

**Effect of Supercritical CO<sub>2</sub> on Fabrication of Free-standing Hierarchical Graphene oxide/Carbon nanofiber/Polypyrrole film and its Electrochemical Property**

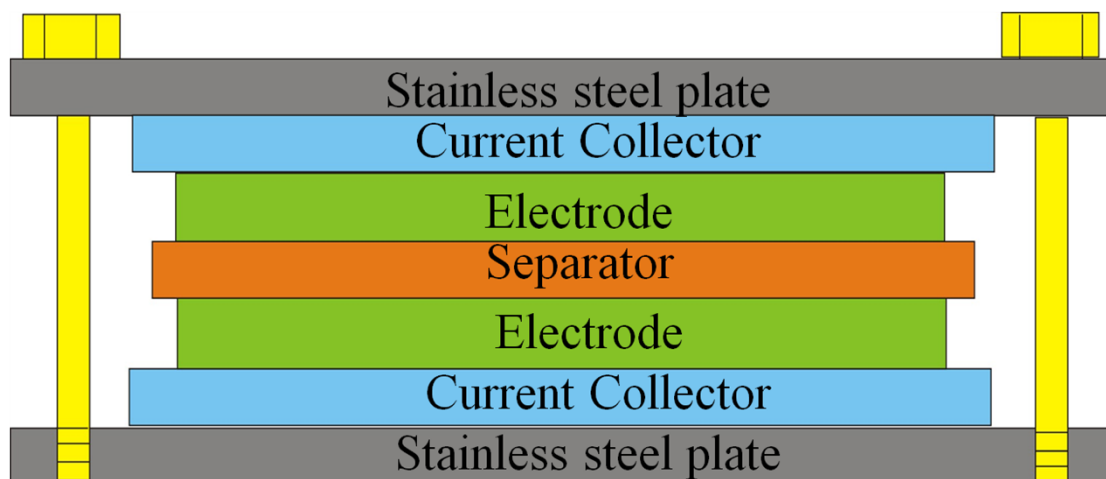
Shanshan Xu, Hongxia Yang, Kaixi Wang, Bo Wang, Qun Xu\*

College of Materials Science and Engineering, Zhengzhou University,

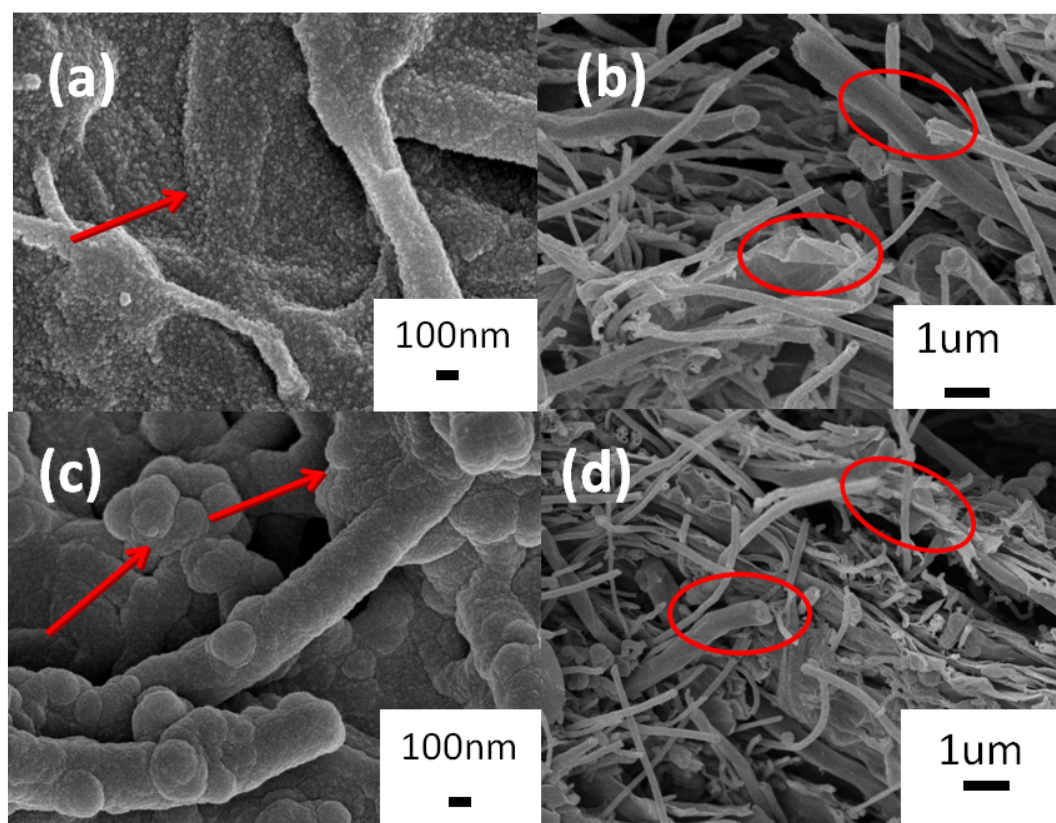
Zhengzhou 450052, China

E-mail: [qunxu@zzu.edu.cn](mailto:qunxu@zzu.edu.cn)

Tel.: +86 371 67767827; fax: +86 371 67767827

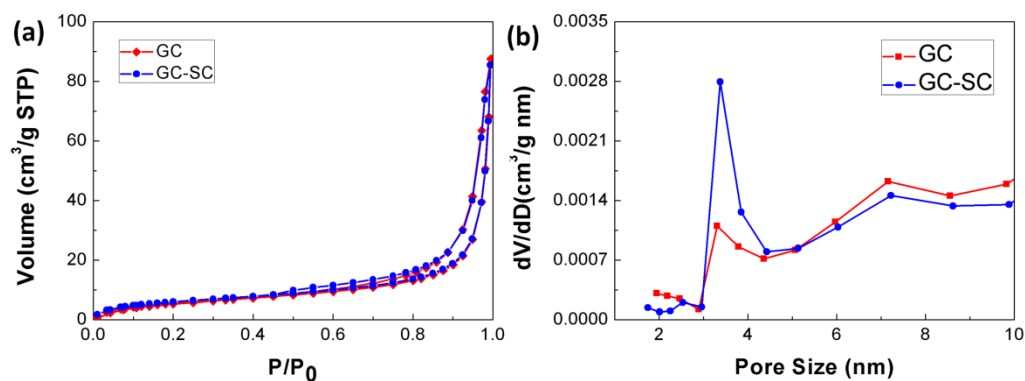


**Figure S1.** (a) Schematic diagram of a flexible hybrid film supercapacitor.

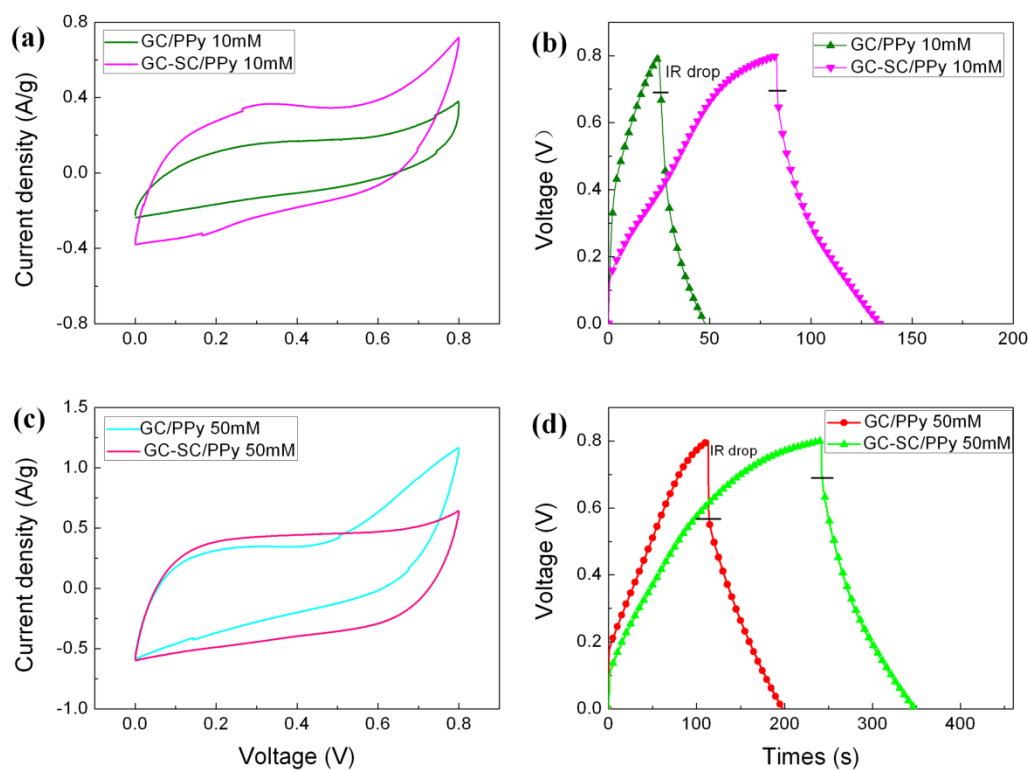


**Figure S2.** Top-view SEM images of (a) GC/PPy-10 paper and (c) GC /PPy-50 paper.

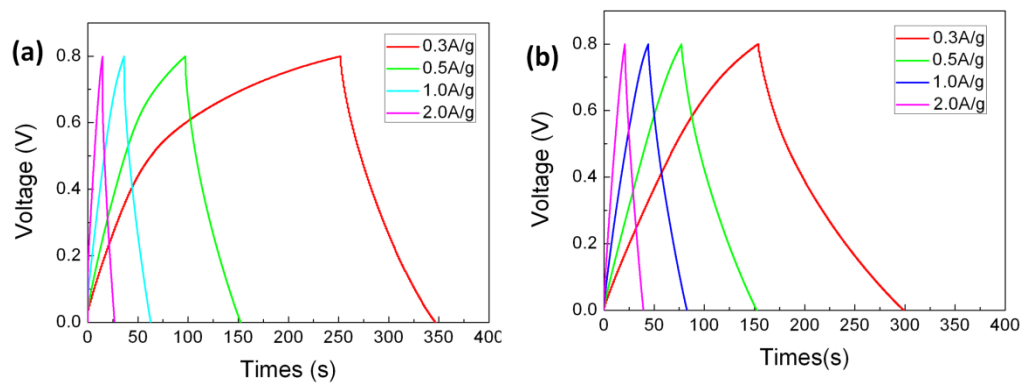
Cross-sectional SEM images of (b) GC/PPy-10 paper and (d) GC/ PPy-50 paper.



**Figure S3.** (a) Nitrogen adsorption isotherms of GC and GC-SC film. (b) Pore Size distributions of GC and GC-SC film.



**Figure S4.** (a) CV curves in 1M H<sub>2</sub>SO<sub>4</sub> solution at 10mV s<sup>-1</sup> and (b) charge-discharge curves at 300 mA/g of GC/PPy-10, GC-SC/PPy-10 paperlike electrodes. (c) CV curves in 1M H<sub>2</sub>SO<sub>4</sub> solution at 10mV s<sup>-1</sup> and (d) charge-discharge curves at 300 mA/g of GC/PPy-50, GC-SC/PPy-50 paperlike electrodes .



**Figure S5.** Detailed Galvanostatic charge-discharge curves at different current densities of (a) GC/PPy-30, (b) GC-SC/PPy-30.