

Ecomimcry and Nano Air Vehicle Design

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Abstract:

The Research Dealt With The Issue Of The Distinction Between Biomimicry And Ecomimcry When Inspired By Nature In Building Human Artifacts To Overcome The Confusion Between The Two Concepts, Whether During Innovation Or When Criticizing And Evaluating, That In The Light Of Nanotechnology Innovations.

With The Beginning Of The Third Millennium, There Are Terms That Have Changed Based On Technological Development And The Discovery Of New Worlds That Man Was Not Aware Of (The World Of The Large Surrounding It In The Vast Space With Its Criminality, Stars And Planets, And The Small World That Is Replete With Micro-Organisms). Those Concepts That Expanded After Revealing Those Worlds To Make Ecomimicry And Nanotechnology One Of The Most Important And Broadest Sources Of Inspiration In The Field Of Industrial Design, Especially For The Design Of Micro-Creations Such As Wearable Technology.

The Inspiration Takes Place In Two Stages:

First, Biomimicry: The Ability To Inspire The Formal And Natural Properties Found In Systems, Structures, And Mechanisms From Nature To Invent Human Inventions To Perform Certain Functions.

Second, Ecomimcry: The Ability To Inspire Through Basic Sciences, Mathematics, Physics, Chemistry And Others To Support The Requirements Associated With Operational Functions, Materials Functions, Manufacturing Functions, And Production Functions. As Well As Aesthetic Functions

Keywords:

Ecomimcry - Nanotechnology - Nano Air Vehicle.

Introduction:

In light of the research taking place in the field of (Ecomimicry) about increasing human understanding of the universe so that he may be inspired by nature to solve his life problems through development in the field of the ability to magnify, or in other words to be inspired by nature for those solutions through basic sciences and knowledge such as physics, chemistry, mathematics, biology, and also Natural knowledge such as science and ecological knowledge.

The phenomenon that is the subject of research Research Phenomenon:

God gave man the ability to search and investigate and showed him the existence of different worlds. The role of technological development accompanying man's will to realize had the greatest impact on the desire to achieve the goal of drawing inspiration from infinitesimal nature effectively, which appeared as advanced human creativity as basic tools to help him achieve his goal of discovering those worlds, which is not possible. He can be perceived sensually and mentally without Assistive Technology to help him do that. He was given the ability to create whatever he wanted from these technologies to help him explore the depths of other worlds in which he lives, which he cannot perceive with his limited human ability through development in the field of magnification.

Research Problem:

Linking ecomimcry to the design of nano-flying vehicles through nanotechnology (Figure 1).



Figure 1: Research problems

Research Objective:

The research aims to build knowledge linking eco-microcomputers and nanocomposites to reveal and determine the relationship between nanotechnology, which opens new horizons for practicing design innovations in extremely complex and ultra-fine fields.

Research Methodology:

Deductive Approach:

Through it, we formulate existing scientific knowledge about (a phenomenon, issue, or problem) related to aspects of nanotechnology concepts and its applications in a way that allows us to benefit from and rely on them in supporting the field of industrial design.

Research Hypotheses:

The research assumes that the combination of nanotechnology on the one hand and inspiration from the basic sciences of nature (Ecomimcry) opens new horizons for practicing design innovations.

Importance of research:

Supporting inspiration from the basic sciences of nature (Ecomimcry) based on the potential and capabilities of nanotechnology.

Research Plan:

The research plan includes a set of integrated stages:

First Stage: Investigation and information gathering stage. In this stage, the available pieces of knowledge and information about the research topic are collected, **the most important of which are:**

- The basic concept of Ecomimcry and nanotechnology. Nanotechnolog
- Economy and its role in industrial design and nano applications.

Second Stage: Analysis stage. In this stage, the data collected in the previous stage is analyzed and classified.

Third Stage: The stage of forming relationships (patterns) and deduction. This was achieved through merging data and linking information in the previous stages, in which relationships (patterns) are formed, results are drawn, and the dimensions and aspects of the relationship are understood between the economy and the design of nano-flying vehicles.

Forthstage: Visualizationresults stage: In this stage, the search results are displayed.

Conclusion:

The researcher concluded by correcting the concept of Ecomimcry due to its great confusion and similarity with the concept of Biomimicry. If the concept of Biomimicry is related to the inspiration of nature in terms of the constructions of natural creatures, then Ecoimcry is concerned with the inspiration of (natural) ecosystems, which are concerned with the recycling and re-exploitation of minerals and the flow of energy. Flow and control of the population and behavior of living organisms. God created systems from partial configurations of sub-systems to perform certain functions in life.

When inspired by ecological systems (Ecomimcry), the designer uses the sciences related to system design, which are the basic sciences, mathematics, physics, chemistry, and others, to support the requirements related to operational functions, materials functions, and manufacturing and production functions for the inspired systems, as well as animal behavior sciences with regard to ethics. With its systems of living and movement in nature, including movement and migration.

Result & Recommendationsresearch:**First: Results**

Through the construction of knowledge of Economy and the design of nano-flying vehicles and its role in supporting aspects of industrial design, the following results were reached:

- Building scientific knowledge about drawing inspiration from the basic sciences of nature (Ecomimcry) in light of nanotechnology for designing nano-flying vehicles.
- The possibility of differentiating between Ecomimicry and Biomimicry in the applications of Nature Inspiration in human creativity Artifacts.

- Correcting the concept of ecomimicry is an urgent necessity in order to examine the large and profound confusion between it and the concept and method of biomimicry, as the concept of ecomimicry is drawing inspiration for design from the basic sciences found in nature (physics, chemistry, and mathematics).

Second: Research Recommendations

The research concluded with a set of recommendations:

- Interest in the science of Ecoimcry
- Interest in nanotechnology as a science that helps in all its dimensions inspire the industrial designer to create nano applications.
- Interest in changing the concepts and terminology of the 2nd Millennium in line with the repercussions of the 3rd Millennium and taking into account any new change in the coming decades, and then studying the new concepts in each time period and integrating them into industrial design knowledge.
- Stirring the spirit of innovation in the industrial designer, including challenging his abilities and design skills, as the importance of research for the industrial designer lies in helping him in the field of biomechanical and biomechanical design, and the importance of applying it in a more easy and diverse manner.

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