

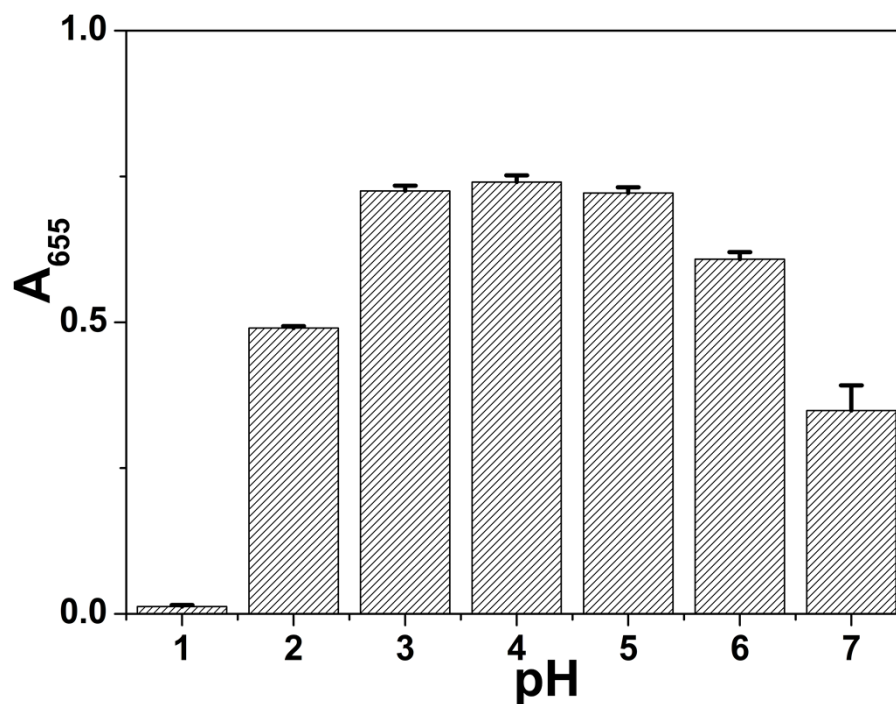
## Supplementary Material for

### **Colorimetric detection of hypochlorite in tap water based on the oxidation of 3,3',5,5'-tetramethylbenzidine**

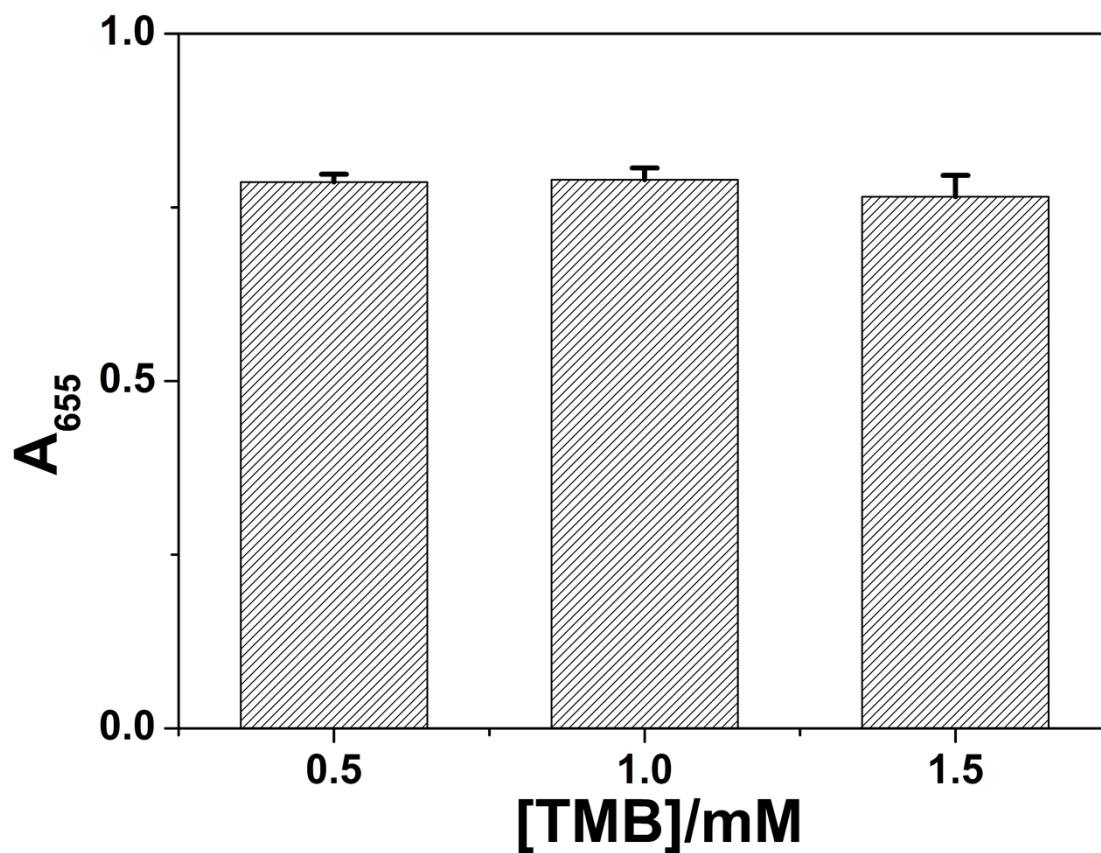
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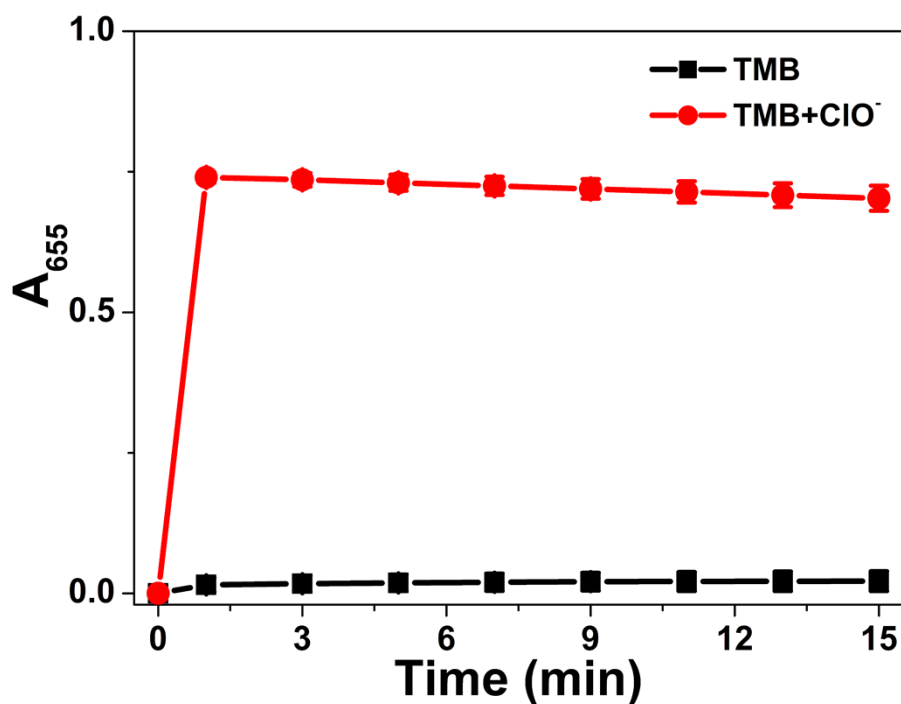
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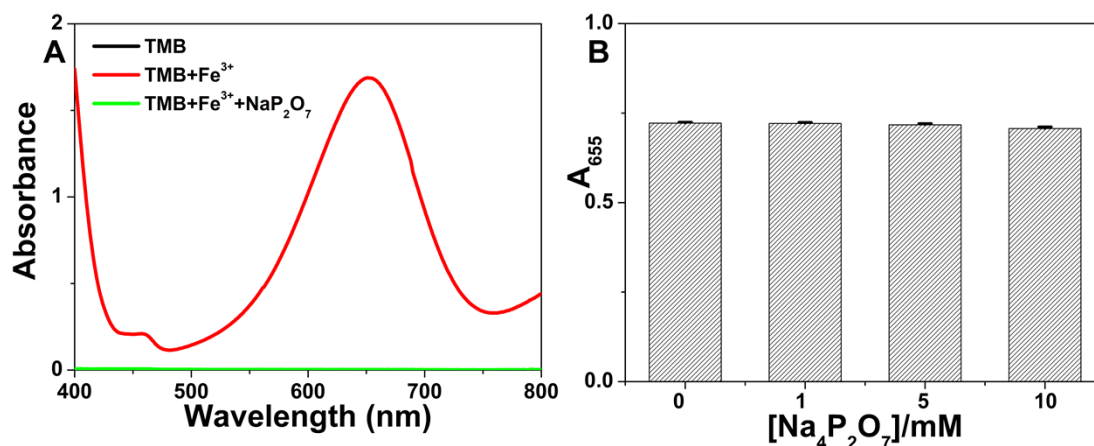
**Fig. S1** The plot of  $A_{655}$  of the TMB solution at different pH values (the concentration of TMB is 1 mM, the concentration of  $\text{ClO}^-$  is 20  $\mu\text{M}$ ).



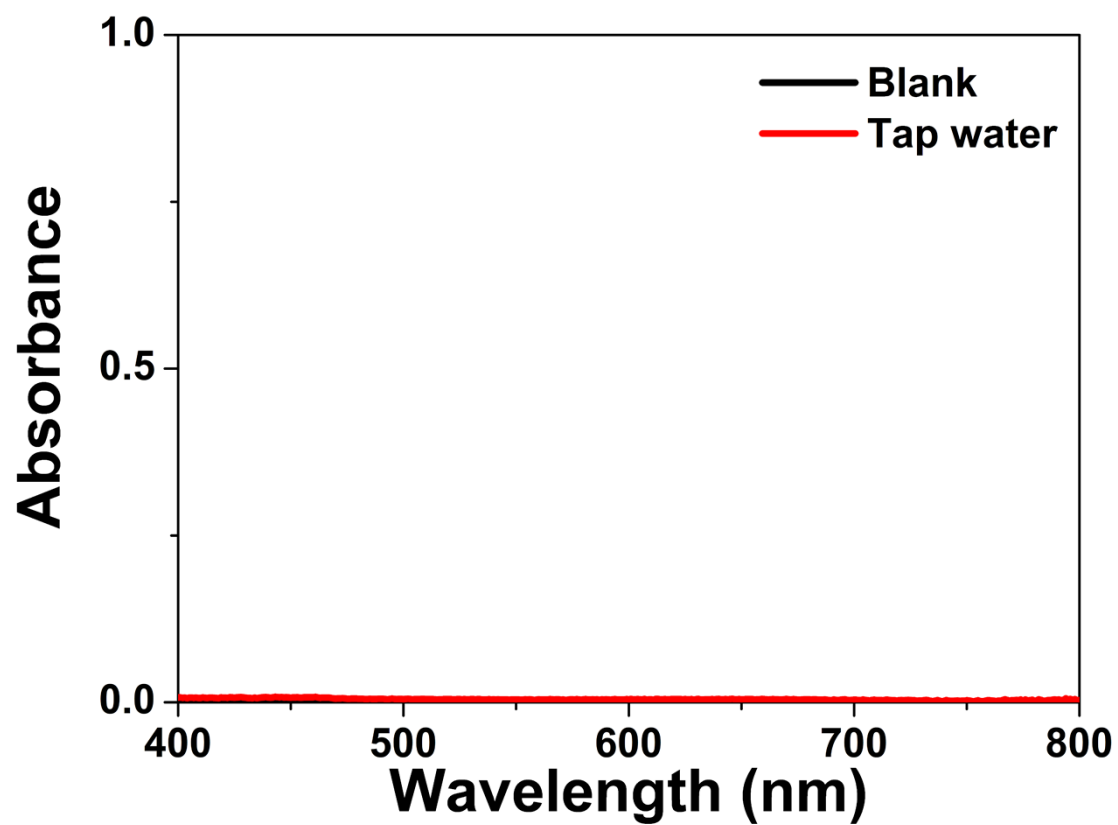
**Fig. S2** The plot of  $A_{655}$  of the different concentrations of TMB solution (the concentration of  $\text{ClO}^-$  is 20  $\mu\text{M}$ , 50 mM pH 4.0 HAc-NaAc buffer).



**Fig. S3** The plot of  $A_{655}$  of the TMB solution in the absence and presence of  $\text{ClO}^-$  at different time (the concentration of TMB is 1 mM, the concentration of  $\text{ClO}^-$  is 20  $\mu\text{M}$ , 50 mM pH 4.0 HAc-NaAc buffer).



**Figure S4.** (A) UV-vis absorption spectra of TMB, TMB with  $\text{Fe}^{3+}$  (200  $\mu\text{M}$ ) and TMB with  $\text{Fe}^{3+}$  (200  $\mu\text{M}$ ) and sodium pyrophosphate (1 mM). (B) The plot of  $A_{655}$  of the TMB solution in the presence of different concentrations of sodium pyrophosphate (the concentration of TMB is 1 mM, 50 mM pH 4.0 HAc-NaAc buffer).



**Fig. S5** UV-vis absorption spectra of TMB and TMB with tap water (the concentration of TMB is 1 mM, 50 mM pH 4.0 HAc-NaAc buffer).