OP- 2

반응성 염료의 광그라프트에 의한 양모직물의 염색

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Photo-grafting Dyeing of Wool Fabrics with Dimethacrylated Quinizarin Dye

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Abstract

The hydrophobic nature of the wool surface give rise to difficult penetration of dye molecules. Among all the methods of modification, graft polymerization is an attractive method to impart a variety of functional groups to a polymer. Grafting has been made by irradiating the light on the polymer in the presence of a solvent containing monomer. The energy source commonly used are high-energy electrons, X-rays, UV and visible light. UV irradiation is a relatively low-energy radiation in comparison with others since it has the least possibility to change bulk properties.

In the present paper, a photo-reactive dye was synthesized from quinizarin by the reaction with methacryloyl chloride. The synthesized dye was continuously grafted onto wool fabric at room temperature by UV irradiation. Several key parameters including UV energy, dye concentration and pH have been examined to understand their influence on the photoreactive coloration.

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