful chemicals and toxins. For Our Wealth: By building a more durable home and being more efficient with resources like water and electricity, we reduce our monthly utility bills and ongoing maintenance expenses. For Our Soul: Collectively doing the right thing for our planet does make a difference—and that is soul-nourishing. Learn the logistics of choosing windows, insulation, appliances, and lighting. Find out about FSC certified wood and about using reclaimed materials. Here is everything you need to make your home sustainable. *Green Interior Design* - Lori Dennis
2021-03-09
"An essential introduction to sustainable domestic design." —Dwell magazine
How to Achieve Style and Sustainability
Green Interior Design is the most comprehensive guide to sustainable building, designing, and decorating on the market. This beautifully illustrated guide covers every detail of your home—from the

drywall to the finial on the curtain rod—and how to find the most environmentally friendly versions of products and décor. This second edition of *Green Interior Design* is meant as much for the budget DIYer as it is for the luxury homebuilders looking to dip their toes into sustainability. Sprinkled among the chapters, readers will find: Digestible how-tos for quick updates Fun DIY projects Quick tips on repurposing and upcycling Helpful resources and buying guides Inspiring home tours Unconventional advice from designers (e.g., “Don’t buy anything!”) We hope readers carry this reference guide with them as they decorate apartments, furnish their first properties, and build their dream homes from the ground up. The second edition’s interactive structure allows you, the reader, to choose your own adventure: go into the weeds and get granular with purchasing decisions for your home, or take a more generalized approach to your green design project. Whichever path you choose, know that it’s more important than ever before to act sustainably. “Going green” is more than just a trend: It’s a global economic and social necessity.

The Passivhaus Handbook - Janet Cotterell
2021-10-14

An essential guide to making a supremely comfortable, healthy and durable home with exceptionally low energy costs. Covers both retrofitting and new-build.

The Power of Zero - Jason F. McLennan
2015-11-01

The New Net Zero - Bill Maclay 2014

The new threshold for green building is not just low energy, it's net-zero energy. In *The New Net Zero*, sustainable architect Bill Maclay charts the path for designers and builders interested in exploring green design's new-frontier net-zero-energy structures that produce as much energy as they consume and are carbon neutral. In a nation where traditional buildings use roughly 40 percent of the total fossil energy, the interest in net-zero building is growing enormously--among both designers interested in addressing climate change and consumers interested in energy efficiency and long-term savings. Maclay, an award-winning net-zero designer whose buildings have achieved high-performance goals

at affordable costs, makes the case for a net-zero future; explains net-zero building metrics, integrated design practices, and renewable energy options; and shares his lessons learned on net-zero teambuilding. Designers and builders will find a wealth of state-of-the-art information on such considerations as air, water, and vapor barriers; embodied energy; residential and commercial net-zero standards; monitoring and commissioning; insulation options; costs; and more. The comprehensive overview is accompanied by several case studies, which include institutional buildings, commercial projects, and residences. Both new-building and renovation projects are covered in detail. *The New Net Zero* is geared toward professionals exploring net-zero design, but also suitable for nonprofessionals seeking ideas and strategies on net-zero options that are beautiful and renewably powered.

Material Revolution 2 - Sascha Peters
2014-02-24

Following the huge success of *Material Revolution*, this second volume addresses the rapid development of material research and presents materials new to the market since 2010. The significance of sustainable and intelligent materials in design and architecture has increased enormously over the last two years. Numerous new products have been introduced to the market and designers' thirst for knowledge about the sustainability of new material is as strong as ever, making a sequel to *Material Revolution* necessary. The new volume contains a similar system of classification but covers a completely different range of materials. There is a chapter dedicated solely to the criteria and factors of sustainable product design, as well as to innovative projects by designers and architects that work with new materials and technologies.

The Technology Fallacy - Gerald C. Kane
2019-04-16

Why an organization's response to digital disruption should focus on people and processes and not necessarily on technology. Digital technologies are disrupting organizations of every size and shape, leaving managers scrambling to find a technology fix that will help their organizations compete. This book offers managers and business leaders a guide for

surviving digital disruptions—but it is not a book about technology. It is about the organizational changes required to harness the power of technology. The authors argue that digital disruption is primarily about people and that effective digital transformation involves changes to organizational dynamics and how work gets done. A focus only on selecting and implementing the right digital technologies is not likely to lead to success. The best way to respond to digital disruption is by changing the company culture to be more agile, risk tolerant, and experimental. The authors draw on four years of research, conducted in partnership with MIT Sloan Management Review and Deloitte, surveying more than 16,000 people and conducting interviews with managers at such companies as Walmart, Google, and Salesforce. They introduce the concept of digital maturity—the ability to take advantage of opportunities offered by the new technology—and address the specifics of digital transformation, including cultivating a digital environment, enabling intentional collaboration, and fostering an experimental mindset. Every organization needs to understand its “digital DNA” in order to stop “doing digital” and start “being digital.” Digital disruption won't end anytime soon; the average worker will probably experience numerous waves of disruption during the course of a career. The insights offered by *The Technology Fallacy* will hold true through them all. A book in the Management on the Cutting Edge series, published in cooperation with MIT Sloan Management Review.

Net Zero Energy Design - Thomas Hootman
2012-10-15

Conveniently organized and packed with robust technical content and clear explanations of key principles Written by an architect who is the director of sustainability at a global architecture firm, *Net Zero Energy Design* is a practical guide for architects and related construction professionals who want to design and build net zero energy commercial architecture. It offers no-nonsense strategies, step-by-step technical analysis, and valuable examples, in addition to

developed case studies. With a focus on application in a variety of building types and scales, the book also develops a broad-based understanding of all the integrated principles involved in achieving net zero energy. This book is an indispensable resource for anyone venturing into net zero energy design, construction, and operation, and it also serves as an excellent resource on a variety of sustainable design topics. Important features include: Organization based upon the commercial building delivery process Robust technical content for use in actual project applications Analysis examples that demonstrate key technical principles Plenty of design data for use as a valuable design resource Abundant and sophisticated information graphics and color illustrations and photographs A distinct design focus on the content that inspires adoption of principles into projects

Passive House Design - Gonzalo Roberto
2014-06

The passive house standard is developing more and more into the international key currency of energy-efficient construction. Passive houses are being erected in almost all parts of the world and for all types of users. "Plus energy" buildings and entire zero-energy districts show that the passive house standard is also a sound basis for advanced efficiency strategies. At the same time, many architects are unsure about the specifics: What do passive houses really deliver, and what errors need to be avoided during planning? The book "*Passive House Design*" gives readers confidence in dealing with the passive house standard from the very first design draft. It shows how much scope for design there is in passive houses and explains design strategies that lead to better passive buildings. Detailed documentations of both residential and non-residential buildings illustrate how design, construction and building technology combine in passive houses. Chapters on building physics, building services engineering and energy balancing provide the required detailed knowledge for being able to implement your own passive house projects.