
The Biomimetic Office Building Exploration Architecture

Greening the Building and the Bottom Line
 Biomimetics in Architecture
 De natuur als uitvinder
 Innovation Inspired by Nature
 Product Engineering
 Architecture of Life and Buildings
 A New Dynamic 2- Effective Systems in a Circular Economy
 Biomimicry and Business
 Design Paradigms for Our Planetary Emergency
 Selected Proceedings from the International Conference of Sustainable Ecological Engineering Design for Society (SEEDS) 2019
 Nature - Analogies - Technology
 The Architecture of Luis Barragán
 Interdisciplinary Expansions in Engineering and Design With the Power of Biomimicry
 Increasing Productivity Through Energy-efficient Design
 Fluid Structures
 Biomimetics
 Biomimetics
 Learning from Nature
 Examples, Ideas and Case Studies
 Transformative Technologies and Research Trajectories
 Disillusionment Or New Opportunities?
 Eco-Design, Technologies and Green Energy
 The Shark's Paintbrush
 Nature-Inspired Design and Innovation
 Emotionally Durable Design
 How Companies Are Using Nature's Strategies to Succeed
 Biomimetics for Architecture
 Handbook of Biophilic City Planning & Design
 Biologically Inspired Technologies
 Architecture Inspired by Nature
 Biomimetics
 A biophilic design guide
 Energy Efficient Building Design
 Architecture Follows Nature-Biomimetic Principles for Innovative Design
 Development
 Nature Inside
 Design Methods for High-Performance Building Envelopes
 Biomimicry and How Nature is Inspiring Innovation
 Biomimetic Research for Architecture and Building Construction
 Adventures in Engineering

*The Biomimetic Office
 Building Exploration
 Architecture*

Downloaded from
business.itu.edu.tr/guest

SHAYLEE CHEN

Greening the Building and the Bottom Line
 Basic Books
 The purpose of investigating the overlaps between architecture and biology is neither to draw borders or make further distinctions nor to declare architecture alive, but to clarify what is currently happening in the blurred fields, and to investigate the emerging discipline of „biomimetics in architecture“ [Architekturbiomimik]. An overview of the present state of research in the relatively young scientific field of biomimetics shows the potential of the approach. The new discipline aims at innovation by making use of the subtle systems and solutions in

nature having evolved within millions of years. Approaches that have been taken to transfer nature's principles to architecture have provided successful developments. The new approach presented in this book transfers the abstract concept of life onto built environment. Strategic search for life's criteria in architecture delivers a new view of architectural achievements and makes the innovative potential visible, which has not been exploited yet. A selection of case studies illustrates the diversity of starting points: from vernacular architecture to space exploration. *Biomimetics in Architecture* Routledge Practical information on designing sustainable, energy-efficient building facades As energy and other natural resources are being depleted, it has become clear that technologies and

strategies that allow us to maintain our satisfaction with interior environments while consuming less of these resources are major objectives of contemporary facade design. Sustainable Facades focuses on the strategies and approaches for designing sustainable, high-performance building facades, and provides technical guidance for architects and designers. This timely and useful guide presents strategies and technical guidelines for designing environmentally sensitive, energy-efficient facades based on scientific principles. It provides climate-specific approaches for minimizing energy consumption, analyzes the thermal behavior of different facade systems and materials, and illustrates with case studies how these approaches have been implemented on architectural projects. It also discusses

emerging facade technologies, materials, and systems. Topics covered in this unique and indispensable guide include: Climate-based design approaches for high-performance facades Characteristics of sustainable facades: energy efficiency, thermal behavior, and moisture resistance Designing for thermal comfort, lighting and glare control, and acoustic quality Emerging technologies in facade design, including smart materials, double-skin facades, and facades as energy generators Case studies on building orientation and facade design, tectonic sun exposure control, external shading elements, and more

De natuur als uitvinder Springer

Nature is the world's foremost designer. With billions of years of experience and boasting the most extensive laboratory available, it conducts research in every branch of engineering and science. Nature's designs and capabilities have always inspired technology, from the use of tongs and tweezers to genetic algorithms and autonomous legged robots. Taking a systems perspective rather than focusing narrowly on materials or chemistry aspects, *Biomimetics: Biologically Inspired Technologies* examines the field from every angle. The book contains pioneering approaches to biomimetics including a new perspective on the mechanization of cognition and intelligence, as well as defense and attack strategies in nature, their applications, and potential. It surveys the field from modeling to applications and from nano- to macro-scales, beginning with an introduction to principles of using biology to inspire designs as well as biological mechanisms as models for technology. This innovative guide discusses evolutionary robotics; genetic algorithms; molecular machines; multifunctional, biological-, and nano- materials; nastic structures inspired by plants; and functional surfaces in biology. Looking inward at biological systems, the book covers the topics of biomimetic materials, structures, control, cognition, artificial muscles, biosensors that mimic senses, artificial organs, and interfaces between engineered and biological systems. The final chapter contemplates the future of the field and outlines the challenges ahead. Featuring extensive illustrations, including a 32-page full-color insert, *Biomimetics: Biologically Inspired Technologies* provides unmatched breadth of scope as well as lucid illumination of this promising field.

Innovation Inspired by Nature

Routledge

Emotionally Durable Design presents

counterpoints to our 'throwaway society' by developing powerful design tools, methods and frameworks that build resilience into relationships between people and things. The book takes us beyond the sustainable design field's established focus on energy and materials, to engage the underlying psychological phenomena that shape patterns of consumption and waste. In fluid and accessible writing, the author asks: why do we discard products that still work? He then moves forward to define strategies for the design of products that people want to keep for longer. Along the way we are introduced to over twenty examples of emotional durability in smart phones, shoes, chairs, clocks, teacups, toasters, boats and other material experiences. *Emotionally Durable Design* transcends the prevailing doom and gloom rhetoric of sustainability discourse, to pioneer a more hopeful, meaningful and resilient form of material culture. This second edition features pull-out quotes, illustrated product examples, a running glossary and comprehensive stand firsts; this book can be read cover to cover, or dipped in-and-out of. It is a daring call to arms for professional designers, educators, researchers and students from in a range of disciplines from product design to architecture; framing an alternative genre of design that reduces the consumption and waste of resources by increasing the durability of relationships between people and things.

Product Engineering Springer Nature

"This publication offers practical advice and inspiration for ensuring that nature in the city is more than infrastructure--that it also promotes well-being and creates an emotional connection to the earth among urban residents. Divided into six parts, the Handbook begins by introducing key ideas, literature, and theory about biophilic urbanism. Chapters highlight urban biophilic innovations in more than a dozen global cities. The final part concludes with lessons on how to advance an agenda for urban biophilia and an extensive list of resources."--Publisher.

Architecture of Life and Buildings

Routledge

Nature's evolution has led to the introduction of highly efficient biological mechanisms. Imitating these mechanisms offers an enormous potential for the improvement of our day to day life. Ideally, by bio-inspiration we can get a better view of nature's capability while studying its models and adapting it for our benefit. This book takes us into the interesting world of biomimetics and describes various arenas where the

technology is applied. The 25 chapters covered in this book disclose recent advances and new ideas in promoting the mechanism and applications of biomimetics.

A New Dynamic 2- Effective Systems in a Circular Economy Springer Science & Business Media

Repackaged with a new Afterword, this "valuable and entertaining" (New York Times Book Review) book explores how scientists are adapting nature's best ideas to solve tough 21st century problems. Biomimicry is rapidly transforming life on earth. Biomimics study nature's most successful ideas over the past 3.5 million years, and adapt them for human use. The results are revolutionizing how materials are invented and how we compute, heal ourselves, repair the environment, and feed the world. Janine Benyus takes readers into the lab and in the field with maverick thinkers as they: discover miracle drugs by watching what chimps eat when they're sick; learn how to create by watching spiders weave fibers; harness energy by examining how a leaf converts sunlight into fuel in trillionths of a second; and many more examples. Composed of stories of vision and invention, personalities and pipe dreams, *Biomimicry* is must reading for anyone interested in the shape of our future.

Biomimicry and Business Springer Science & Business Media

Applying Properties of Animals Skins to Inspire Architectural Envelopes Biology influences design projects in many ways; the related discipline is known as biomimetics or biomimicry. Using the animal kingdom as a source of inspiration, Ilaria Mazzoleni seeks to instill a shift in thinking about the application of biological principles to design and architecture. She focuses on the analysis of how organisms have adapted to different environments and translates the learned principles into the built environment. To illustrate the methodology, Mazzoleni draws inspiration from the diversity of animal coverings, referred to broadly as skin, and applies them to the design of building envelopes through a series of twelve case studies. Skin is a complex organ that performs a multitude of functions; namely, it serves as a link between the body and the environment. Similarly, building envelopes act as interfaces between their inhabitants and external elements. The resulting architectural designs illustrate an integrative methodology that allows architecture to follow nature. "Ilaria Mazzoleni, in collaboration with biologist Shauna Price, has developed a profound methodology for architectural and design

incentives that anticipates and proposes novel ways to explore undiscovered biological inspirations for various audiences." —Yoseph Bar-Cohen

Design Paradigms for Our Planetary Emergency John Wiley & Sons

Biomimicry, the practice of observing then mimicking nature's strategies to solve business challenges, offers a path to healthy profit while working in partnership, and even reciprocity, with the natural world. Other books have described biomimicry, its uses, and its benefits. This book shows readers how to create their own biomimetic or bioinspired solutions with clear benefits to the bottom line, the environment, and people. Fashioned through storytelling, this book blends snapshots of five successful companies – Nike, Interface, Inc., PAX Scientific, Sharklet Technologies, and Encycle – which decided to partner with nature by deploying biomimicry. The book details how they discovered the practices, introduced them to staff, engaged in the process, and measured outcomes. The book concludes with challenges for readers to determine their own next steps in business and offers practical and useful resources to get there. By revealing the stories of each professional's journey with lessons they learned, then providing resources and issuing a challenge and pathway to do business better, this book serves as a tool for entrepreneurs, seasoned professionals, and students to emulate nature's brilliance, apply it at work, and contribute to a healthier, more prosperous world.

Selected Proceedings from the International Conference of Sustainable Ecological Engineering Design for Society (SEEDS) 2019 Ellen MacArthur Foundation Publishing

Usually authors write introductions for their books, although they know that not many readers will read it. Despite this, authors insist on writing an introduction and no publisher will publish a book without one. I would like to inform my dear readers that I have spent almost all of the first quarter of my life in a village in the Nile Delta, 65 km north of Cairo. The everyday scenery there was the beautiful green landscape dissected with canals full of running water. All of these were bordered with the huge sycamore, mulberry and acacia trees. The desert was something unknown to me at that time, except for the very basic information given in geography books, which explained that the desert is a place without water or cultivation. Some of my ideas about the desert came to me from the stories in the history of Islam and the desert lands

where Islam originated. My real attraction to the desert developed in the last year of my under graduate studies. This was during the field courses in Ecology (Prof. A.M.

Nature - Analogies - Technology Routledge

The external facades of a building are more than a protective mantle, or an intelligent skin regulating temperature and light, they also determine its very appearance. By unusual choices of materials and the use of complex technology, facades have become increasingly significant in recent years. External surfaces are being perceived as an integral part of the building and are therefore being designed as such. This volume focuses on the wide-ranging aspects of facade design, from the selection and use of materials to the advanced technical possibilities now open to the architect. A wide array of carefully selected international examples show the theory in the practice. All plans, details, and large scale sections of the facades have been researched with the high degree of competence typical of the editorial staff from the review Detail. Expert authors provide the essential information needed to plan and design facades and elucidate on the latest developments in technology and materials.

The Architecture of Luis Barragán Walter de Gruyter

The wave of the future has been around since the beginning of times: it's called Nature. Let inventor and entrepreneur Jay Harman introduce you to stunning solutions to some of the world's thorniest problems. Why does the bumblebee have better aerodynamics than a 747? How can copying a butterfly wing reduce the world's lighting energy bill by 80%? How will fleas' knees and bees' shoulders help scientists formulate a near-perfect rubber? Today an interdisciplinary and international group of scientists, inventors and engineers is turning to nature to innovate and find elegant solutions to human problems. The principle driving this transformation is called biomimicry, and Harman shares a wide range of examples of how we're borrowing from natural models to invent profitable, green solutions to pressing industrial challenges. Aimed at a business audience, aspiring entrepreneurs, environmentalists and general science readers, *The Shark's Paintbrush* reflects a force of change in the new global economy that does more than simply gratify human industrial ambition; it teaches us how to live in harmony with nature and opens bright opportunities for

a better future.

Interdisciplinary Expansions in Engineering and Design With the Power of Biomimicry Biomimicry in Architecture

This book provides the readers with a timely guide to the application of biomimetic principles in architecture and engineering design. As a result of a combined effort by two internationally recognized authorities, the biologist Werner Nachtigall and the architect Göran Pohl, the book describes the principles which can be used to compare nature and technology, and at the same time it presents detailed explanations and examples showing how biology can be used as a source of inspiration and "translated" in building and architectural solutions (biomimicry). Even though nature cannot be directly copied, the living world can provide architects and engineers with a wealth of analogues and inspirations for their own creative designs. But how can analysis of natural entities give rise to advanced and sustainable design? By reporting on the latest bionic design methods and using extensive artwork, the book guides readers through the field of nature-inspired architecture, offering an extraordinary resource for professional architects, engineers, designers and urban planners, as well as for university teachers, researchers and students. Natural evolution is seen throughout the book as a powerful resource that can serve architecture and design by providing innovative, optimal and sustainable solutions.

Increasing Productivity Through Energy-efficient Design BoD – Books on Demand Through research and proven practice, the aim of the International Conference of Sustainable Ecological Engineering Design for Society (SEEDS) is to foster ideas on how to reduce negative impacts on the environment while providing for the health and well-being of society. The professions and fields of research required to ensure buildings meet user demands and provide healthy enclosures are many and diverse. The SEEDS conference addresses the interdependence of people, the built and natural environments, and recognizes the interdisciplinary and international themes necessary to assemble the knowledge required for positive change.

Fluid Structures UCL Press

The surprising ways nature has influenced architecture. It may come as a surprise to learn that architects have found solutions to all kinds of design challenges in nature! Some have looked to nature to solve a structural problem, like creating an earthquake-proof bridge by mimicking the extremely long roots of a special type of

grass. Others have turned to nature for artistic inspiration, designing buildings and bridges that evoke the movement of swimming fish or a bird in flight. When it comes to style and structure, nature and architecture make perfect partners! From cactuses to birds' wings, termite towers to honeycombs, inspiration for ingenious design is everywhere around us!

Biomimetics BoD – Books on Demand
Biomimetic and bioinspired membranes are the most promising type of membrane for multiple usage scenarios, including commercial separation applications as well as water and wastewater treatment technologies. In recent years, aquaporin biomimetic membranes (ABMs) for water purification have raised considerable interest. These membranes display uniquely favorable properties and outstanding performances, such as diverse interactions, varied selective transport mechanisms, superior stability, high resistance to membrane fouling, and distinct adaptability. Biomimetic membranes would make a significant contribution to alleviate water stress, environmental threats, and energy consumption.

Biomimetics Springer Science & Business Media

Prominent intellectuals and public figures explore the dynamics of development, offering varying perspectives from a range of fields.

Learning from Nature Springer Nature
Rethinking Building Skins: Transformative Technologies and Research Trajectories provides a comprehensive collection of the

most relevant and forward-looking research in the field of façade design and construction today, with a focus on both product and process innovation. The book brings together the expertise, creativity, and critical thinking of more than fifty global innovators from both academia and industry, to guide the reader in translating research into practice. It identifies new opportunities for the construction sector to respond to present challenges, towards a more sustainable, efficient, connected, and safe future. Introduces the reader to the role of façades with respect to the main challenges ahead; Provides an overview of the major façade technological advancements throughout history and identifies prospective research trajectories; Includes interviews with key industry players from different backgrounds and expertise; Showcases a comprehensive range of leading research topics in the field, organised by product and process innovation; Covers major innovations across the value chain including façade design, fabrication, construction, operation and maintenance, and end-of-life; Contributes towards the definition of an international research agenda and identifies emerging market opportunities for the façade industry.

Examples, Ideas and Case Studies
Hachette UK

People have been finding inspiration in nature in solving their problems, from the very beginning of their existence. In the most general sense, biomimicry, defined as "inspire from the nature," has brought together the engineers and designers

nowadays. This collaboration creates innovative and creative outcomes that encourage people with their interdisciplinary relationships. Accordingly, the aim of this book is to bring together different works or developments on biomimetics in interdisciplinary relationship between different areas, especially biomimicry, engineering, and design. The twenty-first century has conceived many new and amazing designs. The book in your hands will surely be an important guide to take a quick look at the future possibilities.

Transformative Technologies and Research Trajectories BoD – Books on Demand

The second book of the series A New Dynamic reflects on the necessity to develop a whole-system approach to re-think our economy. This edition brings together thought leaders who can see beyond the boundaries of their respective areas of expertise, and establish the necessary connections to re-think our current development path. This portfolio of 11 articles, spanning a variety of fields including architecture, agriculture, design, business and engineering, provides both analytical and action-orientated insights that point towards a new regenerative framework for economic prosperity. A must-read for anyone eager to grasp the issues of the circular economy, with a view to ultimately contributing to this transition. Foreword by Joel de Rosnay, Ph.D -Special Advisor to the President of Universcience, CEO of Biotics International. Author of The Macroscope."

Best Sellers - Books :

- [Never Never: A Romantic Suspense Novel Of Love And Fate](#)
- [Twisted Games \(twisted, 2\) By Ana Huang](#)
- [Think And Grow Rich: The Landmark Bestseller Now Revised And Updated For The 21st Century \(think And Grow Rich Series\) By Napoleon Hill](#)
- [House Of Flame And Shadow \(crescent City, 3\) By Sarah J. Maas](#)
- [The Very Hungry Caterpillar By Eric Carle](#)
- [Blowback: A Warning To Save Democracy From The Next Trump](#)
- [Rich Dad Poor Dad: What The Rich Teach Their Kids About Money That The Poor And Middle Class Do Not! By Robert T. Kiyosaki](#)
- [The Courage To Be Free: Florida's Blueprint For America's Revival](#)
- [Lessons In Chemistry: A Novel By Bonnie Garmus](#)
- [A Letter From Your Teacher: On The First Day Of School](#)