Electronic Supplementary Information

Lanthanide Coordination Polymer Based Biosensor for Citrate Detection in Urine

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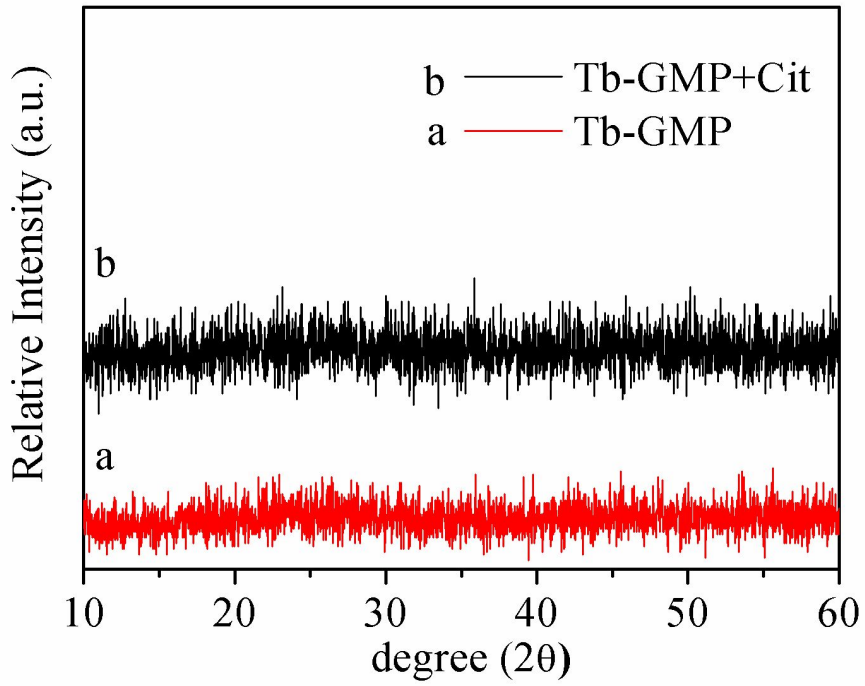

Fig. S1 X-ray diffraction (XRD) spectra of Tb-GMP (a), Tb-GMP after the addition of Cit(b).

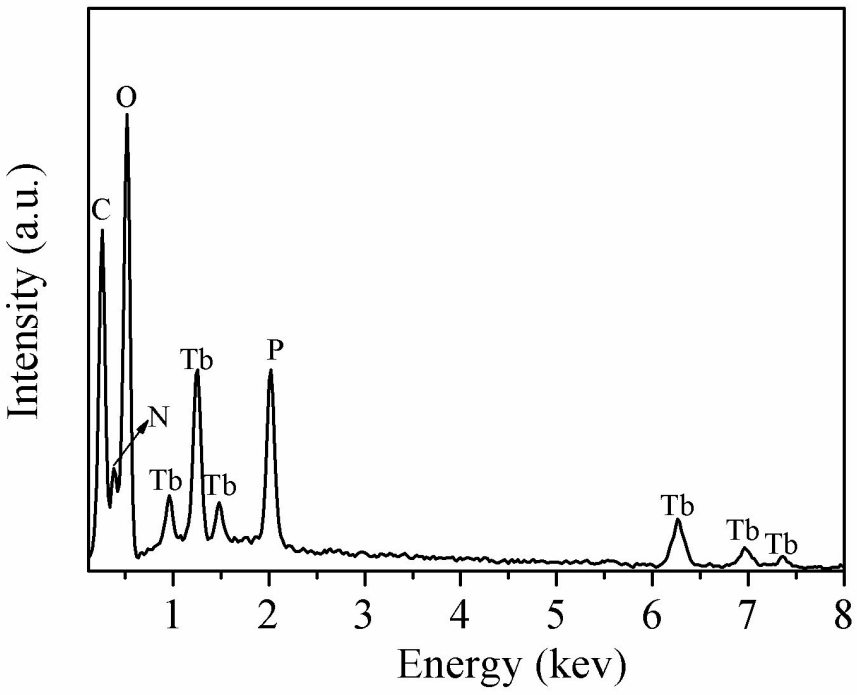

Fig. S2 Energy-dispersive X-ray (EDX) spectra of Tb-GMP.

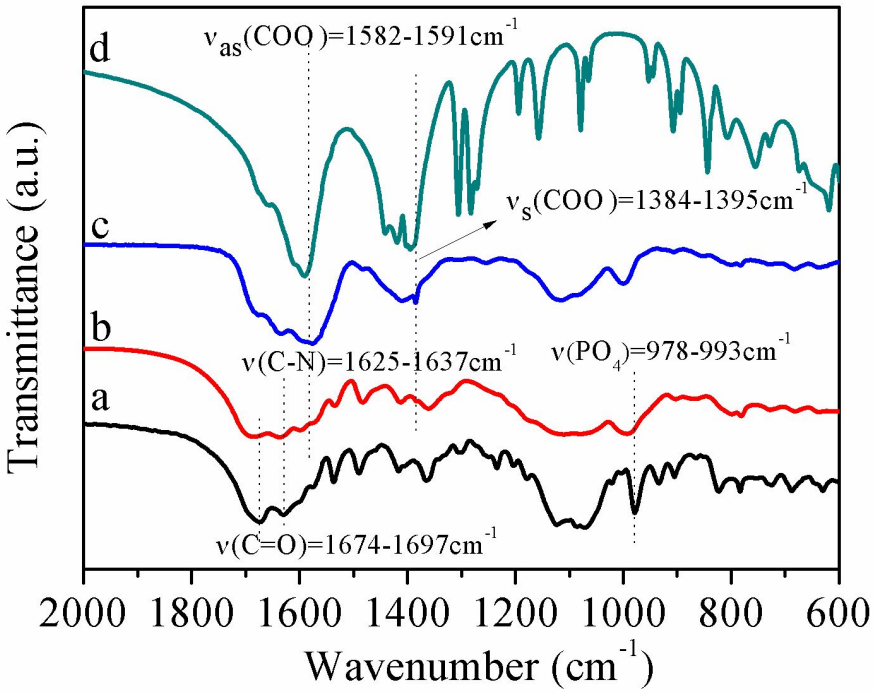

Fig. S3 FTIR spectra of GMP (a), Tb-GMP (b), Tb-GMP after reacting with Cit (c), and pure Cit (d). ν: stretching vibration; ν_s: symmetrical stretching vibration; ν_{as}:asymmetrical stretching vibration.

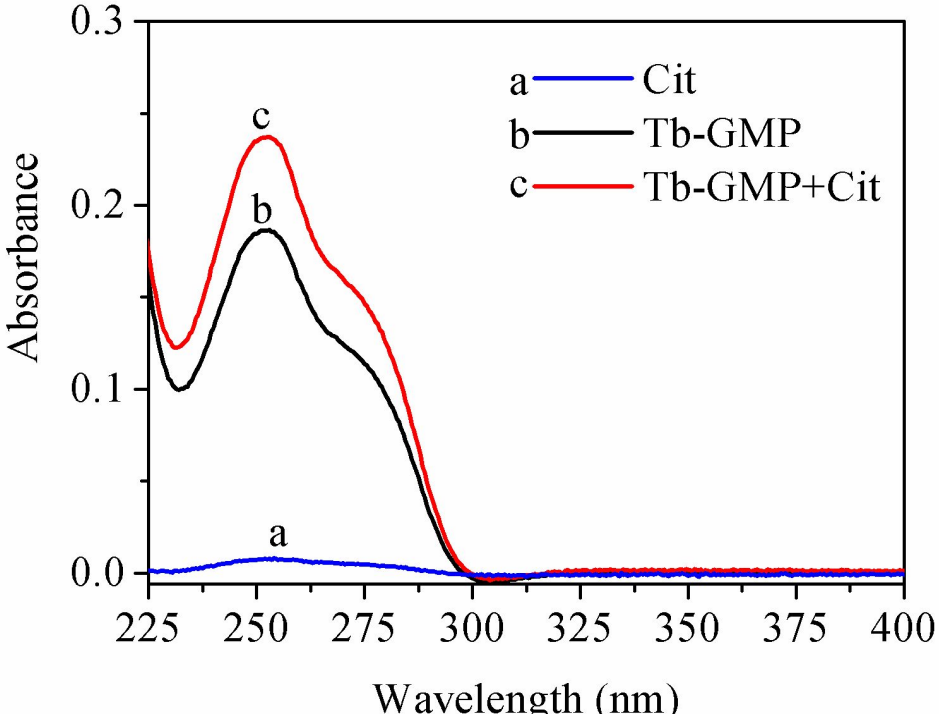

Fig. S4 UV absorption spectra of Cit (a), Tb-GMP(b), Tb-GMP after the addition of Cit (c) in aqueous solution.

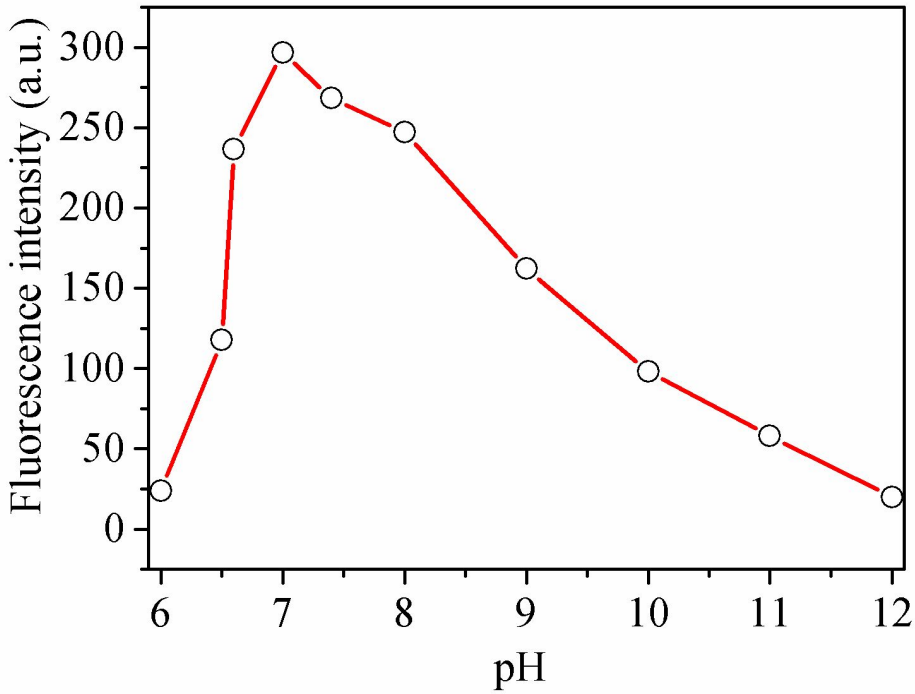

Fig. S5 Effect of pH on the fluorescence intensity of Tb-GMP after the addition of Cit.

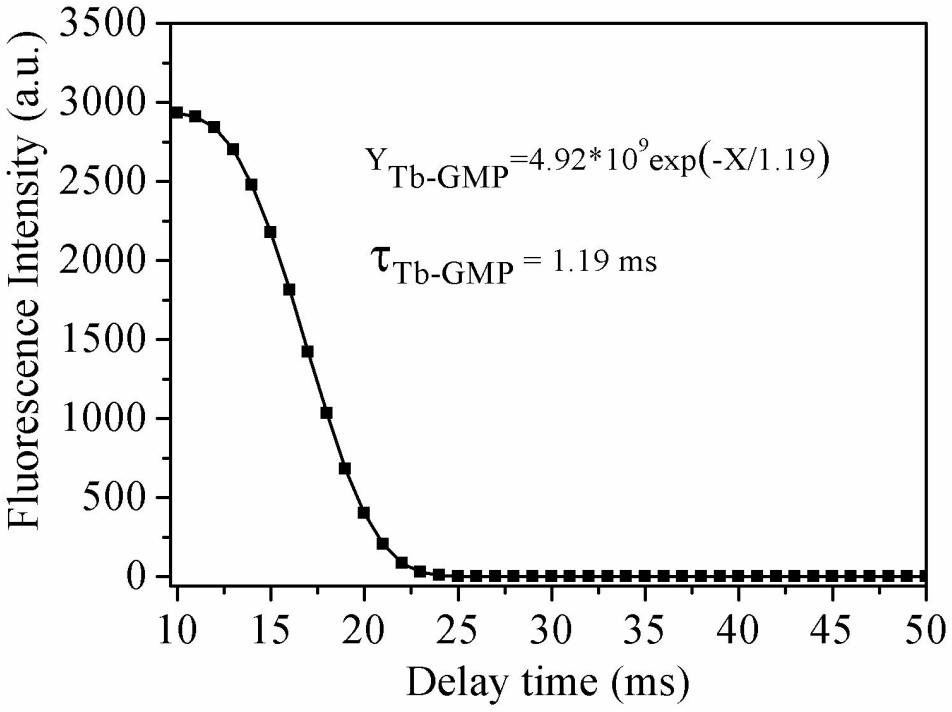

Fig. S6 Fluorescence lifetime of Tb-GMP

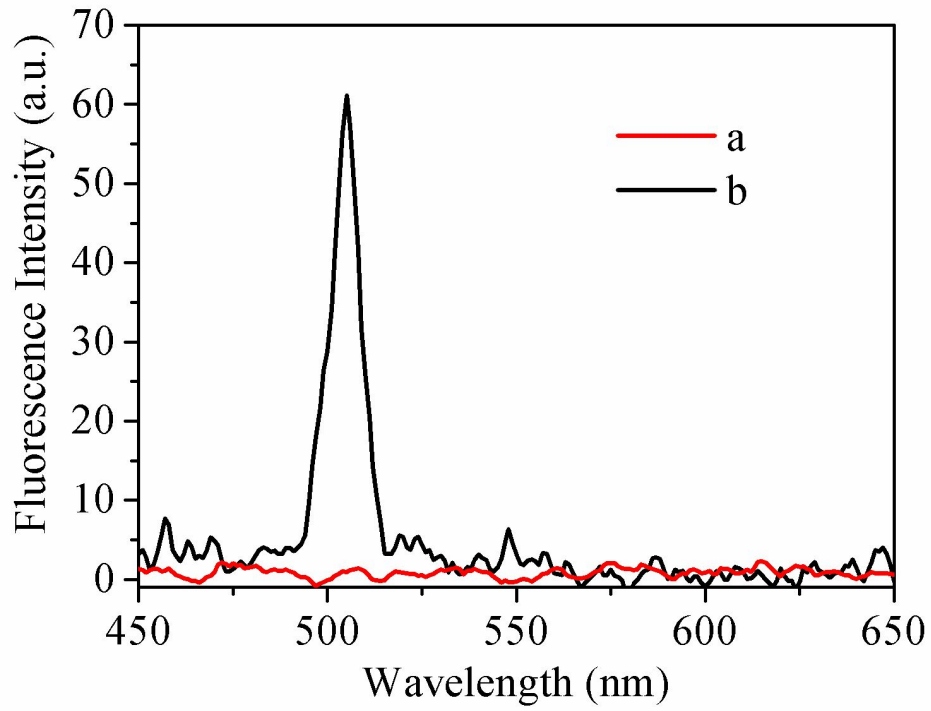

Fig. S7 Fluorescence of urine under time-resolve fluorescence mode (a) and fluorescence mode (b).

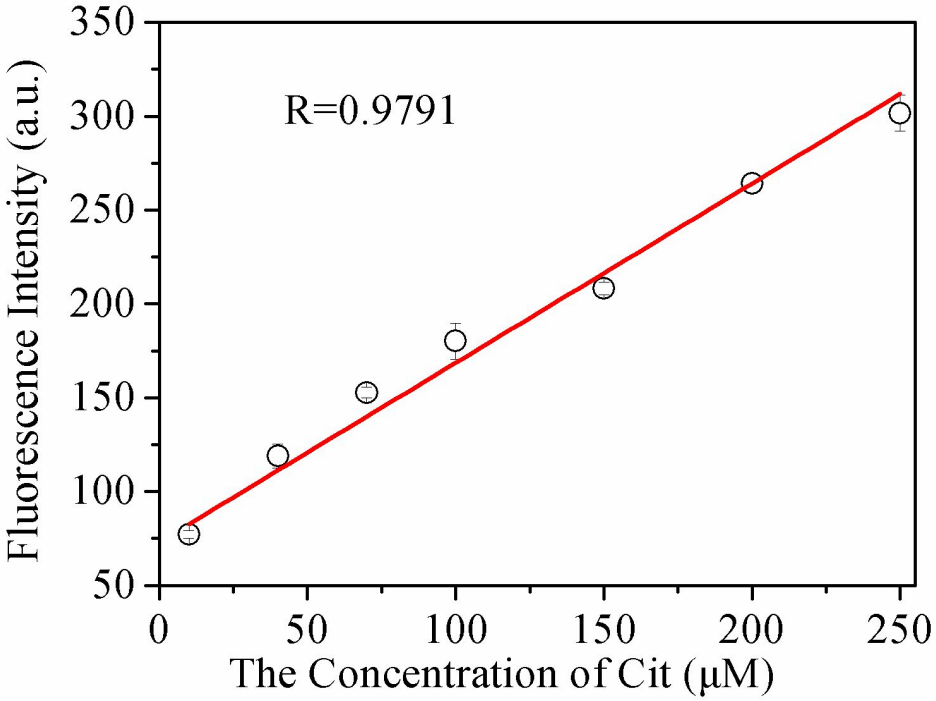

Fig. S8 The linear relationship between the fluorescent intensity of Tb-GMP at 545 nm and the concentrations of Cit in urine sample.

Table S1 Determination of Cit in urine sample based on time-resolved fluorescence.

Samples	Spiked (μM)	Detected (μM)[a]	Recovery (%)
1	30	30.04±1.79	100.20
2	120	111.11±5.55	92.59
3	200	200.39±5.13	100.20

[a] Mean value (n = 3) ± standard deviation.