

Electronic Supplementary Information

Label-free colorimetric sensing of copper(II) ions based on accelerating decomposition of H₂O₂ using gold nanorods as an indicator

Shasha Wang,^{ac} Zhaopeng Chen,^{*a} Ling Chen,^{ac} Ruili Liu,^b Lingxin Chen^{*a}

^a *Key Laboratory of Coastal Zone Environmental Processes, Yantai Institute of Coastal Zone Research (YIC), Chinese Academy of Sciences (CAS), Shandong Provincial Key Laboratory of Coastal Zone Environmental Processes, YICCAS, Yantai 264003, China. Email: zhpchen@yic.ac.cn; Tel: +86 535 2109133; E-mail: lxchen@yic.ac.cn; Fax: + 86-535 2109130; Tel: + 86-535 2109130*

^b *School of environment and materials engineering, Yantai University, Yantai 264005, China*

^c *University of Chinese Academy of Sciences, Beijing 100049, China*

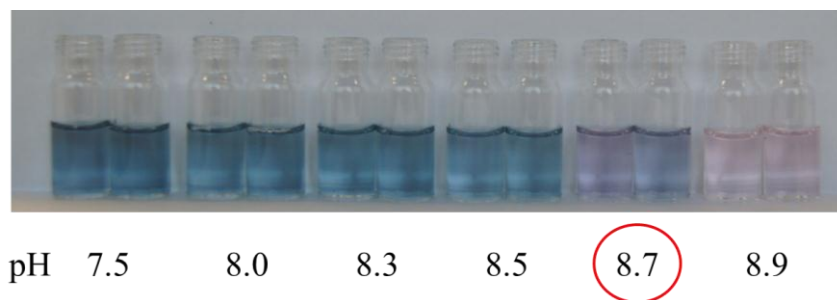


Fig. S1 The effect of pH value. In each pair, the left one is blank and the right is the sample with 50 nM Cu^{2+} , respectively.

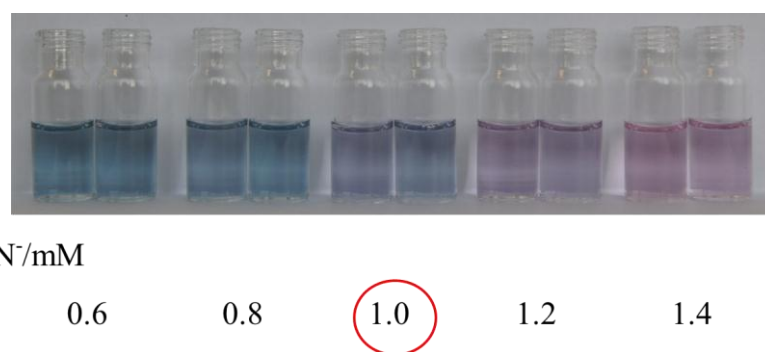


Fig.S2 The effect of concentrations of NaSCN. In each pair, the left one is blank and the right is the sample with 50 nM Cu^{2+} , respectively.

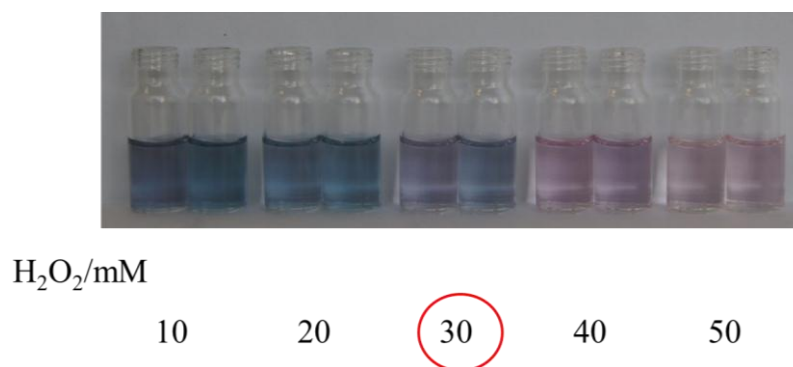


Fig.S3 The effect of concentrations of H_2O_2 . In each pair, the left one is blank and the right is the sample with 50 nM Cu^{2+} , respectively.



Temp/°C

45

50

55

60

65

70

Fig.S4 The effect of incubation temperature. In each pair, the left one is blank and the right is the sample with 50 nM Cu^{2+} , respectively.



Time /min

5

10

15

17

20

25

Fig.S5 The effect of incubation time. In each pair, the left one is blank and the right is the sample with 50 nM Cu^{2+} , respectively.