

## Supporting Information

### **Sustainable lignin-based electrospun nanofibers for enhanced triboelectric nanogenerators**

Junya Wang,<sup>†a</sup> Yanglei Chen,<sup>†a</sup> Yanglei Xu,<sup>a</sup> Jiahui Mu,<sup>a</sup> Junying Li,<sup>a</sup> Shuangxi Nie,<sup>b</sup>

Sheng Chen<sup>\*ab</sup> and Feng Xu<sup>\*a</sup>

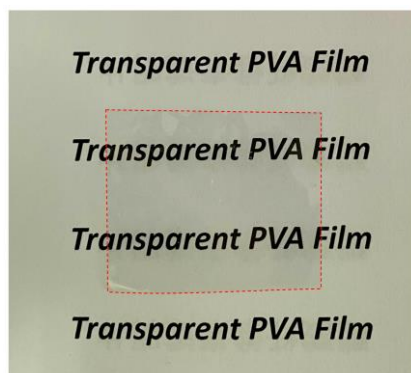
<sup>a</sup> Beijing Key Laboratory of Lignocellulosic Chemistry, Beijing Forestry University,  
Beijing 100083, China

<sup>b</sup> Guangxi Key Laboratory of Clean Pulp & Papermaking and Pollution Control, College  
of Light Industry and Food Engineering, Guangxi University, Nanning 530004, China

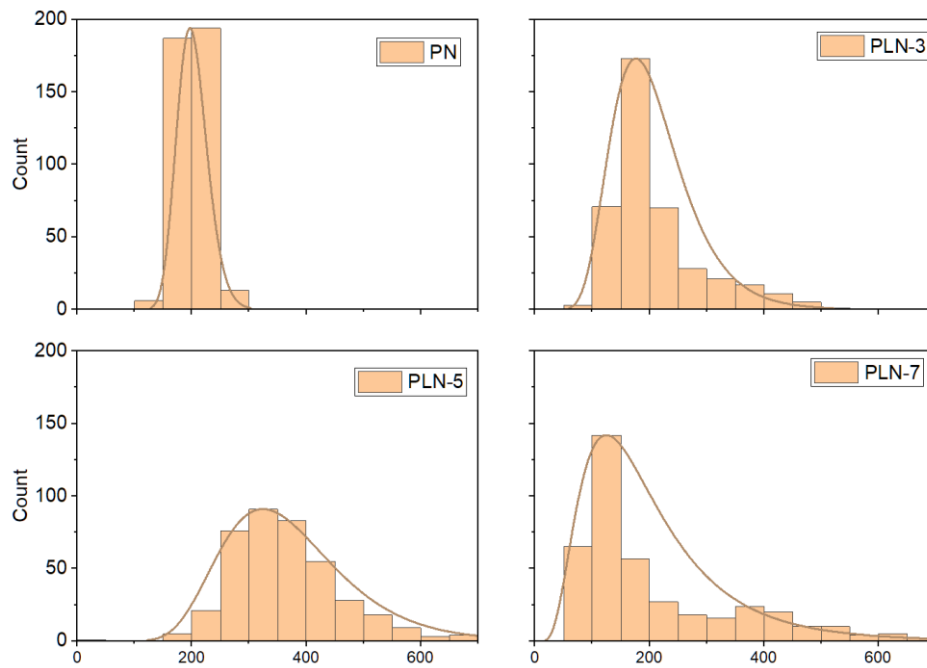
<sup>†</sup> J. Wang and Y. Chen contributed equally to this work.

\* Corresponding authors.

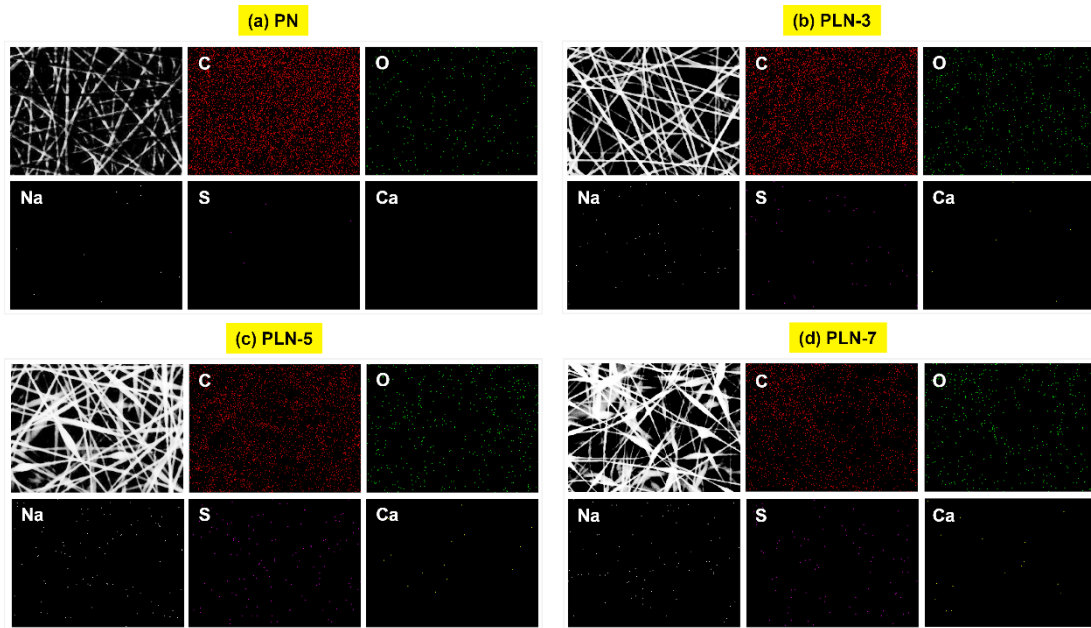
E-mail addresses: shengchen@bjfu.edu.cn (S. Chen), xfx315@bjfu.edu.cn (F. Xu).



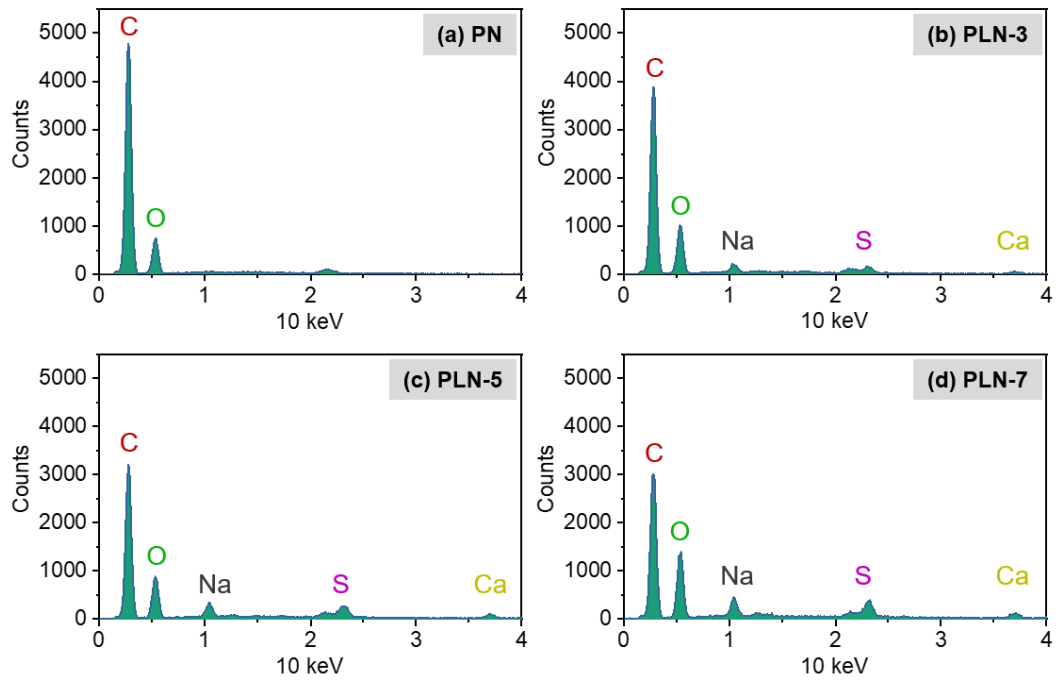
**Fig. S1.** Photograph of the pure PVA film with high transparency.



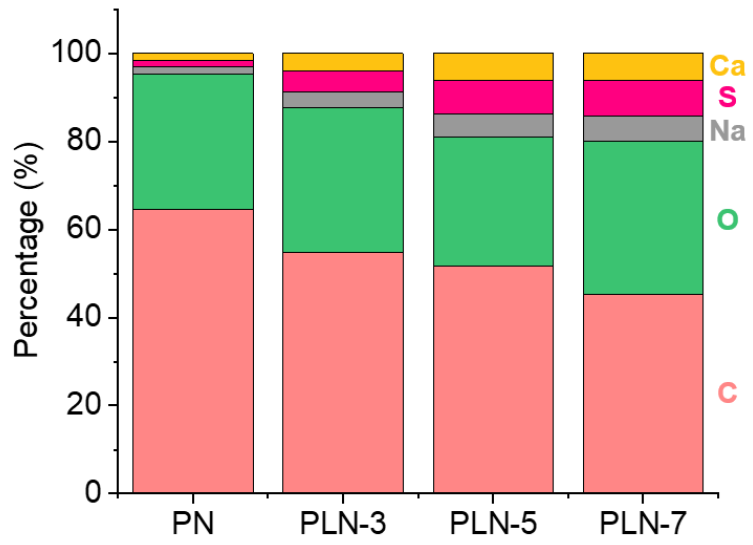
**Fig. S2.** Histogram of the nanofiber diameter distribution and curve of lognormal distribution of PN, PLN-3, PLN-5, and PLN-7.



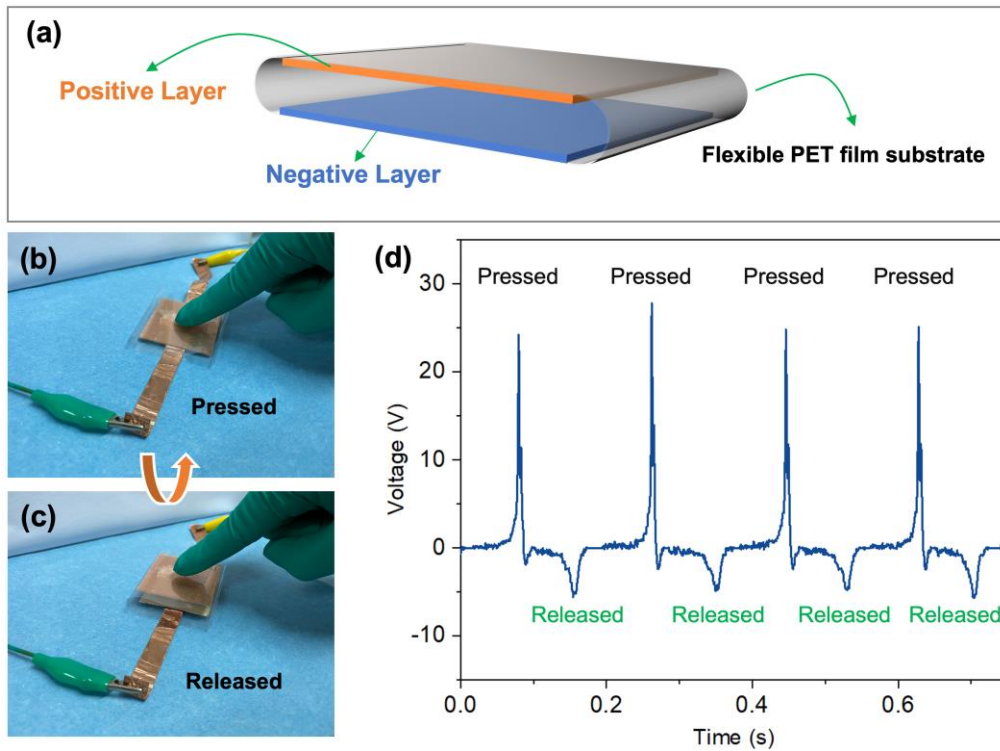
**Fig. S3.** SEM images and related EDS elemental maps of (a) PN, (b) PLN-3, (c) PLN-5, and (d) PLN-7.



**Fig. S4.** The EDS of (a) PN, (b) PLN-3, (c) PLN-5, and (d) PLN-7.



**Fig. S5.** EDS component analysis of the element weight percentage of (a) PN, (b) PLN-3, (c) PLN-5, and (d) PLN-7.



**Fig. S6.** Application of the TENG in self-powered pressure sensing. (a) Scheme of the structure of the TENG. (b,c) Photos of pressing and releasing the TENG. (d) The output voltage of the TENG under pressing and releasing by finger touch.