



ChemTech

International Journal of ChemTech Research

CODEN (USA): IJCRGG, ISSN: 0974-4290, ISSN(Online):2455-9555
Vol.12 No.1, pp 07-25, 2019

Multi-functionalization of cellulosic fabrics using Nanotechnology

A. Farouk^{1,2}

¹ King Khalid University, Art & science collage, Ahad Ruidah, Abha, Saudi Arabia

² National Research Centre, Department of Preparation and Finishing of Cellulosic based textile, Textile Division, Textile Chemistry and Technology,33EL Bohouth st., Dokki-Giza, Cairo,P.O. Box 12622, Giza, Egypt

Abstract : The primary assignment of the present article is to give the best possible completing definition and in addition treatment conditions for accomplishing creative multi-functional properties, i.e. antibacterial, UV-protection, superhydrophobic and photocatalytic properties of cellulosic fabrics. Also enhance the fire resistant and conductive properties of fabrics without unfavorably influencing the physico-mechanical execution properties of the treated substrates fundamental for the industrial needs.

The present article is providing review of the recent projects of nanotechnology and their applications in textile finishing processes. This review highlights the known advantages of utilizing nanotechnology in textile finishing which can be summarized in: (i) more effective, i.e. having large surface areas per unit weight, (ii) fewer impacts on physical and chemical characteristics, i.e. durability, handle and air permeability, (iii) less consumption of chemical and energy; (iv) low coast and achieving of high coloring power, (v) minimal impacts on environment.

Keywords : fabrics- Nanotechnology-Textile – functionalization – nano size.

A. Farouk /International Journal of ChemTech Research, 2019,12(1): 07-25.

DOI= <http://dx.doi.org/10.20902/IJCTR.2019.120102>
