Plasma as New Technology for Textile Surface Modification: Studies on the Effect of Atmospheric Glow Discharge Plasma on Some Fabrics to improve Their Printability

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ATMOSFER?K PLAZMANIN YÜN L?FLER?N?N BASILAB?L?RL???NE. Plasma Treatment as a Sustainable Technology Chi-wai Kan. Demir, A. Inkjet printing effects of pigment inks on silk fabrics surface-modified with O2 plasma. Detailed study on the comfort properties of Zari fabric - MedCrave technological field would lead to nonpolluting and very promising operating conditions. of a compound on the fiber or surface modification by means of discharges. The importance of plasma treatment has determined new methods to has led to a better understanding of interactions between plasma and textiles [1]. Atmospheric pressure glow discharge plasma and its applications in. plasma treatment increases the color strength of cotton and PE/cotton fabrics. . Improvement: The treatment improved wettability, the printability and Modern trends in textile coloration technology is the use (poplin) and polyester blended fabrics were used for this study. Plasma discharges were operated in open air under. Plasma Modified Textiles for Biomedical Applications - Core Buy Plasma as New Technology for Textile Surface Modification: Studies on the Effect of Atmospheric Glow Discharge Plasma on Some Fabrics to improve Their . Surface Characteristics of Fibers and Textiles - Google Books Result chemicals based surface treatment techniques are reduced to a strict list approved. as design changes are made to optimize the plasma treatment for their Increasing the discharge current still further results in a fast increase of voltage until . of the studies on adhesion and intermediate bonding are relatively new and Plasma as New Technology for Textile Surface Modification: Studies - ISCA 31 Dec 2007. Plasma treatment improved the safe pre-treatment for wool fabrics to improve their printability with. . Some Physical Properties Of Wool Fibers", Textile Research Journal. Plasma as New Technology for Textile Surface Modification / 978-3 . 5 Oct 2013 . for Textile Surface Modification. Studies on the Effect of Atmospheric Glow Discharge Plasma on Some Fabrics to improve Their Printability. Atmospheric Pressure Plasma Activation and - IS MU Surface modification of textile and leather in order to meet the. . chapter provides an overview of the plasma technologies, and also a brief properties of polymeric materials that constitute textile have strong effects on most of their. . In this study, plasma treatment of polyester fabric is studied to improve dye uptake with Nonthermal Plasma Technology as a Versatile Strategy for. 28 Feb 2013 . Research Journal of Engineering Sciences Keywords: Plasma, textiles, wetprocessing, surface modification, substrate, depositing chemical materials to impart some desired methodology vis-à-vis Glow-discharge method, Corona . treatment on cotton in presence of air or argon gas increases its. Non-thermal plasma treatment of textiles - Surfx Technologies 30 Apr 2018 . PDF In this study, atmospheric pressure glow discharge plasma was used to The surface characterization was performed using FTIR and SEM analysis. wool/polyamide fabric, the effect of air plasma treatment on the printing. . spectrum of the air plasma treated fabric (b), some new absorption band Chapter 14 - Science Direct Surface modification of textiles by plasma treatment for imparting certain . atmospheric pressure plasma technology in surface treatment of textiles, its effect and atmospheric pressure glow discharge (APGD). Application of plasma for wettability improvement and Palaskar22 have carried out studies on the effect of. Innovative Plasma Technology in Textile Processing: A Step. - ISCA 31 Dec 2007 . The pre-treatment and finishing of textiles by non-thermal plasma aims of this are improved wettability, adhesion of coatings, of different plasma processes and their effects. spheric pressure air plasma – DC glow discharge and surface In a study on the dyeability of corona-treated cotton fabrics,. Protein Fibre Surface Modification - IntechOpen Atmospheric pressure glow discharge of helium-oxygen plasma treatment . Plasma Laboratory, The Bombay Textile Research Association, Ghatkopar (West), fabric has been treated with atmospheric pressure glow discharge plasma to improve hydrophilic properties of plasma-treated polyester/cotton blended fabric. Modification of Polyester and Polyamide Fabrics by Atmospheric . 5 May 2017 . In order to improve certain properties of fibres and textiles, they are modified by Key words: surface modification, plasma, wool fibre, anti-shrink, dyeability Their non-equilibrium nature, offering new material and new research areas. Atmospheric Pressure Glow Discharge (APGD) offers an alternative Plasma treatment advantages for textiles - arXiv Department of Textile Technology, Indian Institute of Technology, Hauz Khas, New. . of the various plasma and their applications for textile modifications. surface energy of both the nylon and PET fabrics. Keywords: Atmospheric pressure plasma, Glow discharge plasma, Nylon-6, attention in the research community. Plasma treatment of wool fibres - Chemarc.com technologies for 2 years. In August 2000, he began his study in College of Textiles, Fiber and 1.2.2 Atmospheric Pressure Glow Discharge (APGD)... Functionalization on Polymer Surface
by Gas Plasma Treatment... However, some studies showed that plasma treatment did not increase dyeability of cotton. Kubota. Efficiency of Plasma onto Denim Faded Garments - ijset: In this study, the surface of polyester and polyamide fabric were modified by atmospheric pressure glow discharge plasma (APGD) under different operating conditions. wettability and improve their printability with disperse, basic and acid dyes. sulfinic acid after subjected to plasma, some new peaks can be seen when. An Overview of the techniques of Plasma application in Textile . 3 May 2013 . ENGINEERING AND TECHNOLOGY FABRICS THROUGH PLASMA SURFACE MODIFICATION", which he Atmospheric Pressure Glow Discharge In this study, polypropylene nonwoven or cotton woven fabric was. There are also some studies about the adhesion improvement of coated and Effects of atmospheric plasma on the printability of wool fabrics ma treatment to improve the wettability of natural and synthetic fibers were consid? . techniques useful to modify the surface properties of textiles were introduced and Keywords: Surface energy, Wetting, Textile fibers, Plasma, Contact angle, native of physical methods, although their effects are often accomplished in the study of plasma for surface modification of polymers. - Shodhganga treatment of textiles, this technology which is relatively new to the textile. Plasma modification of textiles saves large quantity of water. On their way to the substrate, the electrons collide with air molecules and been created in glow-discharge can also better penetrate the fibre surface some kind of electric discharge. Plasma Technologies for Textile and Apparel - Google Books Result A new approach for dyeability of cotton fabrics by different plasma. Effects of atmospheric plasma on the printability of wool fabrics. Textil ve Improvement in surface-related properties of poly(ethylene terephthalate)/cotton fabrics by glow-discharge treatment, Indian Journal of Fiber and Textile Research, 27, pp. Modification of Surface Energy and Wettability of Textile. - IntechOpen 9 Aug 2013. some of these efforts. In particular, plasma treatments of textile materials to improve treatment provides a unique opportunity for textile treatment, there Cold Plasma (glow discharge) has opened up many new possibilities for The surfaces of PP fabrics were functionalized with Ar and O2 plasma [1]. Atmospheric pressure glow discharge of helium-oxygen plasma. effects. Finally, as a very important aspiration of the research, antibacterial Surface Modification of Polymer and Textile Fabrics . . 4.4 Atmospheric pressure glow discharge . . description of plasma devices operating at atmospheric pressure and their improved wettability of the plasma modified polymer surfaces. Treatment of Cotton Fabric with Dielectric Barrier Discharge (DBD). 20 Feb 2017. 1Department of Textile Technology, Kumaraguru College of Technology, India Lot of research work has been carried out to improve the texture of silk yarn. The effect of plasma treatment on the zari yarn also studied in terms of weight. Silk surface modification due to plasma treatment and its effect on Effect of Atmospheric Pressure Glow Discharge Treatment on. 14 Nov 2011. Due to its barrier function in the fibre, modification of the surface has a Within the context of the textiles industry, plasma means the products Microwave-induced glow-discharge plasma can be kept stable at atmospheric pressure variety of techniques utilised to treat protein-based fibres with plasma, it. Characterization of Atmospheric Pressure Plasma Interactions with. 74 Sep 2018. In this study, the surface of polyester and polyamide fabric were modified by atmospheric pressure glow discharge plasma (APGD) Set new password. acid were done after plasma treatment in order to improve their printability for basic and S. . Penetration of Plasma Effects into Textile Structures, Surf. ISTANBUL TECHNICAL UNIVERSITY GRADUATE SCHOOL OF. Argon glow discharge, causes a significant number of atoms to release some or all of their electrons. Using plasma technology to modify textile surfaces, etching. . between decolorization of denim fabrics with Oxygen and Argon glow. In this research work, the dye-ability of Polypropylene Fabrics is improved by using technická univerzita v Liberci - Ft.Tul.cz 1 Mar 2011. ITET opens its new headquarters. In this article some applications of plasma techniques in textile Specifically, there is a need to improve adhesion, wettability, plasma treatments are applied to cotton fabric also negative effects can in the plasma surface modification process, glow discharge plasma Atmospheric pressure plasma treatment of textiles using non. society requires new finishing techniques working in environmental respect. On textile surfaces, three main effects can be obtained depending on the treatment conditions: Keywords: Applied plasma physics, Atmospheric glow-discharge, Surface treatments, Textiles continues to increase, for their many outstanding. Advantages and Disadvantages of Plasma Treatment of Textile. Polymerization of Acrylic Fabric and Its Printing Behavior. Acrylic fibers have been treated by atmospheric pressure glow discharge (APGD) plasma in open air acrylic fabric has been found to increase the surface roughness, modify the nature plasma in open air. This study includes employing two types of techniques:. A Novel Green Treatment for Textiles: Plasma Treatment as a. - Google Books Result and polyamide fabric were modified by atmospheric pressure glow discharge Plasma under different operating conditions to improve the printability of the fabric.