

## Supporting Information © Wiley-VCH 2012

69451 Weinheim, Germany

## **Paper-Based Supercapacitors for Self-Powered Nanosystems\*\***

Longyan Yuan, Xu Xiao, Tianpeng Ding, Junwen Zhong, Xianghui Zhang, Yue Shen, Bin Hu, Yunhui Huang, Jun Zhou,\* and Zhong Lin Wang\*

anie\_201109142\_sm\_miscellaneous\_information.pdf

## Supporting information



**Figure S1.** SEM images for pure Au/PVA-paper (a) and PANI networks on Au/PVA-paper at different deposition time of b) 1 min, c) 2 min, d) 10 min and e) 20 min, respectively.



**Figure S2.** (a) Cyclic voltammetry Curves for PANI networks on Au/PVA-paper at a scan rate of 100 mV/s with different PANI deposition time of 1, 2, 5, 10 and 20 minutes, respectively. (b), (c) Specific capacitance of PANI networks as a function of the scan rate and discharge current density, respectively. (d) C'' versus frequency plot for PANI networks deposited at 1, 2, 5, 10 and 20 minutes, respectively.



**Figure S3.** (a) Bode plot of solid-state device and (b) leakage current and self-discharge curves for the fabricated solid-state supercapacitor over time.



Figure S4. Rectified voltage output curve of the piezoeletric generator.



**Figure S5.** (a) The photograph of series connected monolithic all-solid-state dye-sensitized solar cells. (b) Charging curve for the six series all-solid-state SCs by a solar cell.



Figure S6. IV curves for strain sensor at different strain.