Supporting Information

Simple, Rapid, Sensitive, and Versatile SWNT-Paper Sensor for Environmental Toxin Detection Competitive with ELISA

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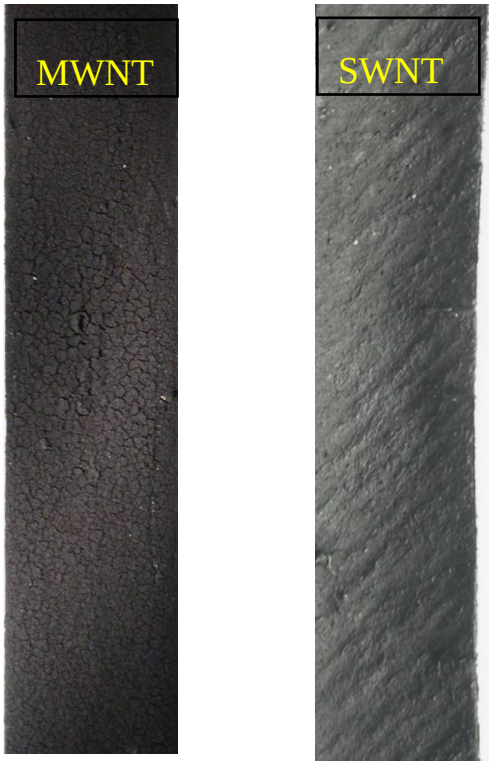

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These three authors contribute equally to this paper.

Figure S1. Optical photographs of the MWNT and SWNT coated paper electrodes.

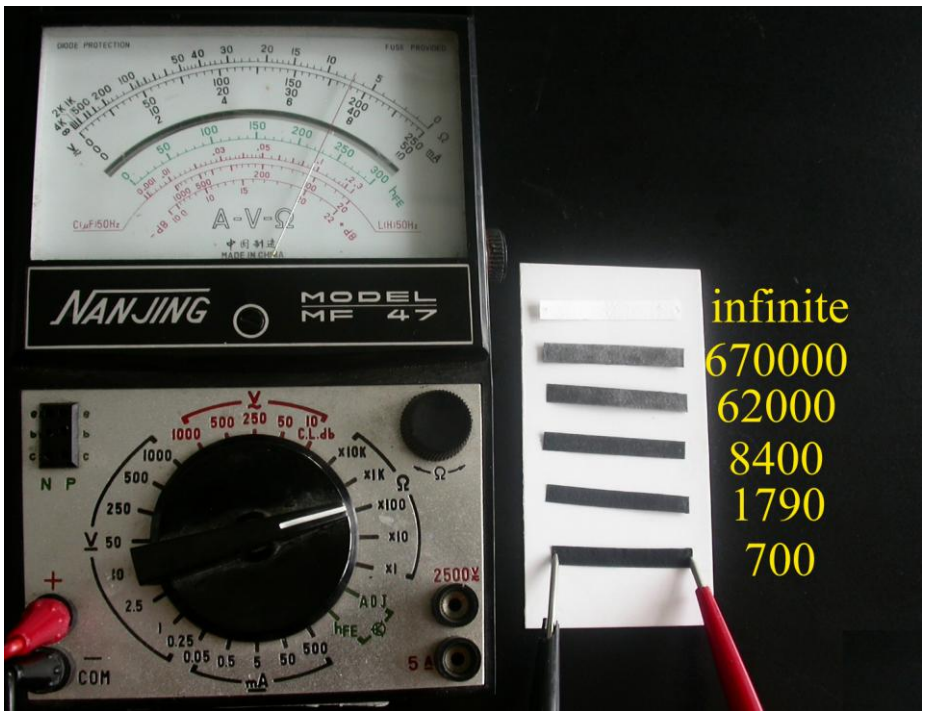

Figure S2. The conductivity of SWNT-impregnated filter paper

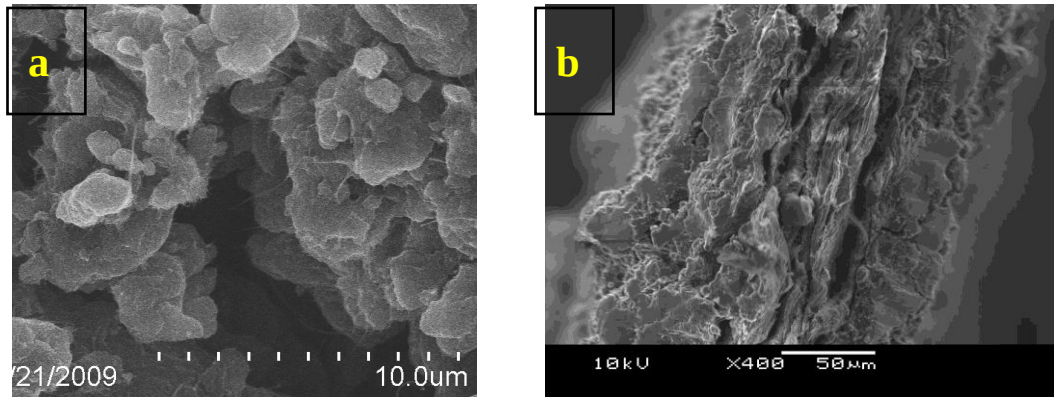

Figure S3. The SEM images of (a) the face and (b) the edge of the 13 deposition cycles paper electrode.

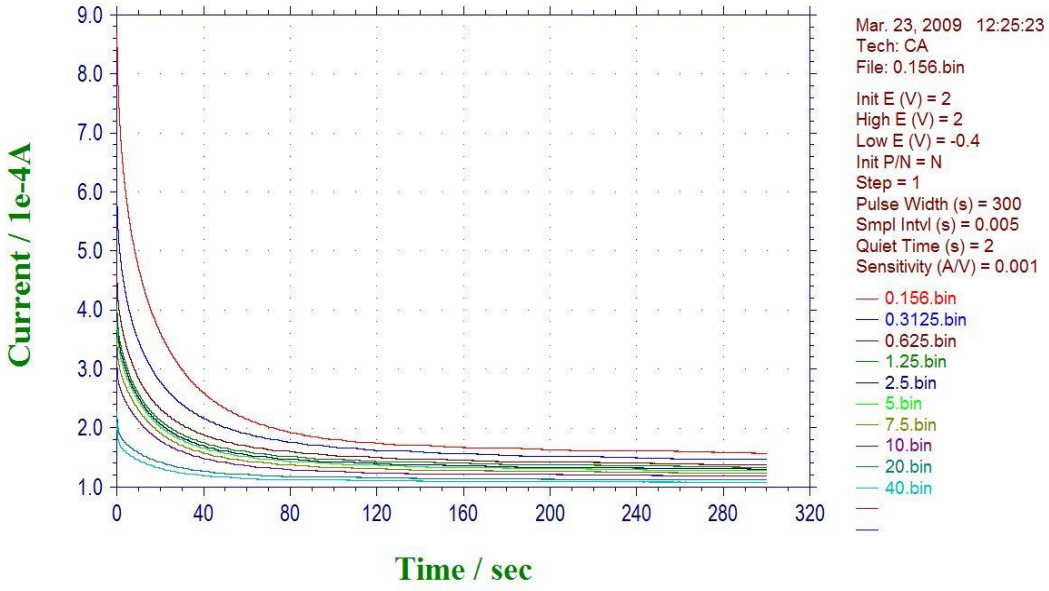

Figure S4. Amperometric i-*t* traces for sensing of the target samples of MC-LR

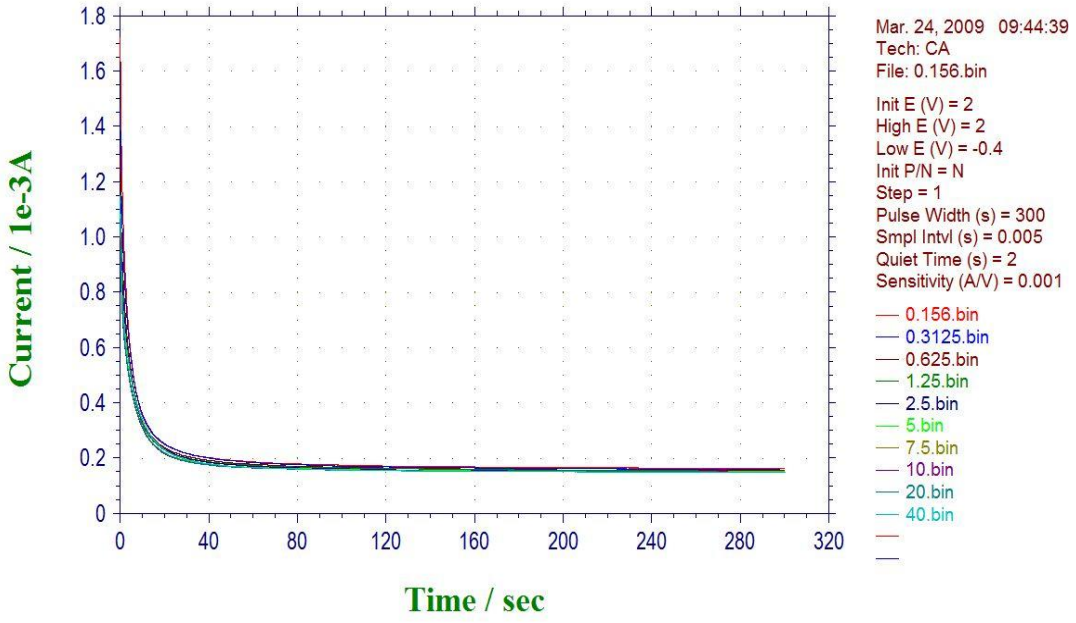

Figure S5. Amperometric i-*t* traces for sensing of the control samples of ochratoxin.

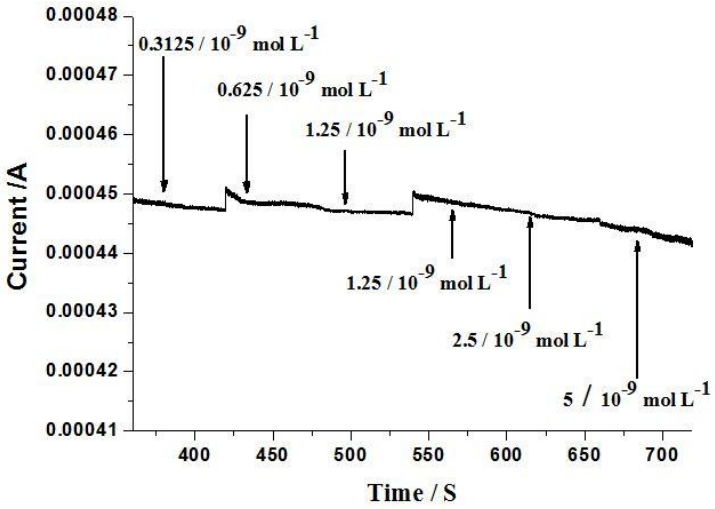

Figure S6. The sensing results for the control samples of ochratoxin.

The detailed process of the ELISA is as follows:

1. Coat each well in a 96-well plate (Costar #9018) with 100 µL of a coating antigen solution.
2. Cover and rock overnight in an incubator at 4^{o}C.
3. Wash 3 times with PBS-Tween 20 in vacuum-apparatus and pat dry.
4. The plate was blocked with 100µL (0.5%, w/v) OVA solution in PBS solution for 2 h at 37 ^{o}C.
5. Wash 3times with PBS-Tween 20.
6. Add 100 µL/well MC-LR at different dilutions or samples with 100µL/well pAb then incubate for 0.5 hour at 37 ^{o}C.
7. Wash 3times with PBS-Tween 20 and pat dry.
8. Dilute horseradish peroxidase-conjugated goat anti-rabbit IgG 1 : 3000 in PBS-Tween 20 for 0.5 hour and incubate as before.
9. Wash 6times as before and pat dry.
10. Prepare color substrate (TMB) and add 100 µL/well for 15 min in dark at room temperature.
11. H_2SO_4 (2 mol/L) was added to stop the reaction and record the absorption in a micro plate reader at 450nm.