Record Nr. UNINA9910299672603321 Autore Pohl Göran Titolo Biomimetics for Architecture & Design: Nature - Analogies -Technology / / by Göran Pohl, Werner Nachtigall Pubbl/distr/stampa Cham:,: Springer International Publishing:,: Imprint: Springer,, 2015 **ISBN** 3-319-19120-9 Edizione [1st ed. 2015.] 1 online resource (353 p.) Descrizione fisica 620 Disciplina Buildings—Design and construction Soggetti Building Construction Engineering, Architectural Biomedical engineering Industrial design Computational complexity Engineering design Regional planning Urban planning **Building Construction and Design** Biomedical Engineering and Bioengineering Industrial Design Complexity **Engineering Design** Landscape/Regional and Urban Planning Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia

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Note generali

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Includes bibliographical references and index.

Nota di contenuto

Technical Biology and Biomimetics -- Buildings, Architecture and Biomimetics -- Biomimetics for Buildings -- Natural Functions and Processes as Prototypes for Buildings -- Biological Support and Envelope Structures and their Counterparts in Buildings -- Products and Architecture - Examples of Biomimetics for Buildings -- Brief Information to Biological Structures -- Appendix.

## Sommario/riassunto

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 natureinspired 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. .