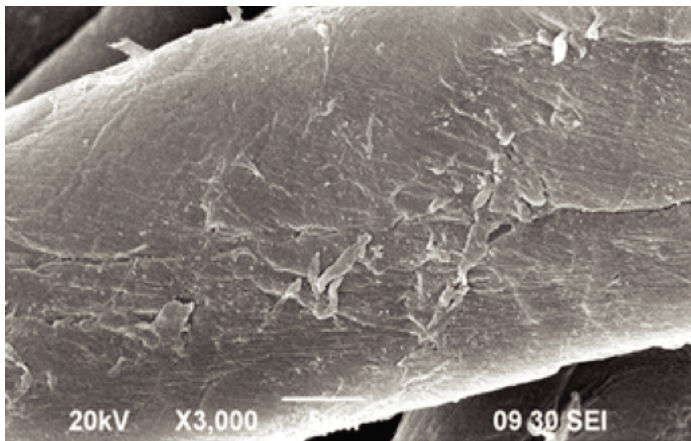




Co-catalyst System Flame Retardant Treatment for Cotton 應用助催化劑系統的低成本織物阻燃處理方法

Dr KAN Chi-wai, Associate Professor, The Institute of Textiles and Clothing



Fabrics made from cellulosic fibres, such as cotton and linen will burn easily with a high flame velocity. Many flame retardant (FR) agents and methods of application have been developed in attempts to produce FR textile materials. However, the FR agents are not efficiently fixed to the cotton fibres unless they are used in combination with a resin and catalyst.

Now, the use of co-catalyst can effectively enhance the flame retardant effect and minimise the side effects of flame retardant treatment. The finishing formulation (recipe) proposed in this invention was applied to cotton fabric by conventional pad-dry-cure finishing techniques. With the use of co-catalyst system in the flame retardant treatment, it can reduce the curing temperature and time used for flame retardant treatment, and retain good flame retardant property of cotton fabric even at a lower curing temperature and shorter curing time. It can also minimize the reduction in tearing strength and whiteness of cotton fabric after flame retardant treatment.



Catalyst 催化劑

由纖維製造的布料，例如棉和麻布，在火焰下極容易燃燒。現時已經有以不同的阻燃劑和處理方法製造阻燃紡織材料，然而，這些阻燃劑必須混合樹脂和催化劑，才能有效固定附於棉質材料上，同時也可能減損撕裂強度和潔白度。理大研究團隊在織物上應用助催化劑，既有效提升阻燃效能，並且減少阻燃處理的副作用。此技術可減少阻燃處理所需的烘焙溫度和時間，而且在低烘焙溫度和短時間下，仍保存棉質布料的阻燃性能，因此成本大為降低。



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Food Safety Consortium

itdo@polyu.edu.hk



Innovation and Technology
Development Office
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Contact Us

Ir Steven LAM, Manager, Innovation and Technology Development Office

T (852) 3400 2864

E steven.tf.lam@polyu.edu.hk