



Aminothienochromene based Bisazo Disperse Dyes: Synthesis, Characterization and Dyeing Application

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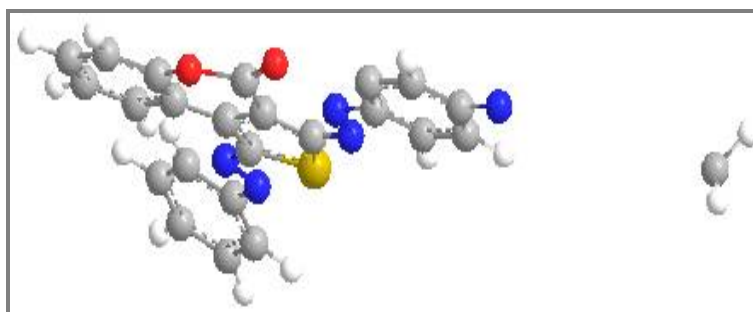
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ABSTRACT

A series of novel bisazo disperse dyes have been synthesized via an easy and efficient methodology. In the present investigation we have synthesized monoazo dyes by the reaction of 3-Amino-4H-thieno[3,4-c]chromen-4-one with various substituted 3^o amine coupling components. These monoazo dyes were then coupled with various diazotized primary amines to yield bisazo dyes. The chemical structure of the synthesized dyes was investigated using FTIR, ¹H NMR, elemental analysis and UV spectroscopy. All the synthesized compounds were studied and their dyeing performance was evaluated. The synthesized dyes were applied to polyester fabrics by using high temperature dyeing method at 130°C. The results of fastness properties of the dyes on polyester fabric gave excellent sublimation ratings, excellent washing fastness, perspiration ratings and good light fastness ratings.

Graphical Abstract



Keywords: Bisazo disperse dyes, 3-Amino-4H-thieno[3,4-c]chromen-4-one, Tertiary amines, Primary amines and Dyeing performance.