## **Supplementary information**

An electrochemical sensor for pesticide assays based on carbon nanotube-enhanced acetycholinesterase activity

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## **Figure captions**

**Figure 1-S.** Cyclic voltammogram for prussian blue with different MWNT loading, a) 20, b) 10 and c) 0 μg MWNT.

**Figure 2-S.** Cyclic voltammograms of AChE/PB (up panel) and AChE/MWNT/PB (down panel) sensors in a 25 mM phosphate buffer with pH 7.6, in the a) absence and b) presence of 1 mM ATCh. Scan rate: 50 mV/s.

**Figure 3-S.** The influence of different amount of MWNT in the electron transfer layer on the signal of MWNT-AChE/PB/MWNT biosensor with 4.8 mU enzyme loading: a) 20 μg, b) 10 μg, c) 0 μg.

**Figure 4-S.** The signal of MWNT-AChE/PB/MWNT biosensor on different enzyme loading. 5ul immobilization mixture per electrode consisted of 0.1% nafion, 1% BSA, 0.5 μg MWCNT and 4.8 (a), 3.2 (b), 1.6 (c) and 0.8 (d) mU of AChE. ATCh 150 mM, 25 mM PB pH 7.6.

**Figure 5-S.** Relative changes of eight sequential measurements of MWNT-AChE/PB/MWNT biosensor with 0.8 mU AChE loading. 1 mM ATCh , 25 mM PB pH 7.6.

**Figure 6-S.** The pH dependence of the MWNT-AChE/PB/MWNT sensor with 0.8 mU enzyme loading.

**Figure 7-S.** Signals of the MWNT-AChE/PB/MWNT sensor in response to DDV at different exposure time.

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Figure 2-S

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Figure 4-S



Figure 5-S

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Figure 6-S



Figure 7-S