

Electronic Supplementary Information

Determination of nitrite and glucose in water and human urine with light-up chromogenic response based on the expeditious oxidation of 3,3',5,5'-tetramethylbenzidine by peroxynitrous acid

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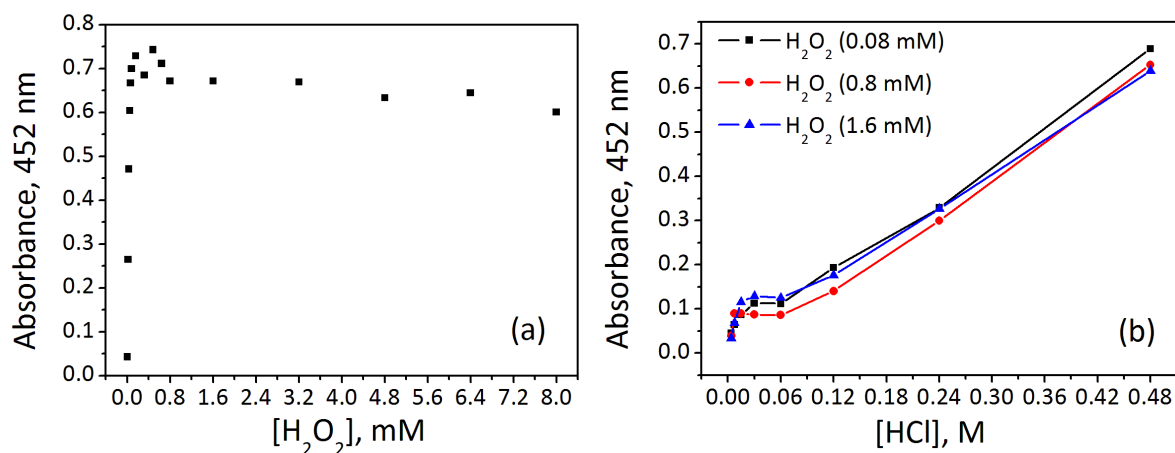


Fig. S1 Effects of (a) H₂O₂ and (b) HCl concentration on the oxidation of TMB (25 μM). For (a), the HCl concentration was 0.48 M, and for (a) and (b), the NO₂⁻ concentration was both 10 μM.

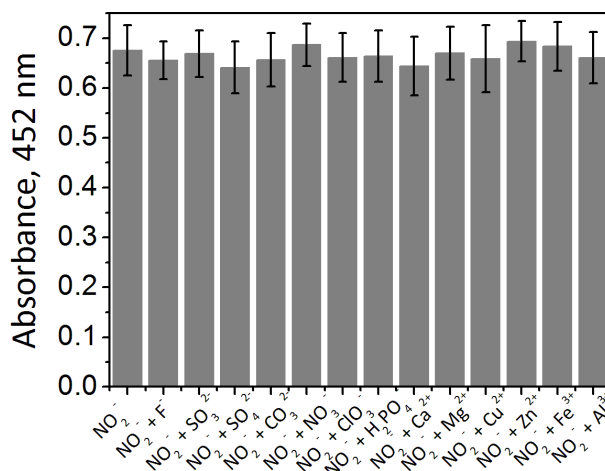


Fig. S2 Interference study of the TMB-H₂O₂ system by the addition of a mixture of nitrite and another ion. NO₂⁻: 10 μM, other anions: 1 mM, Ca²⁺: 1 mM, and other cations: 0.1 mM.

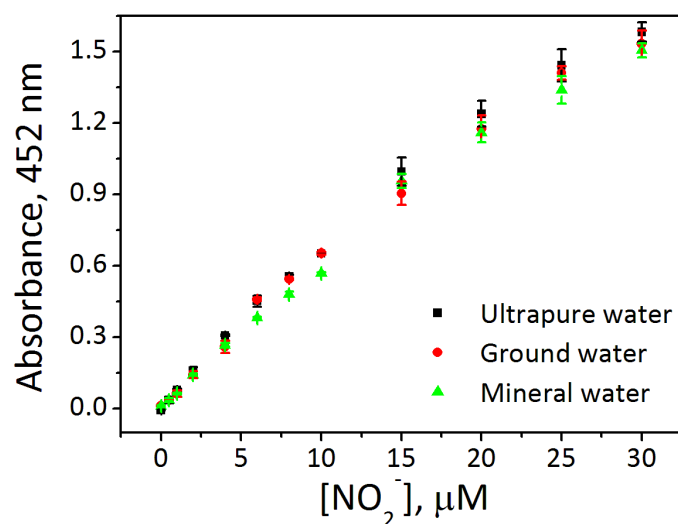


Fig. S3 The calibration curves for the nitrite assay in three water samples. The error bar represents the standard deviation of three measurements.

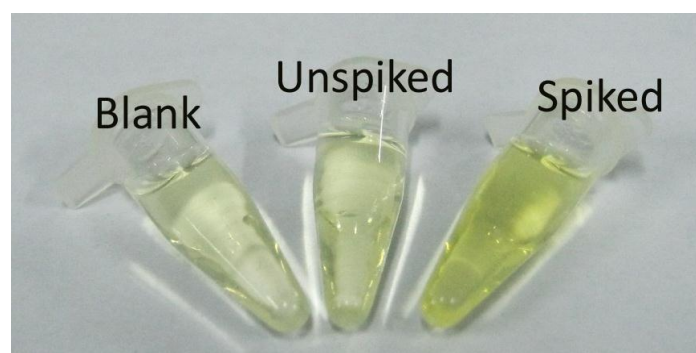


Fig. S4 Photographs for the determination of glucose in human urine.

Table S1 Results for the determination of nitrite in real samples.

Real samples	Detected/ μM	Spiked/ μM	Recovery/%	RSD/%
<i>Ground water</i>	No detection	4	95-103	< 5
		8		
<i>Household tap water</i>	No detection	4	95-103	< 5
		8		
<i>Commercial mineral water</i>	No detection	4	95-103	< 5
		8		
<i>Human urine</i>	No detection	4	95-103	< 5
		8		

All data are based on three measurements.