

# **An Anthocyanin-Based Eco-Friendly Triboelectric Nanogenerator for pH Monitoring and Energy Harvesting**

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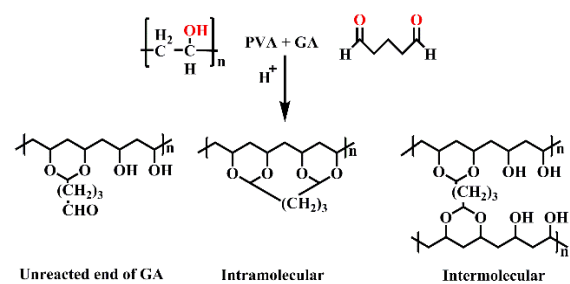
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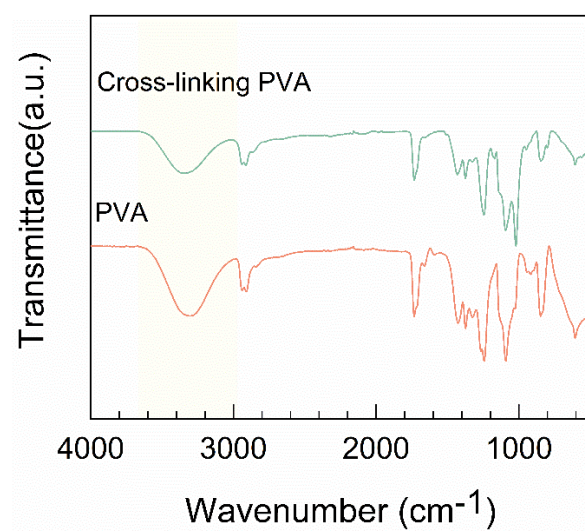
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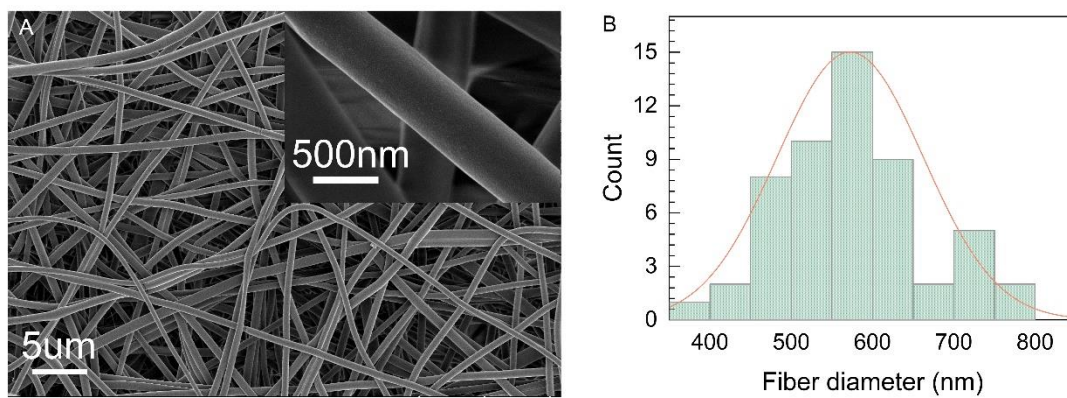
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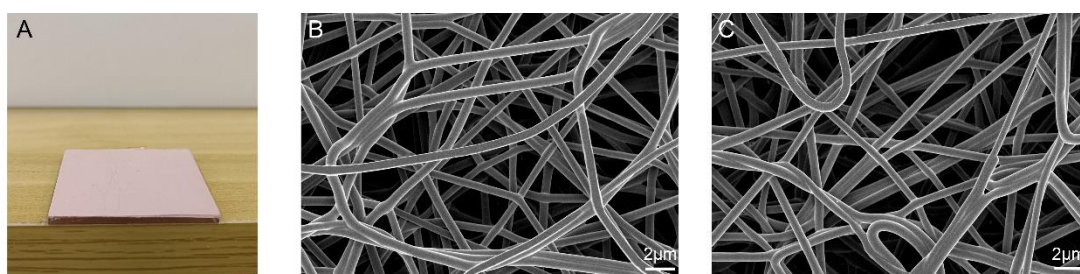
**Figure S1.** Chemical structure during the fiber film crosslinking reaction.



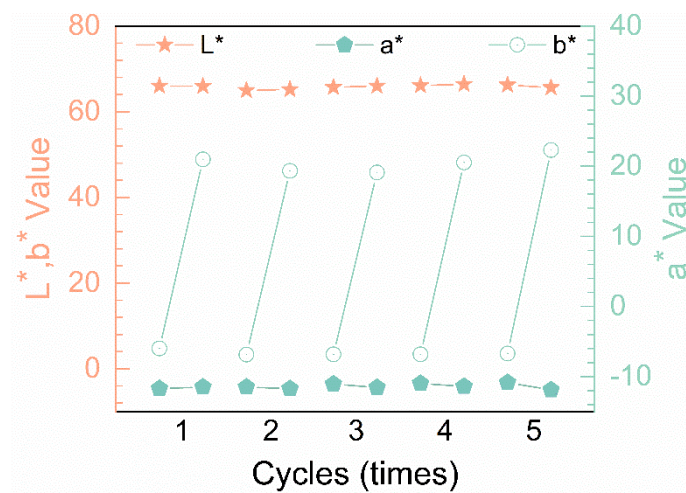
**Figure S2.** FT-IR spectra of different nanofiber membranes.



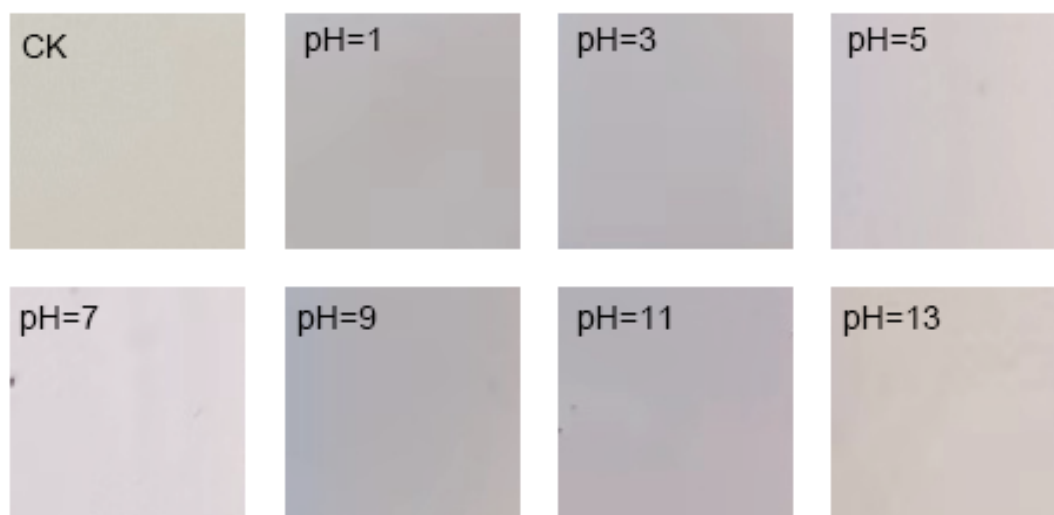
**Figure S3.** A) SEM image of pure PVA fiber film. B) Fiber diameter distribution of pure PVA fiber film.



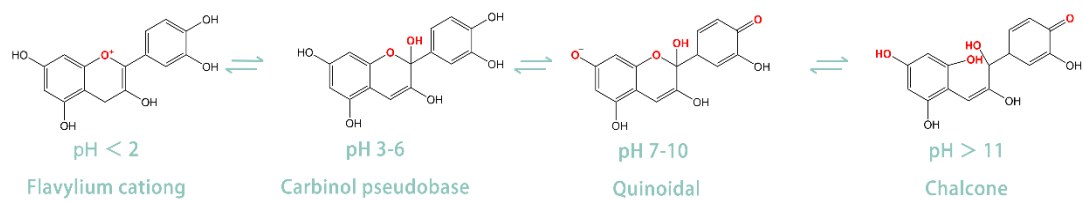
**Figure S4.**A) Photographs of PVA@Ac fiber surfaces following the durability experiments. B) SEM images of PVA@Ac fibers before the durability experiments. C) SEM images of PVA@Ac fibers after durability testing.



**Figure S5.** The Reusability of pH-TENG.



**Figure S6.** The color variations of pure PVA under different pH values.



**Figure S7.** Structural transformations of anthocyanin in response to pH variations.