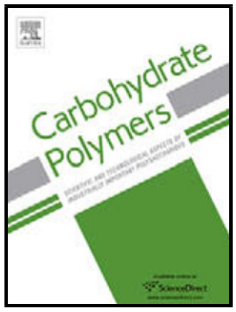

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Hypophosphorous acid cross-linked layer-by-layer assembly of green polyelectrolytes on polyester-cotton blend fabrics for durable flame-retardant treatment

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Highlights

- Multi-layered coating was fabricated and cross-linked by hypophosphorous acid.
- The treated fabrics exhibited a significant reduction of 77% in pHRR.
- The treated fabrics showed good flame retardancy after 12 laundering cycles.

Abstract: In this work, a facile method to manufacture the layer-by-layer (LbL) assembled coating with durable flame-resistant effect on the polyester-cotton blend fabrics was reported. The LbL coating modified polyester-cotton fabric was treated with positively charged polyethyleneimine (PEI) and negatively charged oxidized