Electronic Supplementary Information

Enhanced photoelectrochemical aptasensing platform amplified by sensitization effect of CdTe@CdS core-shell quantum dots coupled with exonuclease-I assisted target recycling

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Section 1:

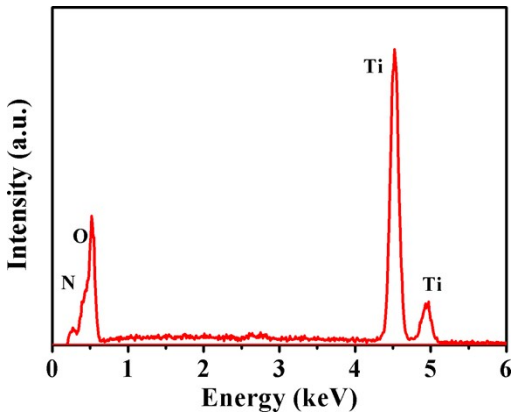

Figure S1. EDX spectrum of the synthesized $mTiO_2$:N sample.

Section 2:

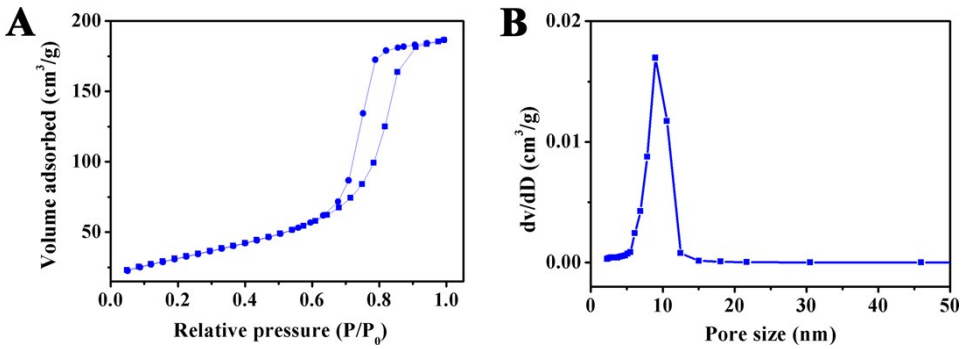

Figure S2. (A) N_2 adsorption/desorption isotherm and (B) pore size distribution of the synthesized $mTiO_2$:N sample.

Panels A and B of Figure S2 display N_2 adsorption/desorption isotherm and pore size distribution of the synthesized $mTiO_2$:N, respectively. The N_2 adsorption/desorption isotherm curve in Figure S2-A pointed the typical structure of type-IV isotherm with well-defined H1-type hysteresis loop, indicating existence of well-defined mesoporous structure in the synthesized $mTiO_2$:N sample. It could be obtained from Figure S2-B that the average pore size of the $mTiO_2$:N sample was about 9 nm, which was agree with the TEM result.

Section 3:

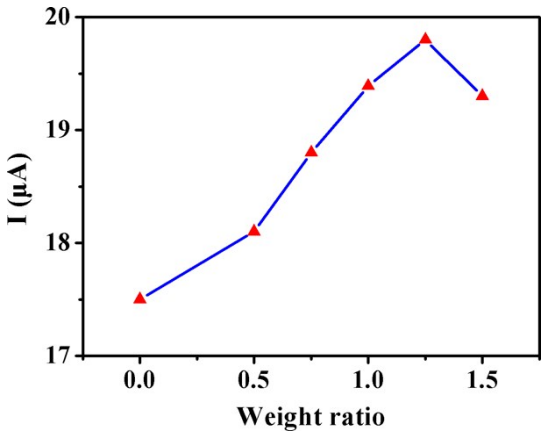

Figure S3. Photocurrent responses of the ITO/mTiO_2:N electrode prepared with different weight ratios of urea/Ti in the synthesis process.

Section 4:

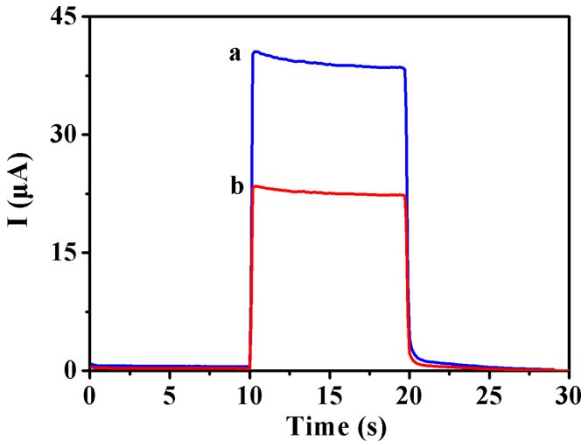

Figure S4. Photocurrent intensity of the aptasensor by using (a) mTiO_2:N and (b) mTiO_2 as substrate photoactive material.