

## Paper-Based Triboelectric Nanogenerator and its Application in Self-Powered Anticorrosion and Antifouling

Yange Feng<sup>a,b</sup>, Youbin Zheng<sup>a</sup>, Zia Ur Rahman<sup>a</sup>, Daoai Wang<sup>a,\*</sup>, Feng Zhou<sup>a</sup>, Weimin Liu<sup>a,\*</sup>

Y. Feng, Dr. Y. Zheng, Prof. D. Wang, Prof. F. Zhou, Prof. W. Liu,  
State Key Laboratory of Solid Lubrication, Lanzhou Institute of Chemical Physics  
Chinese Academy of Sciences

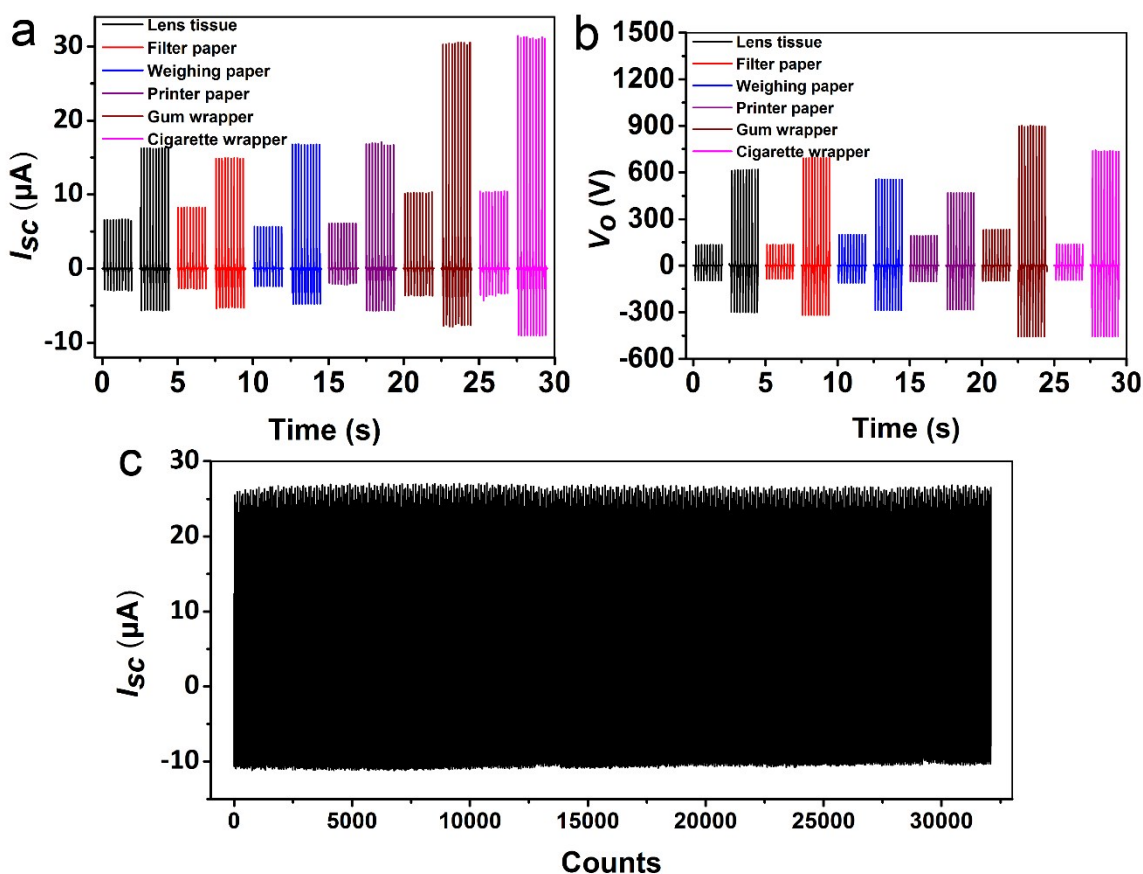
Lanzhou 730000, China

E-mail: wangda@licp.cas.cn(D.A. Wang), wmliu@licp.cas.cn(W. M. Liu)

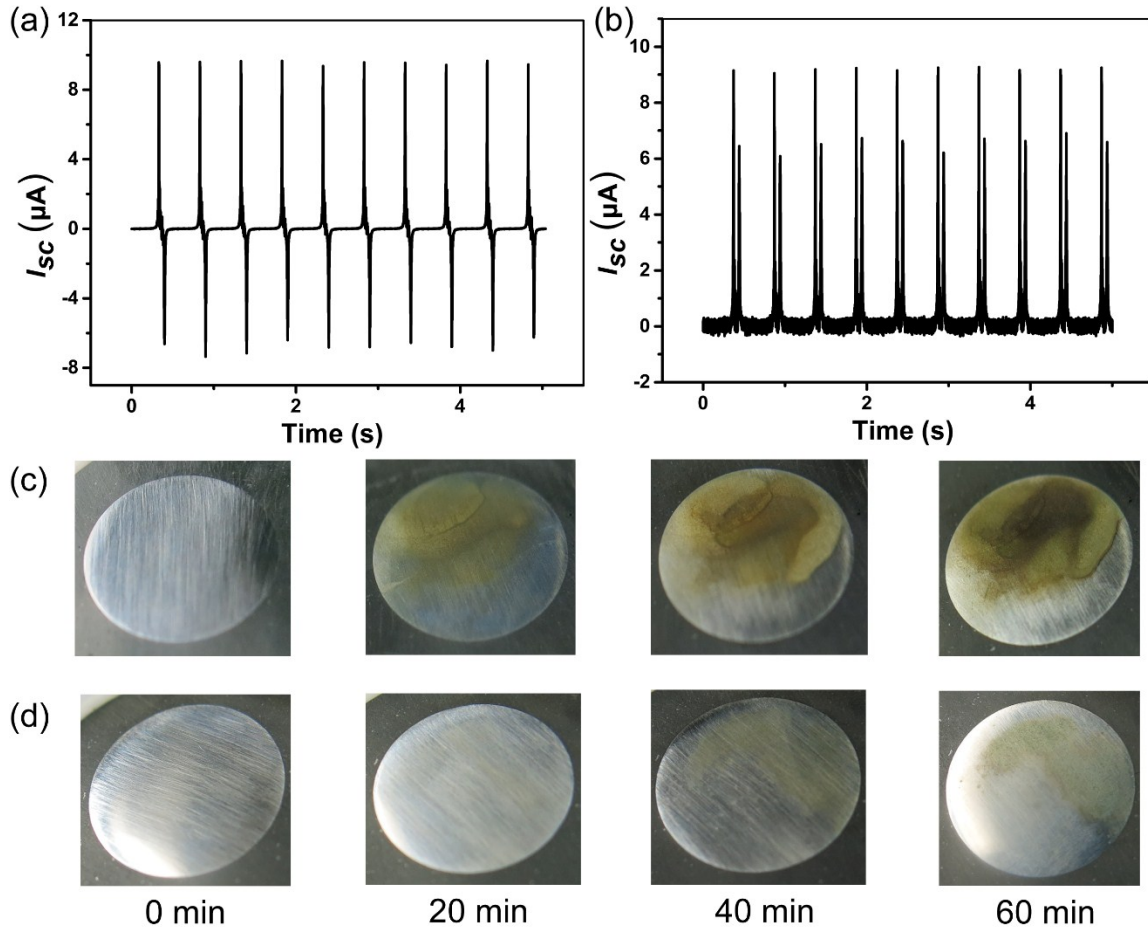
Y. Feng

University of Chinese Academy of Sciences

Beijing 100049, China



**Fig. S1** The performance of paper-based TENGs with different paper sources including lens tissue, filter paper, weighing paper, printer paper, gum wrapper and cigarette wrapper before and after modification with polydopamine. (a) Short-circuit current, (b) output voltage, (c) resistance test of polydopamine modified gum wrapper-based TENG.



**Fig. S2** Output performance of DPA-PP TENT under 2 Hz driven frequency (a)  $I_{sc}$  (b) rectified  $I_{sc}$ ; photograph of A3 steel electrode under different corrosion time (c) without TENG (d) with TENG, the diameter of the steel is 10 mm.