All Flexible Electrospun Papers Based Self-Charging Power System

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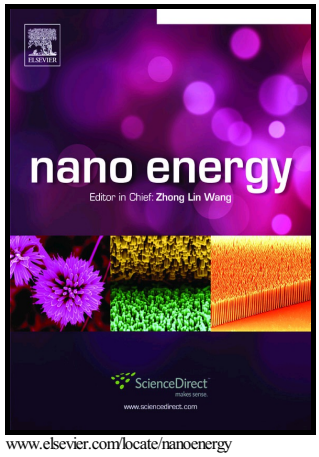

www.elsevier.com/locate/nanoenergy

PII: S2211-2855(17)30327-0
DOI: http://dx.doi.org/10.1016/j.nanoen.2017.05.048
Reference: NANOEN1989

To appear in: *Nano Energy*

Received date: 10 May 2017
Revised date: 22 May 2017
Accepted date: 22 May 2017

Cite this article as: Na Sun, Zhen Wen, Feipeng Zhao, Yanqin Yang, Huiyun Shao, Changjie Zhou, Qingqing Shen, Kun Feng, Mingfa Peng, Yanguang Li and Xuhui Sun, All Flexible Electrospun Papers Based Self-Charging Power System *Nano Energy,* http://dx.doi.org/10.1016/j.nanoen.2017.05.048

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ABSTRACT

To pace with the miniaturization and flexibility tendency of wearable/portable electronics, it is a challenge to develop the lightweight and sustainable power sources with high efficiency. In this work, we proposed an ultralight and flexible self-charging power system via all electrospun paper based triboelectric nanogenerators (EP-TENGs) as energy harvester and all electrospun paper based supercapacitors (EP-SCs) as storage device, respectively. The EP-TENG, made into arch-shape, derived from one nonconductive PAN paper as a triboelectric layer and conductive carbon paper as electrodes. In EP-SC, the conductive carbon paper acted capacitive materials,