

## Supporting Information

### **Ecofriendly fabrication of ultrathin colorful fibers via a UV-assisted solventless electrospinning**

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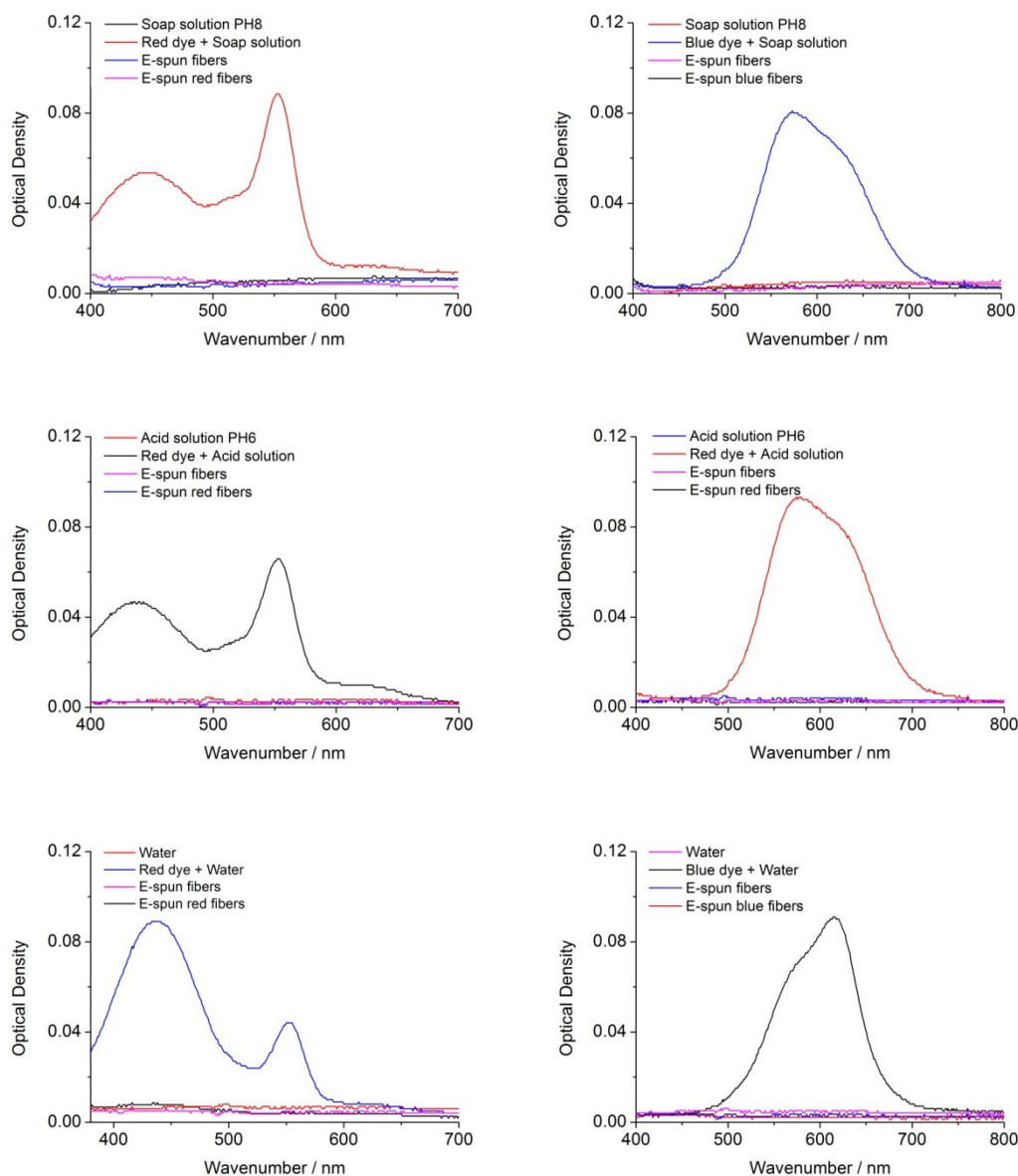
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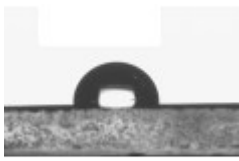

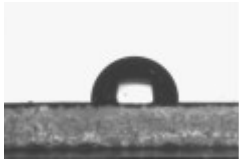
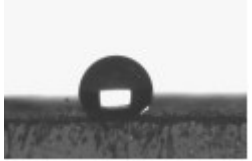


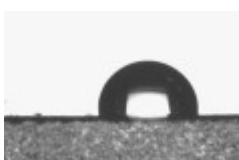
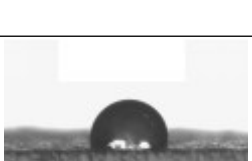





**Fig. S1** UV-Vis spectra of absorbance peak of the dye and standard solutions after soaking of e-spun fibers.

A 0.5 wt% standard soap solution (PH=8) was prepared by dissolving the standard soap in warm water. The standard soap solution was heated to  $40 \pm 2^\circ\text{C}$  in a water bath, and then a piece of e-spun fibers membrane with  $1.0 \text{ cm}^2$  was immersed in the solution. The exhausted standard soap solution was monitored using a UV-Vis spectrophotometer (UV-2450) to characterize the amount of dye release from the membrane. Prior to any spectrophotometric measurements, the UV-Vis cuvette was filled with distilled water and first introduced and recorded as a background.

The absorbance of the dye in the solution was measured in the visible range from 400 to 800 nm, which included the absorbance peak of the dye. UV-vis spectra exhibited the plasma resonance of blue dye around 590 nm (Figure S1). For the measurements, the dye in standard soap solutions after soaking was measured, which was similar to the standard soap solution. Using the same method, the e-spun fibers membrane was soaked in the acid solution (PH=6) and deionized water (PH=7), and the test results were close to the alkaline solution (Figure S1).

**Table S1** Contact angles of e-spun fibrous membranes and coating films with different (five kinds of) colors.

E-spun membrane	Contact angle / °	Picture	Coating film	Contact angle / °	Picture
DR-U301	107.8		DR-U301	94.9	
R-GNP	114.4		R-GNP	99.3	
Y-GNP	108.7		Y-GNP	96.9	
B-GNP	116.7		B-GNP	97.8	
PI-GNP	108.3		PI-GNP	95.8	
PU-GNP	107.1		PU-GNP	92.2	

Contact angles of the e-spun fibers from DR-U301 doped with different colorful GNP were examined by static water contact angle measurement (DSA100). Deionized water (3.0  $\mu$ L) was automatically dropped onto the flat fibrous membrane. The contact angles indicated the wetting ability of the materials were calculated automatically. As showed in Table S1, the contact angle of the resulting fibrous membrane was higher than that of the corresponding coating film by knife coating, indicating that the dye was embedded into the polymer matrix and was not easy to release.