

Green Nano materials -Innovation in interior design, a New Era of Sustainability

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Abstract:

Two decades ago, nanotechnologies demonstrated various applications in different fields. As a result, an exposure to such particles has been risen dramatically within the last century due to anthropogenic sources of nanoparticles. The wide application of nanomaterials in industry, and products for consumers have raised concerns regarding the potential toxicity of nanoparticles to humans. For this Engineered Nano technology, materials have been proved to be with a great risk on human health and environment. For that reason, we now try to find solutions to manage this risks, for many scientific studies have proved it to be with a great dangerous impact. As an alternative solution, scientists work hard to extract natural nanomaterials from different sources of nature even from (agricultural crops – soil- sandetc.).

The aim of the research is to focus on the potential uses of these extracted natural nanomaterials and study their physical and mechanical properties and applications in interior design and furniture fields, in a way to find Sustainable interior design using design principles such as functionality, and aesthetics and expand the focus to include environmental considerations by choosing materials with low environmental impacts.

The research manipulated three components (Nano cellulose fibers sheets, Nano clays and shellac) together, and studied their structural properties, and the advantages of those green Nano materials for future trends and applications in the field of interior design.

Two properties were examined on the prepared samples on this paper; contact angle and water absorption. For the purpose of mating between green Nano-materials and interior design for use in creating a comfortable environment for humans that can be environmentally friendly.

Keywords:

Nano cellulose sheets – Nano clay –shellac - interior design – wood coating – wall paper.