Electronic Supplementary Information

Facile and fast fabrication of polyaniline nanorods on acidized titanium foils with synergistic effect for electrochemical sensing

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Figure S1 Fluorescence spectra of the RhB (5×10^{-7} M) (λ_{ex} = 560 nm) after dipping of different electrodes. The inset images: the photos of (a) blank and (b) Ti-ac under a UV lamp (λ = 365 nm).
Figure S2 The signal of the PANI-NR/CNTs/Ti-ac for detecting 40 μM AA at various condition: (A) the microwave power; (B) the concentration of ANI; (C) the proportion of ANI to APS; (D) the concentration of CNTs; (E) the pH of buffer; (F) the working potential.
Figure S3 (A) Amperometric response of PANI/Ti-ac to successive addition of AA in 0.1 M HCl with 0.1M KCl supporting electrolyte at applied potential of 0.4 V and (B) the calibration curve of current vs. AA concentration. The concentration of AA: (1) $4.00 \times 10^{-7}$ M; (5) $2.60 \times 10^{-6}$ M; (9) $4.56 \times 10^{-5}$ M; (13) $5.66 \times 10^{-4}$ M; (16) $1.77 \times 10^{-3}$ M. Line range: 0.4 μM-1.37 mM. (C) Amperometric response of PANI/Ti in the same condition and (D) the corresponding calibration curve. The concentration of AA: (1) $4.00 \times 10^{-7}$ M; (5) $2.60 \times 10^{-6}$ M; (9) $4.56 \times 10^{-5}$ M; (13) $5.66 \times 10^{-4}$ M; (20) $3.36 \times 10^{-3}$ M. Insets of (A) and (C): the magnified curves of the addition of low concentration of AA from 0.4 μM to 4.6 μM. Line range: 10 μM-2.97 mM.

Figure S4 The stability of the PANI-NR/CNTs/Ti-ac in 0.1 M HCl with 0.1 M KCl supporting electrolyte for detecting 40 μM AA.