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Developing and Improving the functionality Of traffic Police Clothing Fabrics Using Nanotechnology

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Abstract:

The job of the traffic man is one of the hard jobs that require him to stand for long hours in the streets, roads, squares and intersections, so he is exposed to various influences from the surrounding environment such as heat, sunlight and other pollutants. The need for research and development and finding smart solutions for the clothes of the traffic policeman, and several technologies have contributed to the production of new types of advanced fabrics, including (nanotechnology) .
The research problem was formulated with the following questions : 1 .What is the possibility of using textiles processors with nanotechnology to develop and improve the functional performance of traffic police clothing fabrics ? 2 .The effect of good design on the development and improvement of traffic police uniform ?
Research importance: 1 .Shedding light on modern textile processing methods using nanotechnology to improve the functional properties of traffic police clothing fabrics 2 .Contribute to the creation of a traffic police uniform that withstands environmental conditions and improves functionality . 3 .It benefits the relevant institutions in the field of clothing and fabric design in general, and functional clothing in particular . **Objective :** 1 .Develop and improve the quality of traffic police uniform fabrics and support additional clothing properties to provide health protection and comfort . 2 . Creating and designing an upgraded uniform for the traffic policeman to help him improve his job performance . **Methodology**: The research followed the descriptive method. Experimental method. The research included the theoretical aspect and discussed topics including: classification of nanoparticles, methods of assembling nanomaterials, Iraqi traffic police uniforms, traffic police clothing fabrics, textile processing . The applied aspect of the research The research followed the experimental approach. First, the fabrics were treated with nanometric suspension solutions of zinc oxide, silver oxide and nanometric titanium oxide by a cure-dry-pad process device. **Results** : 1 .Determining the areas of raw contact with the body before choosing a type of nano-treatment is most effective in improving performance without having to treat all parts of the costume . 2 .The correct selection of nanomaterials in the final processing of garment parts fabrics gives accurate and more sustainable results . 3 .Traffic Police Fabrics treatments give a set of technical characteristics as a result of their manufacture with functional properties that achieve the ability to respond effectively and high performance characteristics . **Recommendations** : 1 .The method of dividing the pattern parts for functional clothing must be taken into account before proceeding with nanotechnology fabrics treatments . 2 .When designing traffic police clothing, a balance between comfort and protection, and the appearance and prestige of the uniform, is taken into account .

Keywords:

functional performance - Traffic Police –Nanotechnology

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