Effect of Coating with Silver Nanoparticles (AgNPs) on Cotton Fabric Functional Properties

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Abstract:

In the last decade, the advent of nanotechnology has spurred significant developments and innovations in this field of textile technology. Fabric finishing has taken new routes and demonstrated a great potential for significant improvements by applications of nanotechnology. In this study fabric which is used by workers in Al-Ahram Newspaper (commercial press) has been coated using silver nanoparticles (AgNPs) to improve its functional properties for satisfying the final use requirements. Experimental tests (physical and functional tests) were carried out and comparisons have been made before and after treatment, this was done with reference to durability, efficiency and appearance.

Keywords: Nanotechnology, fabric finishing, silver nanoparticles (AgNPs), Nano textile coating, functional properties.