

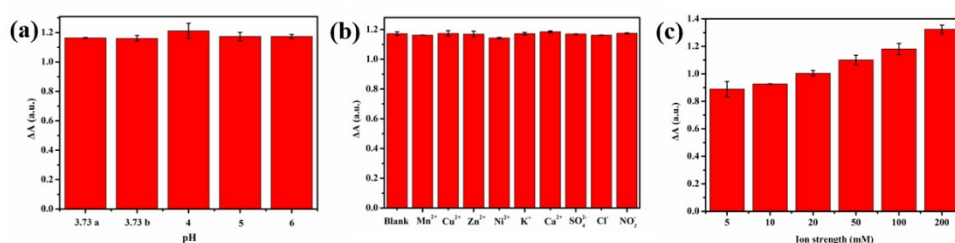
### Supporting information

## Highly selective colorimetric determination of catechol based on aggregation-induced oxidase-mimic activity decrease of $\delta$ -MnO<sub>2</sub>

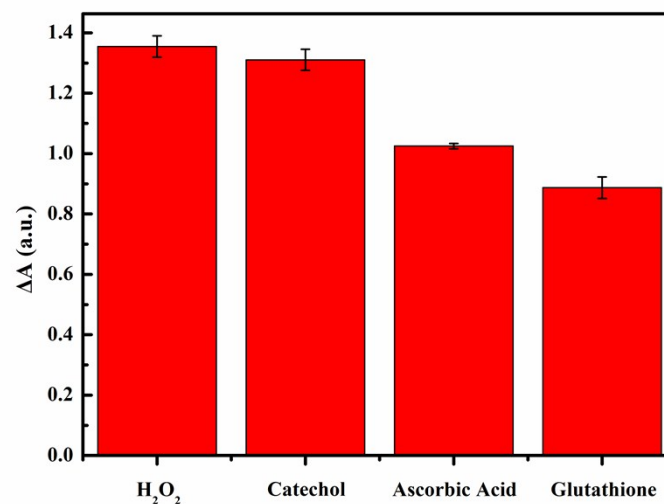
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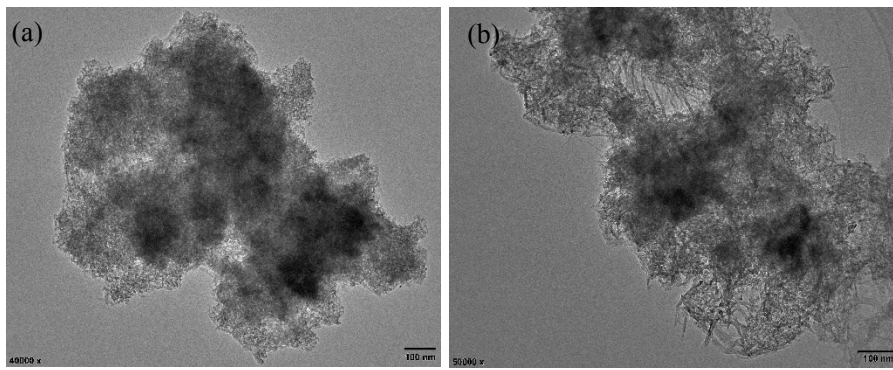
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**Fig. S1.** The effects of (a) pH, (b) common cations and anions, and (c) ion strength during the incubation process of catechol and  $\delta$ -MnO<sub>2</sub> on the final TMB oxidase-like activity.



**Fig. S2.** The response of TMB- $\delta$ -MnO<sub>2</sub> to H<sub>2</sub>O<sub>2</sub>, glutathione, catechol and ascorbic acid.



**Fig. S3.** TEM images of (a) pristine MnO<sub>2</sub> and (b) catechol reacted MnO<sub>2</sub>.