Title: Development of Coloured Flame-retardant Cotton Fabric.

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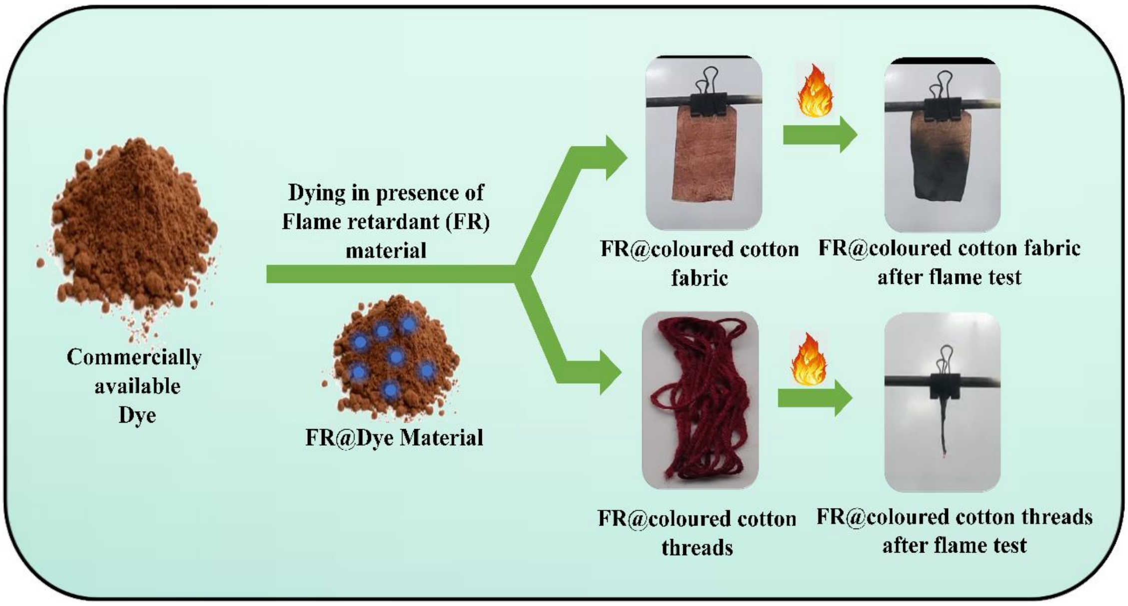
Abstract:
The coloured flame-retardant (FR) dyes are important in FR application of textile materials like cotton. In this study, we have developed coloured FR functionalized cotton fabric using commercially available dye. During the dying process, the FR material was functionalized with dye and successfully dyed on cotton fabric (FR@coloured cotton fabric). The Vat dye was used to prepare FR@coloured cotton fabric. The Limiting oxygen index and vertical flammability test were performed to check the flame retardancy of FR@coloured cotton fabric. The synthesized FR@coloured cotton fabric showed excellent flame retardancy and sustained it for 5 min on continuous flame exposure. The excellent flame retardancy of synthesized FR@coloured cotton fabric opens up a new window for the synthesis of coloured flame-retardant fabrics with other dyes and broadens the flame-retardant area for different applications.

Figure/Scheme (if any):



References and Notes:
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