Supporting Information

## A sensitive MnO<sub>2</sub> nanosheet sensing platform based on a fluorescence aptamer sensor for the detection of zearalenone

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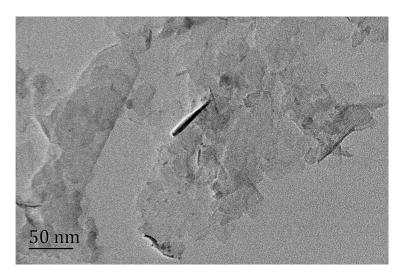
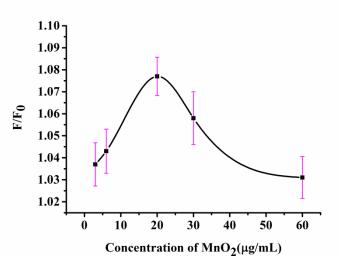


Figure S1. TEM image of the used  $MnO_2$  nanosheet.



**Figure S2.** Effects of the amount of  $MnO_2$  on FL intensity. Other experimental conditions were the same as those given in Figure 3.

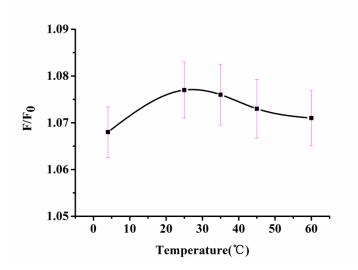


Figure S3. Effects of the binding temperature of 6-FAM-ZEN aptamer to  $MnO_2$  nanosheet on FL intensity. Other experimental conditions were the same as those given in Figure 3.

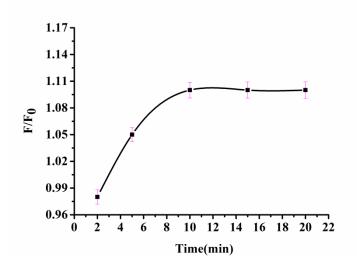
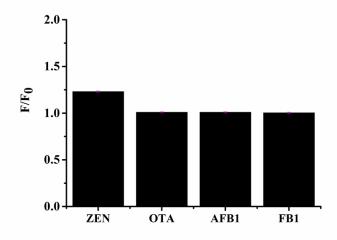
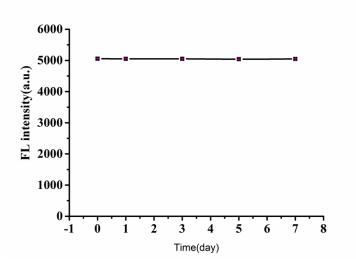


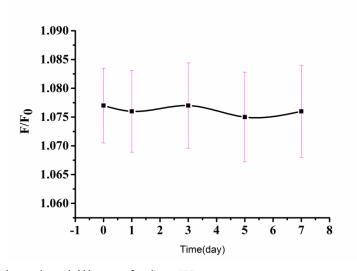
Figure S4. The effect of the binding time of 6-FAM-ZEN aptamer to  $MnO_2$  nanosheet on the FL quenching. Other experimental conditions were the same as those given in Figure 3.



**Figure S5.** Detection specificity of the proposed FL aptamer sensor. Other experimental conditions were the same as those given in Figure 3.



**Figure S6.** The stability of the G-Quadruplex/ZEN. Other experimental conditions were the same as those given in Figure 3.



**Figure S7.** The durability of the FL aptamer sensor. Other experimental conditions were the same as those given in Figure 3.