

Supporting Information

Biodegradable Poly (butylene succinate - *co* - terephthalate) Nanofibrous Membranes Functionalized with Cyclodextrin Polymer for Effective Methylene Blue Adsorption

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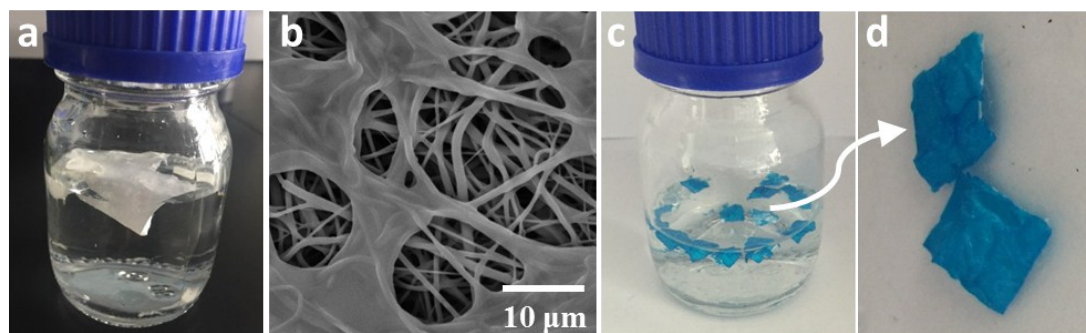


Fig. S1 (a) Photograph of PBST/CDP-2.0 nanofibrous membrane immersed in water after vigorously shaking for 2 hours; (b) SEM image of (a); (c) and (d) Photographs of PBST/CDP-2.0 nanofibrous membrane after adsorption MB for 2 hours.

The photograph of membrane immersed in water (Fig. S1a) after vigorously shaking for 2 hours, which was longer enough for the adsorption of this material, showed no evident CDP residues in water. From the corresponding SEM image (Fig. S1b), it was found that CDP still was coated on the membrane. Moreover, the MB aqueous solution became transparent after adsorbing the dyes for membrane (Fig. S1c) and no blue CDP residues were found in the solution. The composite membrane after adsorbing dyes (Fig. S1d) also showed no falling-off for the CDP fragments.

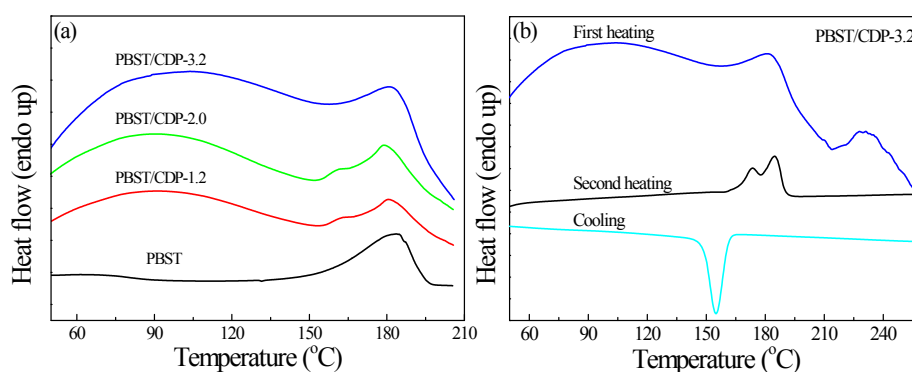


Fig. S2 (a) DSC curves of PBST/CDP nanofibrous membranes in first heating scan (About 7 mg sample sealed in an aluminum pan was heated to 210 °C at a rate of 10 °C/min); (b) DSC curves of PBST/CDP-3.2. (About 7 mg sample sealed in an aluminum pan was heated to 300 °C at a rate of 20 °C/min (the first heating) and kept for 3 min before cooling at a rate of 20 °C/min to 40 °C under N₂ atmosphere. Subsequently, the sample was reheated up to 300 °C at a rate of 20 °C/min (the second heating).)

It can be seen from Fig. S2a that there are broad peaks at around 90 °C and relatively sharp peaks at about 180 °C in the heating scan of PBST/CDP nanofibrous membranes. The second peak should be assigned to the melting of PBST crystals and thus the crystallinity can be calculated based on the melting enthalpy of this peak. The crystallinities of composite membranes were almost unchanged compared with pure PBST. Fig. S2b showed the first broad peak disappeared during the second heating scan, thus indicating that this peak should be attributed to the evaporation of water that was adsorbed by CDP during storage.