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Polypropylene Fibres Dyeable with Acid Dyes

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Abstract : As the threat of global climate change is more seriously, "net zero emissions by 2050" has become a common global goal. In order to reduce the consumption of petrochemical raw materials and reduce carbon emissions, low-carbon fiber materials have become key materials in the future global textile supply chain. This project uses polyolefin raw materials to modify through synthesis and amination to develop low-temperature dyeable polypropylene fibers, endow them with low-temperature dyeability and high color fastness that can be combined with acid dyes, and improve the problem of low coloring strength. The color fastness to washing can reach the requirement of commerce with 3.5 level or more. Therefore, we realize the entry of polypropylene fiber into the clothing textile supply chain, replace existing fiber raw materials, solve the problem of domestic chemical fiber, textile, and clothing industry's plight of no low-carbon alternative new material sources, and provide the textile industry with a solution to achieve the goal of net zero emissions in 2050.

Keywords : acid dyes, dyeing, low-temperature, polypropylene fiber
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