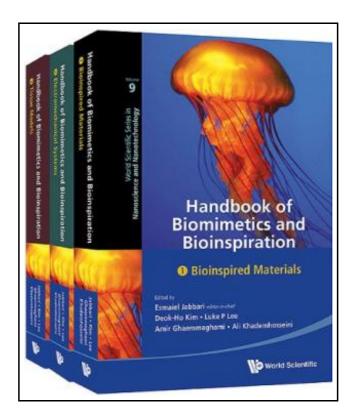
# Handbook of Biomimetics and Bioinspiration: Biologically-Driven Engineering of Materials, Processes, Devices, and Systems (Hardback)



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## Reviews

This pdf is indeed gripping and exciting. It is writter in easy words and phrases and not confusing. Once you begin to read the book, it is extremely difficult to leave it before concluding. (Alayna Kuphal)

## HANDBOOK OF BIOMIMETICS AND BIOINSPIRATION: BIOLOGICALLY-DRIVEN ENGINEERING OF MATERIALS, PROCESSES, DEVICES, AND SYSTEMS (HARDBACK)



World Scientific Publishing Co Pte Ltd, Singapore, 2014. Hardback. Book Condition: New. 267 x 185 mm. Language: English . Brand New Book. Global warming, pollution, food and water shortage, cyberspace insecurity, over-population, land erosion, and an overburdened health care system are major issues facing the human race and our planet. These challenges have presented a mandate to develop natural or green technologies using nature and the living system as a guide to rationally design processes, devices, and systems. This approach has given rise to a new paradigm, one in which innovation goes hand-in-hand with less waste, less pollution, and less invasiveness to life on earth. Bioinspiration has also led to the development of technologies that mimic the hierarchical complexity of biological systems, leading to novel highly efficient, more reliable multifunctional materials, devices, and systems that can perform multiple tasks at one time. This multi-volume handbook focuses on the application of biomimetics and bioinspiration in medicine and engineering to produce miniaturized multi-functional materials, devices, and systems to perform complex tasks. Our understanding of complex biological systems at different length scales has increased dramatically as our ability to observe nature has expanded from macro to molecular scale, leading to the rational biologicallydriven design to find solution to technological problems in medicine and engineering. The following threevolume set covers the fields of bioinspired materials, electromechanical systems developed from concepts inspired by nature, and tissue models respectively. The first volume focuses on the rational design of nano- and micro-structured hierarchical materials inspired by the relevant characteristics in living systems, such as the self-cleaning ability of lotus leaves and cicadas wings; the superior walking ability of water striders; the antifogging function of mosquitoes eyes; the water-collecting ability of Namib Desert Beetles and spider silk; the high adhesivity of geckos feet and rose petals; the high adhesivity of...

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