Electronic Supplementary Material

High-performance supercapacitors based on Ni$_2$P@CNT nanocomposites prepared using an ultrafast microwave approach

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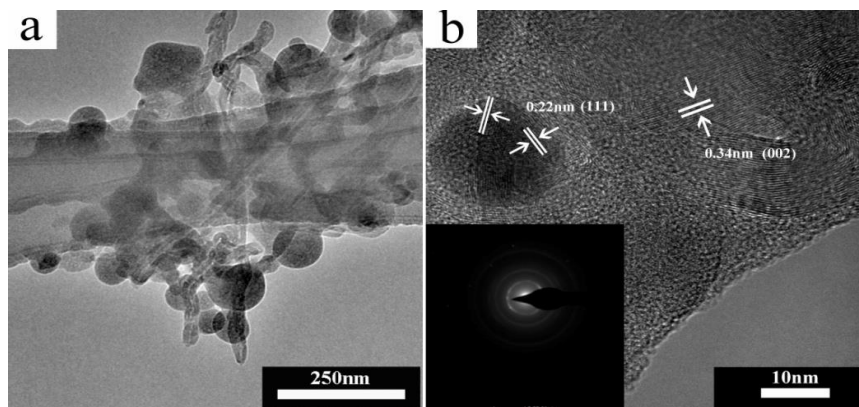E-mails: luojujie@126.com (Luo J); xzz0004@auburn.edu (Zhang X)

Fig. S1. a) Low- and b) high-resolution HRTEM images of the Ni$_2$P@CNT. The inset of (b) is the corresponding SAED pattern.
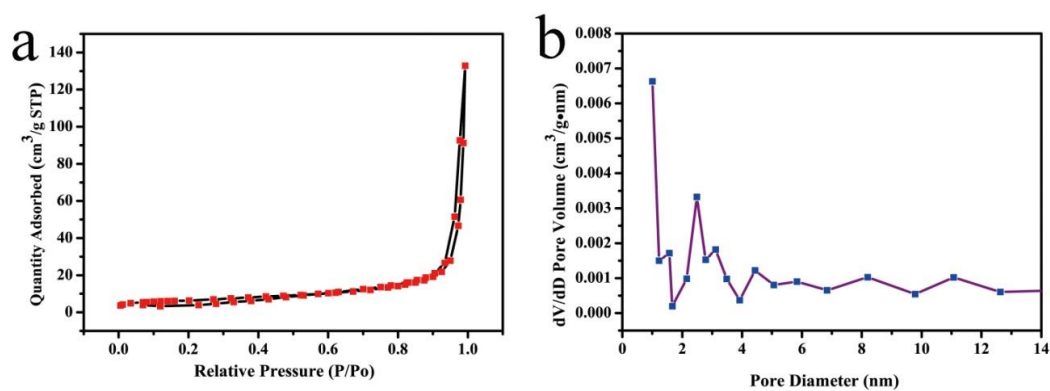

Fig. S2. a) Nitrogen adsorption-desorption isotherm of sample, b) pore size distribution of sample
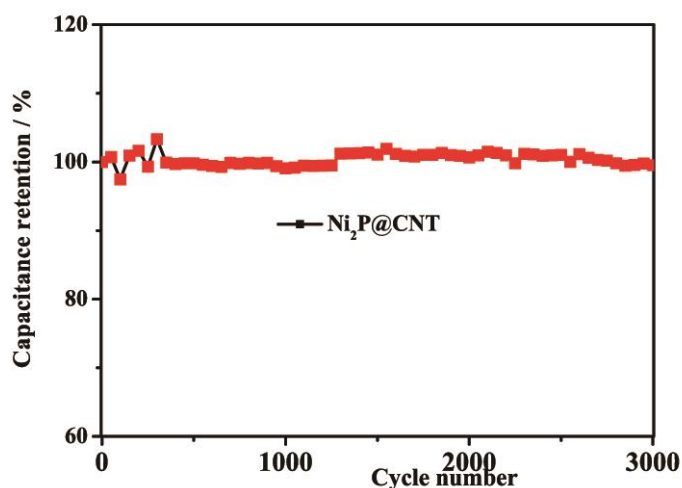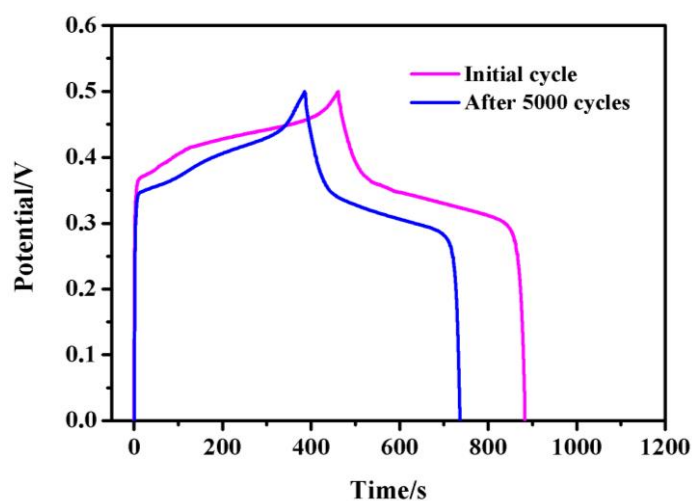
Fig. S3. Cycling performances of the ASCs

Fig. S4. The $Ni_2P@CNT$ nanocomposites comparison of GCD curves before and after cyclic test at $1A\ g^{-1}$.

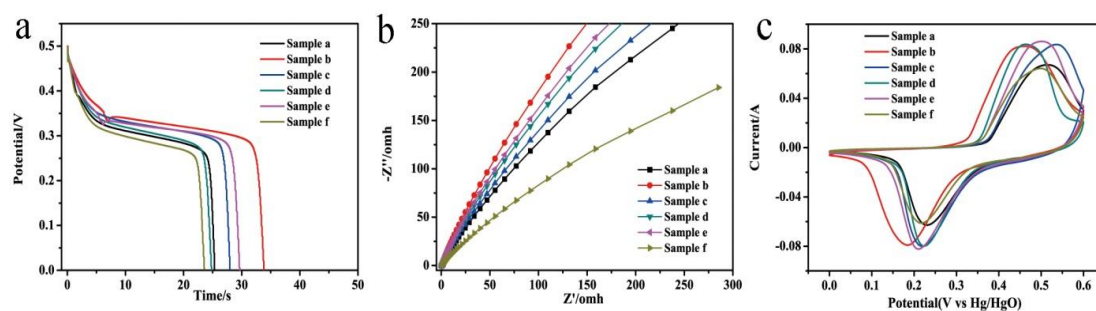**Fig. S5**. (a) GCD curves of $Ni_2P@CNT$ electrode materials with different preparation conditions at a current density of $10\ A\ g^{-1}$; (b) Nyquist $Ni_2P@CNT$ electrode materials with different preparation conditions; (c) CV curves of $Ni_2P@CNT$ electrode materials with different preparation conditions at a scan rate of 50 mV s^{-1}.
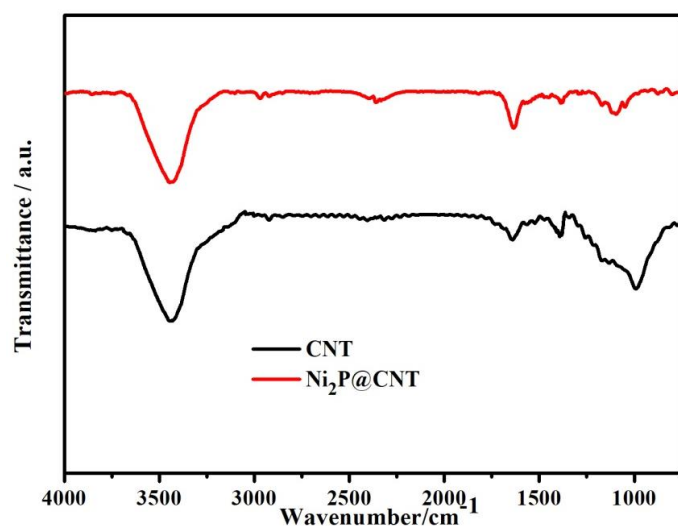
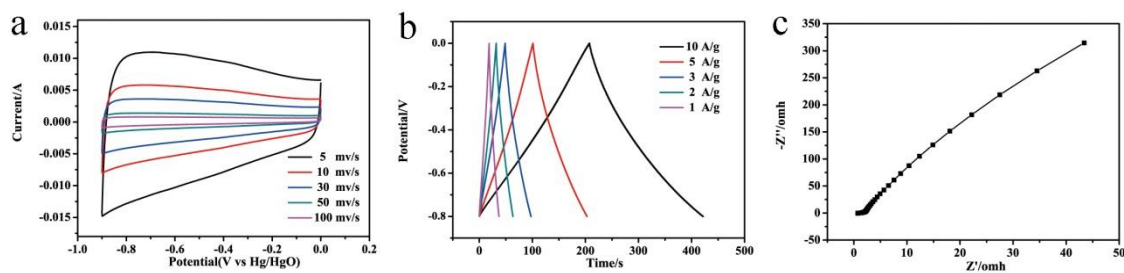**Fig. S6.** Comparison of FT-IR spectra of Ni$_2$P@CNT and CNT

Fig. S7. (a) CV curves of AC electrode materials with different scan rate; (b) GCD curves of AC electrode materials with different current density; (c) Nyquist curves of AC electrode materials.

Table S1. The percentage of elements in a sample

Characterization	Atomic %(Ni)	Atomic %(C)	Atomic %(P)	Atomic %(O)
XPS	7.68	75.89	8.26	8.17
EDS	3.5	88.7	4.7	3.1