

Learning Materials of Atmospheric Pressure Plasma Process: Application in Wrinkle-Resistant Finishing of Cotton Fabric

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Abstract : Cotton fibre is a commonly-used natural fibre because of its good fibre strength, high moisture absorption behaviour and minimal static problems. However, one of the main drawbacks of cotton fibre is wrinkling after washing, which is recently overcome by wrinkle-resistant treatment. 1,2,3,4-butanetetracarboxylic acid (BTCA) could improve the wrinkle-resistant properties of cotton fibre. Although the BTCA process is an effective method for wrinkle resistant application of cotton fabrics, reduced fabric strength was observed after treatment. Therefore, this paper would explore the use of atmospheric pressure plasma treatment under different discharge powers as a pretreatment process to enhance the application of BTCA process on cotton fabric without generating adverse effect. The aim of this study is to provide learning information to the users to know how the atmospheric pressure plasma treatment can be incorporated in textile finishing process with positive impact.

Keywords : learning materials, atmospheric pressure plasma treatment, cotton, wrinkle-resistant, BTCA

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