

## Supplementary Material

### **Redox-induced target-dependent ratiometric fluorescence sensing strategy and logic gate operation for detection of $\alpha$ -glucosidase activity and its inhibitor**

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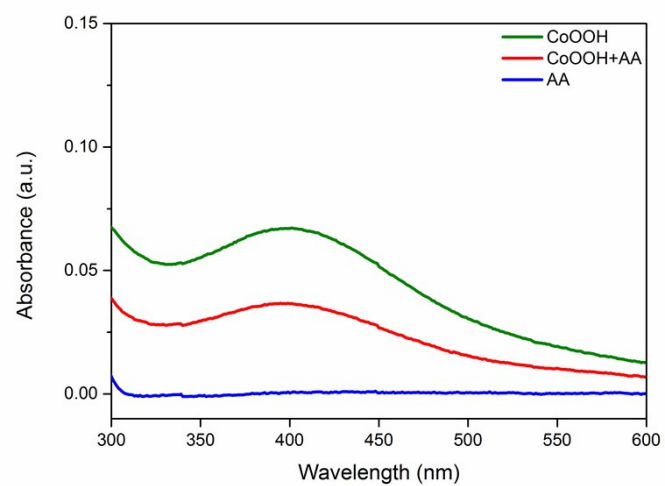
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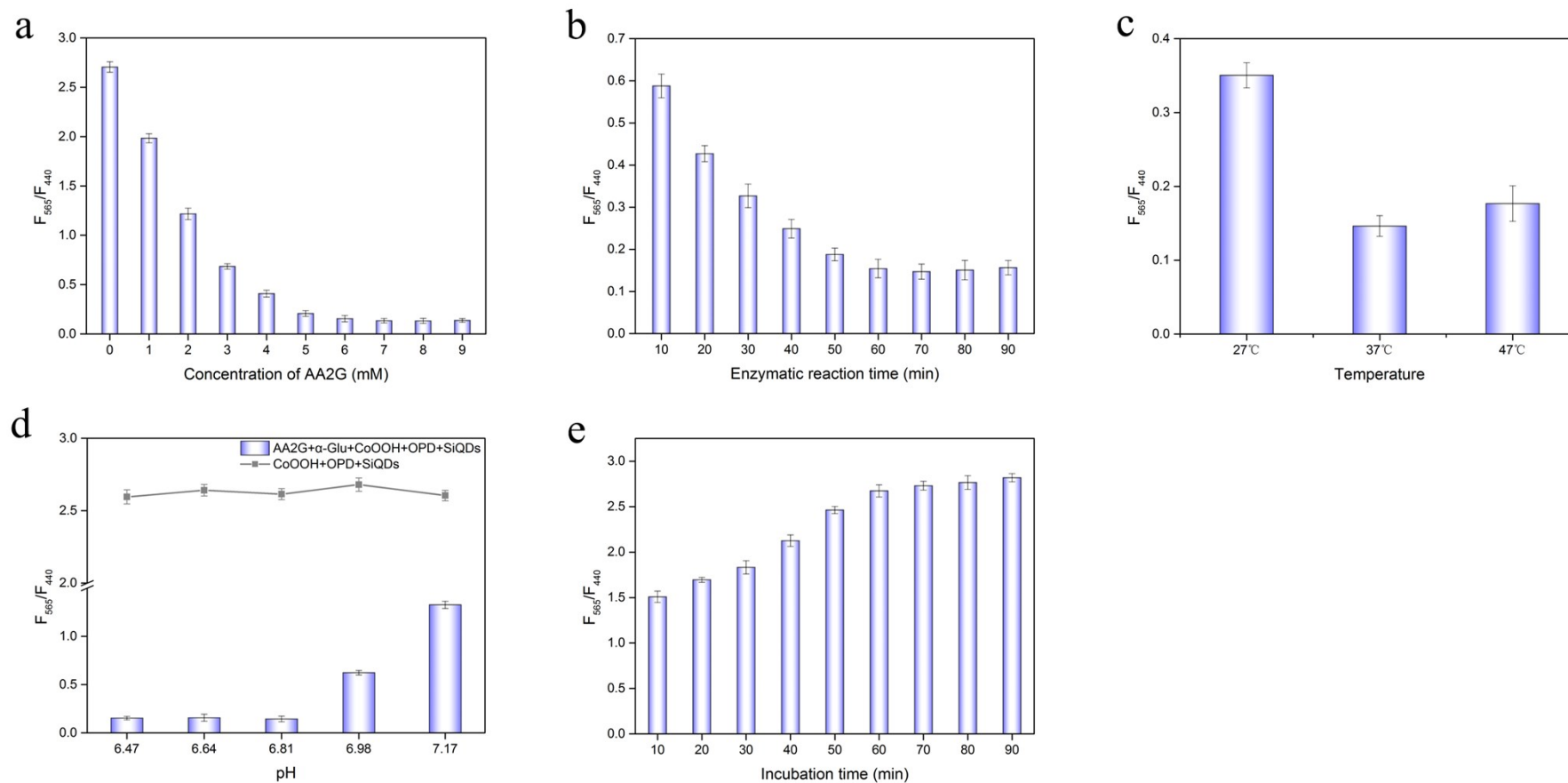
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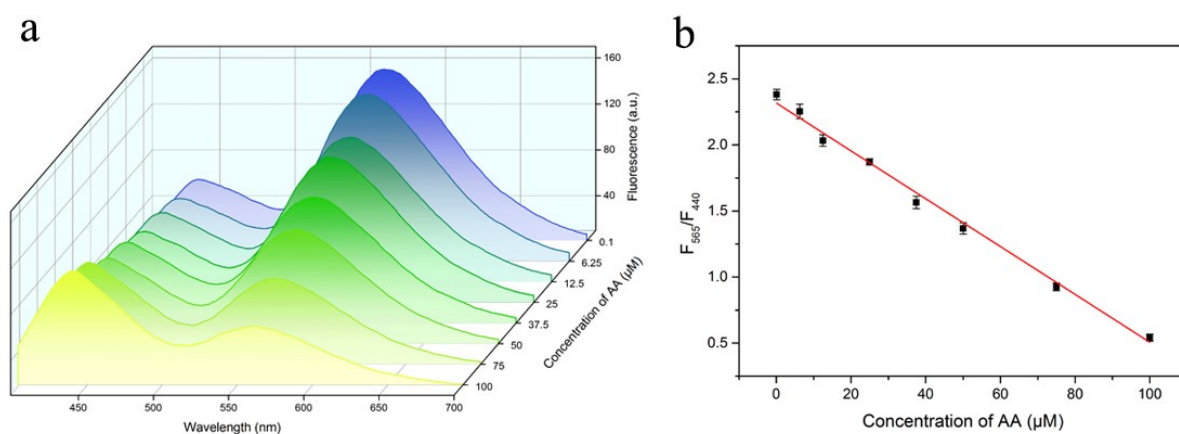
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**Fig. S1.** The UV-vis absorption spectra of CoOOH, CoOOH+AA and AA.



**Fig. S2.** The effects of the concentration of AA2G (a); enzymatic reaction time (b); reaction system temperature (c); solution pH (d) and incubation time (e) on fluorescence intensity of reaction system.



**Fig. S3.** Fluorescence emission spectra of ratiometric fluorescence sensing system with different concentrations of AA (a); the linear relationship between  $F_{565}/F_{440}$  and AA concentration (b).