

## Learning Materials for Enhancing Sustainable Colour Fading Process of Fashion Products

**Authors :** C. W. Kan, H. F. Cheung, Y. S. Lee

**Abstract :** This study examines the results of colour fading of cotton fabric by plasma-induced ozone treatment, with an aim to provide learning materials for fashion designers when designing colour fading effects in fashion products. Cotton knitted fabrics were dyed with red reactive dye with a colour depth of 1.5% and were subjected to ozone generated by a commercially available plasma machine for colour fading. The plasma-induced ozone treatment was conducted with different parameters: (i) air concentration = 10%, 30%, 50% and 70%; (ii) water content in fabric = 35% and 45%, and (iii) treatment time = 10 minutes, 20 minutes and 30 minutes. Finally, the colour properties of the plasma-induced ozone treated fabric were measured by spectrophotometer under illuminant D<sub>65</sub> to obtain the CIE L\*, CIE a\* and CIE b\* values.

**Keywords :** learning materials, colour fading, colour properties, fashion products

**Conference Title :** ICSEETS 2016 : International Conference on Science Education and Effective Teaching Strategies

**Conference Location :** London, United Kingdom

**Conference Dates :** May 23-24, 2016