



## METADATA

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### Abstract

Biomimetics draws inspiration from the properties of organisms that live in nature, in various habitats, and deals with the simulation of their characteristic properties. Structures and properties from the living matter of nature (e.g., hydrophobic, optical, thigmotropic, tactile), which have been proven to be adapted to long-term environmental stress, revealed by research and used by technology, do create jobs, useful and innovative products, for the benefit of human activity. Internationally, this is a rapidly growing scientific specialization that encourages interdisciplinarity, interaction of ideas, novelties and bioinspiration. Biomimicry is linked to the deceptive imitation of an organism's characteristics by another organism for deception, attraction, or defense; for example, flowers of some plants mimic, as they open and display, certain insects in order to attract them. Also, several insects mimic the foliage of trees and shrubs in order to avoid being noticed by consumers. This e-book presents properties of

living organisms that are a "cast" for technology, innovative aspects of research, technological achievements, and future technological challenges and prospects. In other words, the book "Biomimetics and Biomimics" highlights the pre-existing "information" in the "laboratories" of nature, which is currently implemented in innovative anthropogenic constructions. The technological success of Biomimetics is directly related to the properties of the living matter of nature, which are based on long scale, painstaking scientific research. Results obtained using modern infrastructures, sparked many ideas and subsequent bio-inspired applications. Within each of above mentioned topics, nature is conceived as a complex and technologically mediated point of departure for new ways of viewing and making the world. Finally, the topics of biomimetic and biomimicry are coordinated with human life, in an era that is characterized and/or recognized as the threshold-period of climatic change and shortage of energy resources on Earth.

