

Inspiration from nature in the light of nanotechnology and its role in enriching environmental coordination

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Abstract:

Nature is considered an important source of inspiration for art and design majors, due to its rich engineering and kinetic systems. And since these systems are available in nature, the designer's ability to extract and identify them is a necessity to know the essence of their construction, so that awareness of what this system is becoming a source of inspiration, and may even go beyond the limits of that system, to study and analyze what is behind it. Beyond the shape, beyond color. Therefore, inspiration from nature in light of modern technology has a fundamental role in strengthening the fields of art and design in general and the field of environmental coordination in particular. The remarkable development in various fields of science and technology in the third millennium enabled the designer to realize advanced concepts of nature. Nanotechnology is at the forefront of advanced technologies in the third millennium, which in turn enhances the development of the concept inspired by nature. Nanotechnology is the technology that deals with the study of materials on the molecular and atomic levels, which helped to reconstruct materials in a way that goes beyond its physical nature. The research included the concept of nanotechnology and the extent to which it can be used in improving the properties of materials as well as in the field of environmental design. The problem of the research lies in the extent of the possibility of inspiration from nature by making use of the formative relationships of the images captured at the nanoscale level in environmental designs that achieve harmony and environmental beautification. The research followed the descriptive, analytical, and experimental design in order to reach applied ideas to enrich the field of environmental design. The research analytical and experimental study concluded that the visual and color relations at the nanoscale level can be considered one of the philosophical approaches to inspiring nature, due to its Philosophical dimensions, that help the designer in inspiring and achieving it in works that benefit society.

Keywords:

Nanomaterial technology; Environmental design; Nanotechnology

Introduction

Nature constituted and still constitutes for man a vital field through which he was able to ensure the continuation of his life, and it is also this field through which man can demonstrate his ideas,

abilities and creativity. Man is the active being and nature constitutes a field for his action. Hence, there is a reciprocal interaction between nature and man. Through this exchange, man sought to exploit the assets of nature to turn them into a reliable product for the continuation of the wheel of life. This reciprocal relationship has developed over time. In the early stages of human history, the relationship of man with nature was one of harmony, harmony and a close connection. It was a source of reflection and inspiration for man and his intellectual brilliance. Where nature was a fertile field for research and knowledge to benefit from its good and giving. This is evident in the relationship of philosophers to nature; They established an intimate relationship with her to reach a full conception of her metaphysical nature before the physical perception of her. Likewise, poets and artists, for whom nature constituted a source of inspiration to express their innermost thoughts in an attempt to reach the beauty inherent in them.

With the passage of time and the industrial development witnessed by mankind, this relationship developed, so man sought to change and adapt it to meet his ambitions. Man was able to intervene in nature as a subject of his activity and control. After it was a relationship of harmony, harmony and intimacy, it became a relationship of confrontation and rebellion. Where man began to change nature and its balance, which created many environmental problems and weakened the integration of the biological system on the surface of the earth. Hence the need to restore this balance emerged as an urgent necessity to maintain the process of life on the planet, so the issue of protecting and preserving nature became the first human issue. Therefore, man seeks to return that close relationship as it was in the past, a relationship based on mutual benefit, in appreciation of the importance of nature as a formative and philosophical construct. Man's understanding of nature has a great impact in reaching appropriate solutions to solve his environmental and life problems, and the explanations for many of its problems. Nature is still the ideal source of achievements and as a template or an integrated model for divine creativity that man tries to emulate through his continuous contributions in various fields of creativity in terms of scientific, technological and applied applications.

Research problem:

The research problem revolves around the extent to which “nano” technology can be used to draw inspiration from nature and apply it in the field of environmental coordination.

Research goal:

Achieving environmental coordination and beautification by drawing inspiration from the visual relationships of images captured at the "nano" level, with the aim of creating more integrated relationships with nature.

research importance:

Raising awareness of the need to use nano-studies in the field of environmental design and coordination because of their aesthetic systems and structures.

Research Methodology: The research follows the descriptive analytical method and the applied method.

Research results: Design works inspired by "nano" relationships and their use in environmental coordination.

Results

Nanotechnology has influenced the field of experimentation and design by studying the nano-elements and using them as visual and color relations, as nature is not limited to what the naked eye sees only, but goes beyond that vision to see through it conflict and dialogue, the diversity of formulations, relationships, and various influences.

The nano-studies also revealed, through the superior ability to magnify, that the world of microorganisms and cells of living organisms carries dimensions, plastic visions and various psychological suggestions, and this enriches the research process in finding philosophical approaches to the inspiration of nature for the purpose of studying and achieving it later in design works that benefit society, especially in the field of coordination. The environment, the forms (formulas) in nature are very diverse in size, color and all formal characteristics. When the artist takes inspiration from them in his work, he takes from them what expresses the subject and content of his work, and new aesthetic and plastic relations are born that are similar in essence with the elements around us and differ from them in their aesthetics and relationships of forms.

Recommendations:

- 1- Keeping abreast of advanced modern and contemporary technologies such as nano technologies, and using them to reach design ideas that enrich the human and natural environment.
- 2- Paying attention to research on inspiration from nature in art and design, and careful scientific study that helps in that.
- 3- Urging students in technical colleges to go into intellectual and philosophical depth during the design process and try to stand behind things and their content, in order to deepen their sense of philosophical visions in nature and the surrounding environment.

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