

**Electronic Supporting Material on the New Journal of Chemistry**  
**publication entitled**

**A ratiometric fluorescence assay for bleomycin based on Cu<sup>2+</sup>-triggered cascade  
reaction and nanoparticles-mediated autocatalytic reaction**

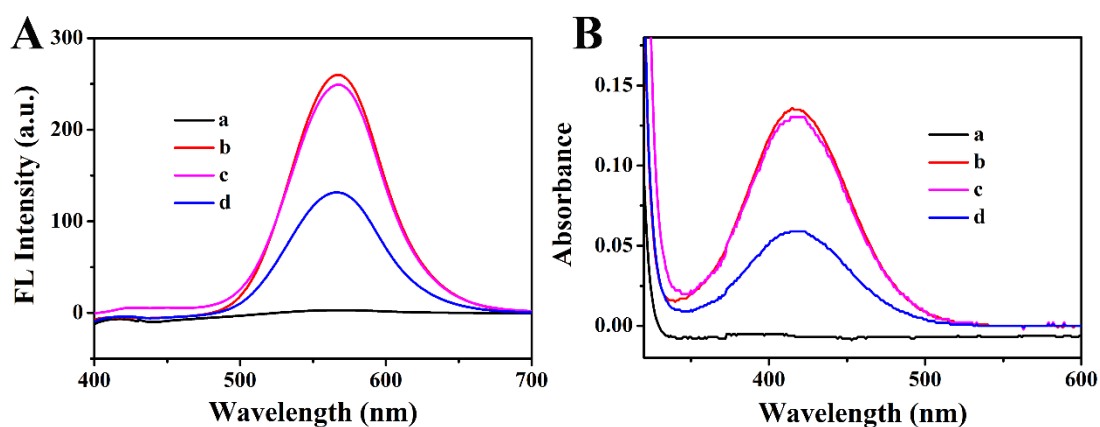
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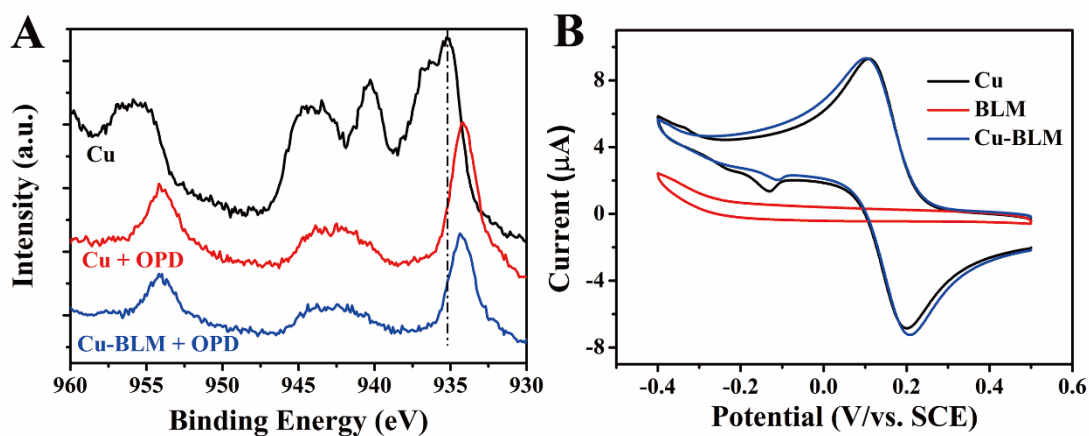
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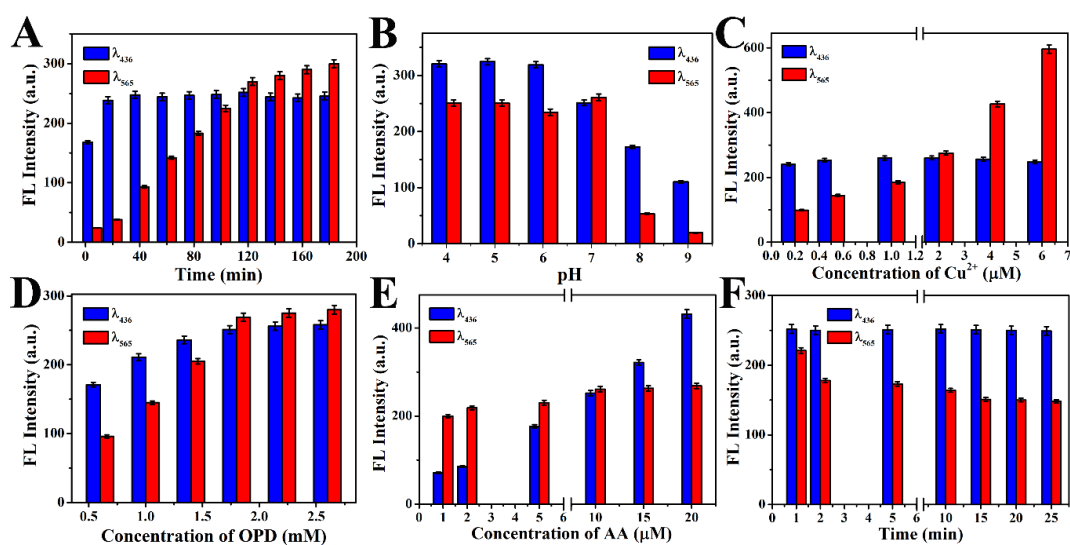
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**Fig. S1** Fluorescence emission spectra (A) and absorption peak (B) of OPD (a), Cu<sup>2+</sup> + OPD (b), Cu<sup>2+</sup>-BLM + OPD (c), Cu<sup>2+</sup> + OPD + BLM (d). Inset: corresponding digital photos under the ultraviolet (A) and visible light (B). [Cu<sup>2+</sup>] = 2.0 μM; [OPD] = 1.8 mM; [AA] = 10.0 μM; [BLM] = 1.0 μM.



**Fig. S2** (A) XPS spectra of Cu 2p for the CuSO<sub>4</sub>, CuSO<sub>4</sub> with OPD, CuSO<sub>4</sub> with OPD and BLM. (B) The CVs of Cu<sup>2+</sup>, BLM, and Cu<sup>2+</sup> with BLM. Scan rate: 50 mV s<sup>-1</sup>.



**Fig. S3** The influences of incubation time of Cu<sup>2+</sup>, OPD and AA (A), pH (B), concentration of Cu<sup>2+</sup> (C), concentration of AA (D), concentration of AA (E) and the reaction time between Cu<sup>2+</sup> and BLM (F) on the fluorescence intensities at 436 and 565, respectively. Error bars were estimated from three replicate measurements.

**Table S1** Analytical results of human serum samples.

Sample No.	Amount of BLM added (nM)	Amount of BLM founded (nM)	Recovery (%)	RSD (%)
1	10.0	9.2	92.0	3.1
2	50.0	47.4	94.8	2.8
3	200.0	192.8	96.4	2.5